

Study on Supply
Chain and Export
Readiness for Organic
farm products in



Sikkim

Acknowledgement

The successful completion of the report "Supply Chain and Export Readiness for Organic Farm Products in Sikkim" is due to the invaluable support and contributions of several individuals and organizations.

We express our sincere gratitude to Shri Abhishek Dev, IAS, Chairman, Agricultural & Processed Food Products Export Development Authority (APEDA), for providing the opportunity to undertake this study and for his unwavering support throughout the project.

Special thanks to Dr. S. Anbalagan, IFS, for his expert guidance and for providing essential information that significantly contributed to this report.

We also acknowledge Shri M. Ravi Kumar, IFS and Shri Jeewan Sharma, GM, Sikkim State Cooperative Supply and Marketing Federation, for their valuable insights and cooperation.

Our appreciation extends to Shri Phurba Tshering Lepcha, Deputy Director, Spices Board; and Shri Mayank Parihar, COO, Sikkim IFFCO, for their significant contributions and assistance.

Lastly, we thank the farmers, FPOs, entrepreneurs, exporters, and transporters for their support and participation in various discussions, which greatly enriched this study. Their collaboration has been pivotal in the successful completion of this report.



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Executive Summary

The state of Sikkim, known for being India's first state to be fully covered under organic certification, is at a pivotal juncture in its journey to leverage its organic farming potential. Despite its commendable achievements, Sikkim faces several challenges in optimizing its organic agriculture sector for domestic and international markets. This report identifies critical issues such as inadequate infrastructure, high transportation costs, limited market access, and a general lack of awareness among farmers about export processes and financial support schemes.

Sikkim's organic farming sector is hindered by infrastructure deficiencies, including insufficient cold storage facilities, processing units, and testing laboratories. These gaps result in significant post-harvest losses and reduced quality of produce, impacting the state's ability to meet the stringent standards of international markets. Additionally, the state's challenging terrain and poor connectivity contribute to high transportation costs and logistics inefficiencies, further straining the supply chain and reducing farmers' profit margins.

Market access remains a pressing issue, as the absence of organized wholesale markets and aggregation centres forces many farmers to rely on informal channels, where they receive lower prices for their produce. Furthermore, there is a substantial knowledge gap regarding export readiness among Sikkim's farmers and exporters. Many are unaware of the necessary export procedures, international standards, and available financial schemes, limiting their ability to compete globally.

To address these challenges, the report proposes several strategic solutions. Firstly, it emphasizes the need for substantial infrastructure development, including the establishment of cold storages, processing units, and testing laboratories at key locations to maintain the quality and freshness of organic produce.

Improving market linkages through the development of a robust network of aggregation centres and dedicated organic market yards at village, district, and state levels is also crucial. These measures will streamline the supply chain, reduce transportation costs, and enhance market access for farmers.

The report also recommends the creation of export facilitation centres to provide comprehensive support to exporters. These centres would assist with documentation, certification, market information, and logistics, while also serving as training hubs for capacity building. Extensive training programs and workshops are essential to educate farmers and exporters about export procedures, international standards, and financial schemes such as the Prime Minister's Employment Generation Programme and the Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme (PMFME).

Moreover, promoting Sikkim's organic produce under a unified brand, "Sikkim Organic," will enhance its visibility and marketability in international markets. Obtaining Geographical Indications (GIs) for Sikkim's unique products will further safeguard their identity and value, positioning the state as a leader in sustainable and organic agriculture.

By implementing these strategic solutions, Sikkim can overcome its current challenges and capitalize on its organic farming strengths. This will not only boost the state's presence in global markets but also improve the livelihoods of its farmers, contributing significantly to Sikkim's economic growth and sustainable development.



Preface

In an era marked by increasing environmental awareness and a shift towards sustainable living, the global market has seen a significant rise in the demand for organic products. Sikkim, a state located in the Himalayas, stands out for its rich biodiversity, cultural heritage, and dedication to sustainable farming.

It holds the distinction of being the first in the world to adopt organic farming since 2003, with 80% of the rural population depending on agriculture and allied sectors.

The state's terrain and climate make it an ideal setting for cultivating a diverse range of crops organically, and is recognized as the largest producer and exporter of Large Cardamom in India. It sets an example of sustainable agriculture production and has huge potential for development of a diversified organic product ecosystem.

However, it is only the initial step and there is further requirement for market linkages with domestic and international consumers and timely movement of produces through multiple transshipment points. The purpose of this research is two-fold: to thoroughly examine the existing supply chain network supporting Sikkim's organic produce, and to analyse the sector's readiness for engaging with export markets.

This study delves into the intricacies of the supply chain and evaluates the export readiness of organic farm products originating from Sikkim. It aims to identify the challenges and opportunities that lie in leveraging Sikkim's organic farming capabilities to meet international demand.

Thus, the study explores Sikkim's vibrant organic farming sector, helps in understanding its opportunities and envisioning a future where Sikkim leads in global sustainable and organic agriculture.

About this Study

This study **aims to** →

01 | Examine the Current State of Organic Farming in Sikkim

To explore & identify organic farming practices in Sikkim, including the range and volume of crops cultivated organically, the state's regulatory framework, certification processes, and the infrastructure support available for organic farmers.

02 | Analyse the Supply Chain Network

To map out the entire supply chain for Sikkim's organic farm products, from production to international markets. This involves identifying key stakeholders, logistics scenario, transit points, storage and packaging facilities, quality control mechanisms, and the turnaround time for the overall flow of goods.

03 | Evaluate Export Readiness and Market Potential

To assess the readiness of Sikkim's organic sector for entering and expanding in the global market. This includes analysing market entry strategies, compliance with international standards, competitive positioning, and identification of potential export markets. This study also examines the role of various agencies involved in promoting Sikkim's organic products.

04 | Identify Challenges and Opportunities

To undertake field visits to assess the level of awareness amongst stakeholders regarding export processes and potential international markets. Also, find the barriers faced in the end-to-end supply chain of organic farming. Concurrently, the study aims to highlight opportunities for growth, innovation, and collaboration within the global organic market framework.

05 | Offer Recommendations

Based on the findings, the study will propose actionable recommendations. These recommendations will aim to strengthen the supply chain, enhance export capabilities, and ensure sustainable growth of the organic sector.

Methodology

The study employs a mixed-methods approach, integrating quantitative and qualitative techniques to thoroughly examine the export dynamics of organic products in **Sikkim** →

► Stakeholder Identification

An inclusive approach focusing on key participants integral to the organic agriculture ecosystem is adopted to identify the key stakeholders for this study. This method recognizes the roles and contributions of diverse groups, including local farmers, Farmer Producer Organizations (FPOs), Farmer Producer Enterprises (FPEs), exporters, traders, and government officials.

► Data Collection

Literature Review

Desk review of the secondary data available is considered on area-wise production statistics, export and demand – supply scenarios. An assessment of current status of organic produce for the identified commodities is done.

Surveys

Data is collected through questionnaires administered via face-to-face interviews and telephonic conversations. The questionnaire explores socio-economic profiles, production techniques, certification status, market connections, and challenges faced by organic farmers and exporters in Sikkim. (Attached in appendix)

Field Visit

Engaged in collecting data by directly interacting with various stakeholders. Through extensive discussions, responses were recorded against the designed questionnaire. Key stakeholders in Sikkim organic farming ecosystem were approached to share their valuable insights. This list encompasses participants involved in the cultivation, government bodies and export of key organic products unique to Sikkim, such as large cardamom, ginger, turmeric, and buckwheat. (Attached in appendix)

► Data Analysis Techniques

Qualitative Analysis

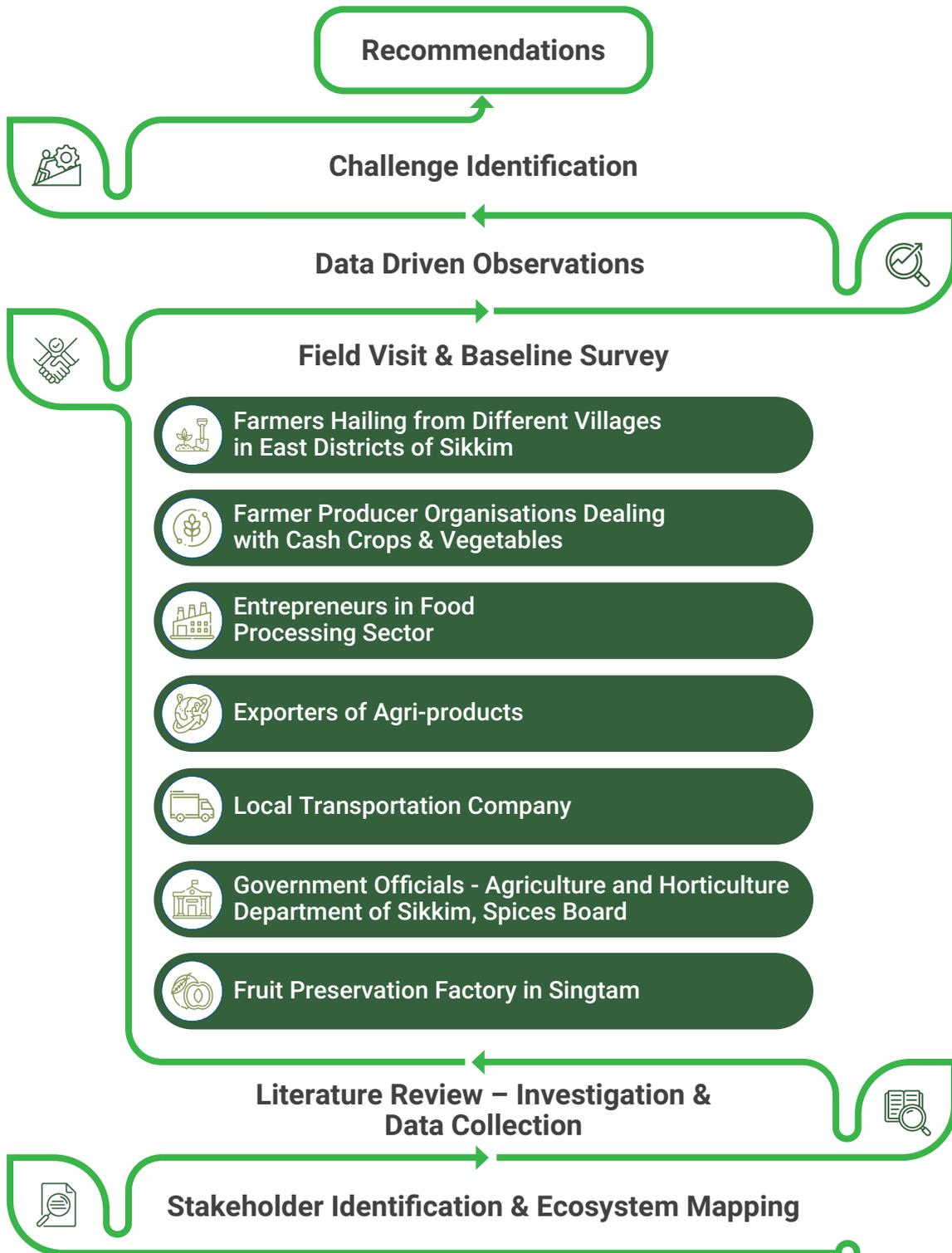
Fishbone Analysis is utilized to visualise cause and effect relationship derived through data collected via stakeholder engagement activities.

► Challenges Identification

Challenges are identified based on secondary research, which are further verified through surveys and field visits.

► Recommendations

Recommendations for addressing the challenges faced by organic agriculture ecosystem in Sikkim are proposed based on global best practices. Additionally, input from stakeholders in organic farming are also taken into consideration.

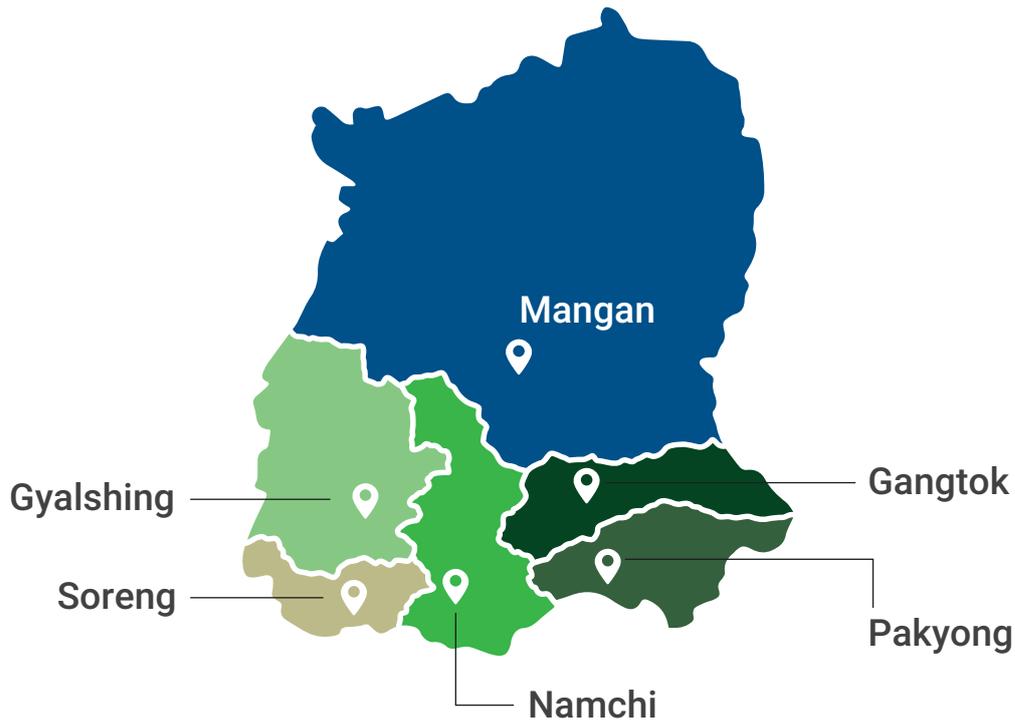




Section A Background

About Sikkim

Sikkim has **6 Districts**



Capital

Gangtok

Geographic Area

7,096 sq.km

Population
(Census 2011)

6.10 Lakh

Large Cardamom contribution in India

57%

Source ▶ [2] Government of Sikkim – Statistics

[3] Spices Board India - Annual report 2022-23

[4] Government of Sikkim - Environmental and Social Systems Assessment 2023

Organic Produce

Sikkim's Products & Details



Large Cardamom (Amomum Subulatum Roxburgh)

- ▶ India ranks as the world's 2nd largest producer of large cardamom, following Nepal.
- ▶ Sikkim dedicates about 30% of its cultivated area to large cardamom production and has a Geographical Indications (GI) tag for it.



Ginger (Zingiber Officinale L.)

- ▶ India ranks as the world's 2nd largest producer of ginger, following China.
- ▶ As per Sikkim's 2023-24 production data, the area under ginger is 15,278 ha with a production of 81,815 MT.



Turmeric (Curcuma Longa)

- ▶ India stands as the top producer and exporter of turmeric in the world.
- ▶ As per Sikkim's 2023-24 production data, the area under turmeric is 5,000 ha with a production of 15,000 MT. Sikkim contributes 1-2% to India's turmeric production, while Telangana and Maharashtra account for over 50%.



Buckwheat (Fagopyrum Esculentum)

- ▶ Buckwheat crop is a short duration crop which matures in 60-90 days.
- ▶ This crop grows well up to an altitude of 5,000-5,500 ft.

Source ▶ [5] Spices Board India - Annual report 2022-23

[6] Handbook of Agriculture (2023-24) by Agriculture Department, Govt. of Sikkim



Temi Tea

- ▶ Temi Tea is exclusive to Sikkim.
- ▶ The temi tea garden, covering 178 ha, serves as Sikkim's only tea estate.



Orchids (Cymbidium)

- ▶ Sikkim has 523 of the country's estimated 1229 orchid species.
- ▶ It is 2nd only to Arunachal Pradesh in terms of orchid diversity.



Dalle Khursani (Cherry Pepper) (Capsicum Annuum)

- ▶ The Dalle Khursani chili, a cherry pepper variety native to Sikkim, has a GI Tag, showcasing the region's agricultural richness.
- ▶ It flowers after 70-80 days of planting, with the first harvest at ripening stage and fruit-bearing continuing for 2-3 years.



Mandarin Orange (Citrus Reticulata)

- ▶ Sikkim's Mandarin Orange is the region's most important commercial fruit.
- ▶ It is similar to the Nepal and Darjeeling Mandarin.

Source ▶ [7] Government of Sikkim - Horticulture Department
[8] Agricultural and Processed Food Products Export Development Authority (APEDA) – Agriexchange
[9] Forest and Environment Department - Government of Sikkim

Sikkim's Key **Agricultural Production** in FY 23-24

► Crops

Th MT

Rice

16.2

Finger Millet

2.13

BuckWheat

1.95

Pulses

5.0

► Livestock & Fisheries

Th MT

Milk

80.99

Meat

5.05

Eggs

125.72

► Fruits

Th MT

Guava

7.78

Kiwi

2.17

Pear

4.14

► Vegetables

Th MT

Potato

44.62

Peas

9.41

Tomato

4.62

Beans

7.11

► Spices

Th MT

Ginger

81.8

Large Cardamom

5.63

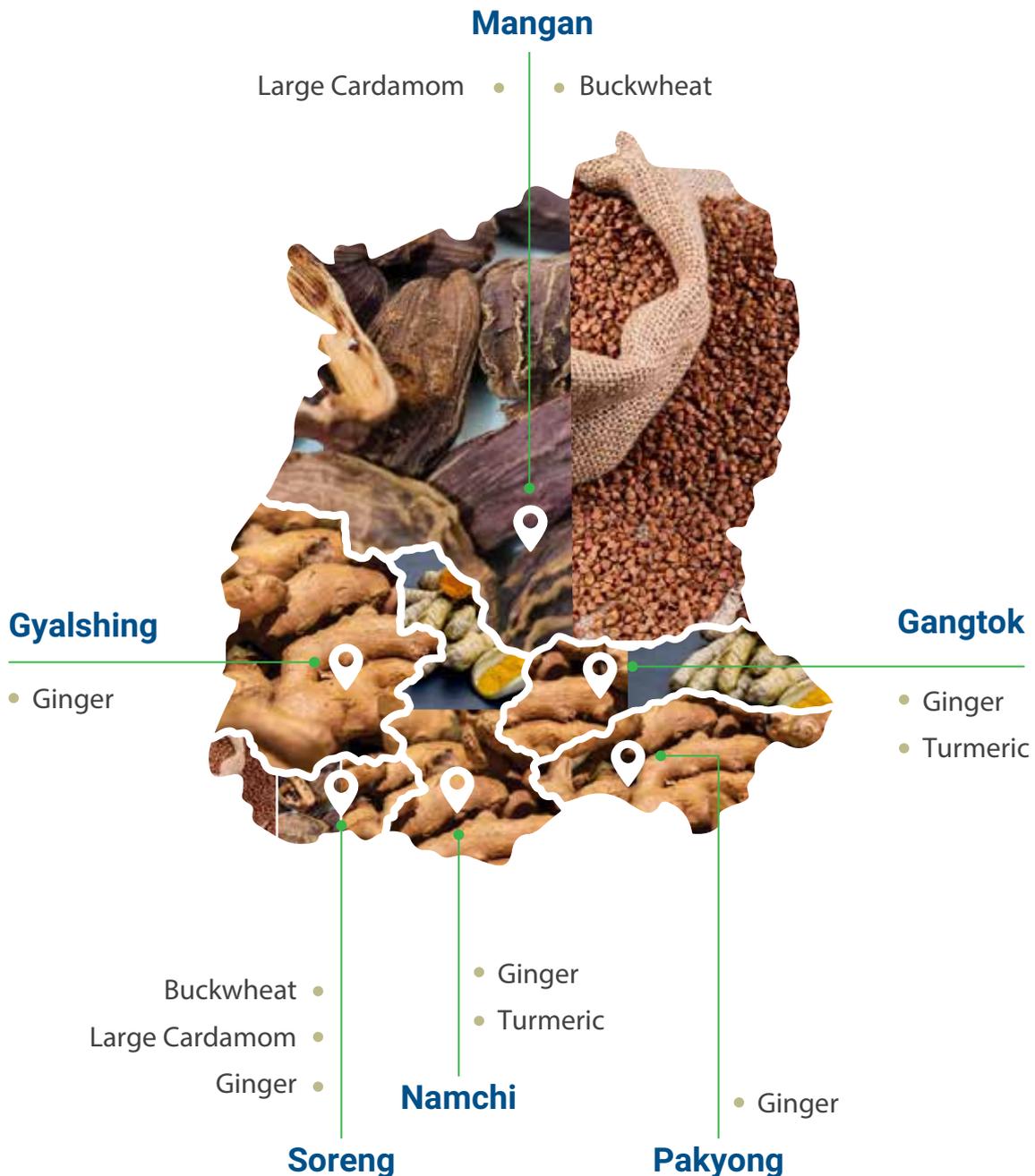
Turmeric

15.53

Source ► [10] Handbook on Agriculture (2023-24) by Agriculture Department, Govt. of Sikkim
 [11] Ministry of Agriculture - Horticulture Department

Key Production Clusters

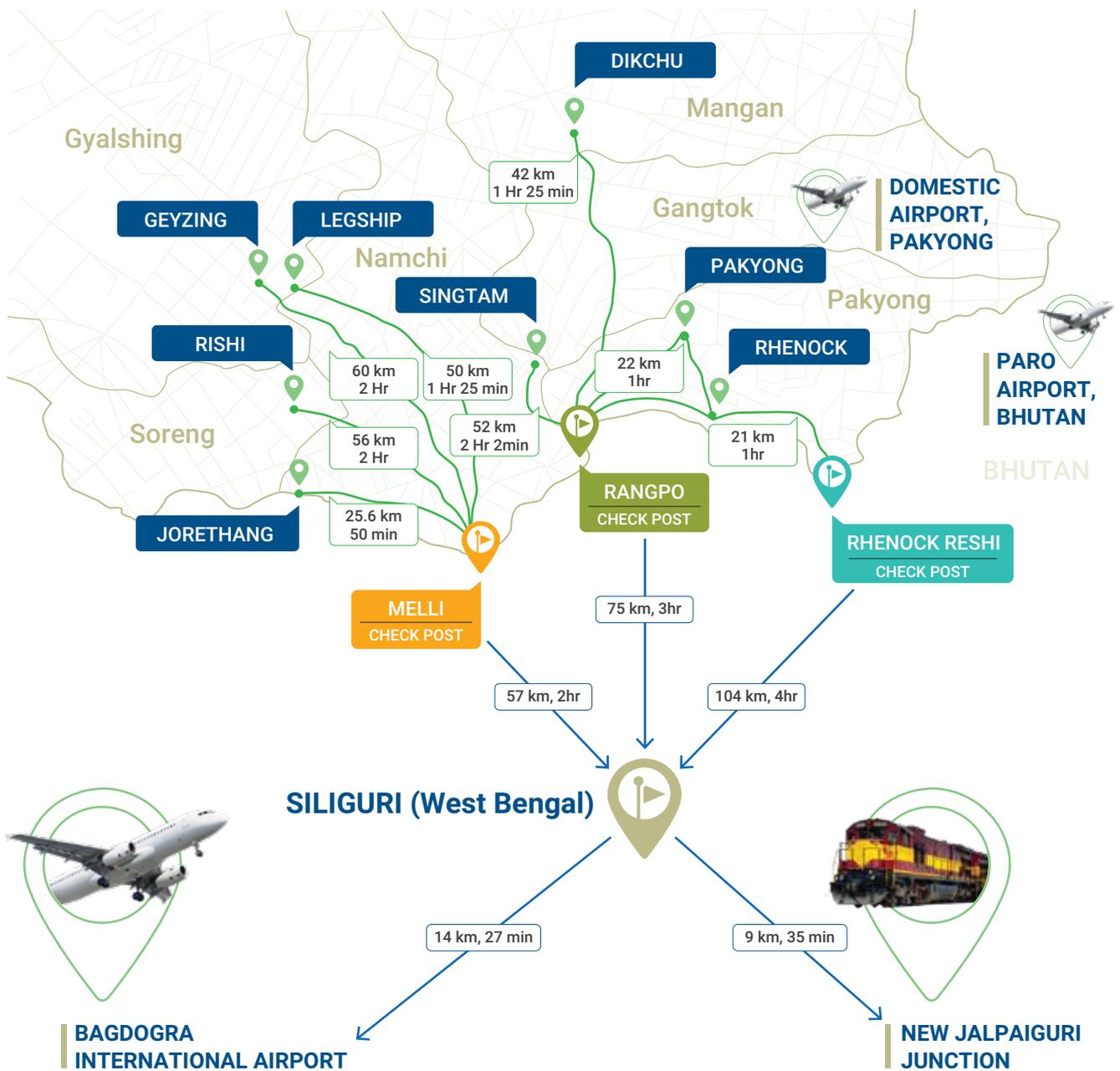
Major areas cultivating following crops in Sikkim.



Fig► Distribution of organic produces in Sikkim

Logistics Scenario

Sikkim's trade routes play a vital role in its economic interactions both with the rest of India and neighbouring countries, primarily through road.



Road Connectivity

Sikkim's road network spans 3,668.78 km, connecting the state to major regions and facilitating access to essential services and markets. The backbone of this network is National Highway (NH) 10, which extends from Siliguri to Gangtok, acting as a vital link between Sikkim and the rest of India.



Road Details

Road Classification	Length in km
National Highways (NH)	512.00
State Highways (SH)	732.61
Major District Roads (MDR)	1,126.31
Other District Roads (ODR)	549.68
Village Roads (VR)	748.19

A strategic branch of NH 10 from Melli enhances access to western Sikkim, while other roads link southern and western Sikkim to the hill stations of Kalimpong and Darjeeling in northern West Bengal. Furthermore, the state extends its reach to international borders, connecting to Tibet via the mountain pass of Nathu La.

The state Government has taken initiatives to improve the road connectivity in Sikkim especially in the remote and hilly areas, with the help of schemes such as Pradhan Mantri Gram Sadak Yojna (PMGSSY) and Border Roads Organisation (BRO).

Source ► [12] Source Roads and Bridges Department - Government of Sikkim



Railways

There are no railway stations located in Sikkim. The closest major railway stations are Siliguri and New Jalpaiguri (NJP) in neighbouring West Bengal. NJP is well connected to the rest of India by various trains, such as Rajdhani Express, Shatabdi Express etc. It is located about 66 KM from Melli Check post and it takes approx. 2 Hr 35 Min to reach. From Rangpo Check Post New Jalpaiguri Junction (NJP) is about 84 KM & takes approx. 3 Hr 35 Min to reach.

The New Sikkim Railway Project has been launched to connect the town of Rangpo in Sikkim with Sevoke on the West Bengal border. Sikkim is set to gain rail connectivity with the rest of India through the under-construction Sevoke-Rangpo railway line, spanning 44.98 kilometers.

Airways

Sikkim's rough terrain long prevented it from having an operational airport. However, Pakyong Airport, the state's first airport located 30 km from Gangtok, became operational in October 2018 after a four-year delay. The Airport Authority of India (AAI) constructed it on 200 acres of land, and at an altitude of 4700 feet above sea level, it stands as one of India's five highest airports.

Despite this advancement, Bagdogra International Airport near Siliguri in Northern West Bengal remains the nearest operational airport for cargo transportation from Sikkim. Located about 71 km from Melli Check Post, it takes approximately 2 hours and 30 minutes to reach. From Rangpo Check Post, Bagdogra International Airport is about 89 km away, with an approximate travel time of 3 hours and 30 minutes.



Waterways

Sikkim, a landlocked state, lacks direct access to the sea but boasts a potential waterway route through the Teesta River. With a navigable stretch of 140 kilometers through West Bengal, the Teesta River presents a strategic opportunity to integrate Sikkim into the National Waterways network of India, enhancing regional connectivity and economic potential.

Stakeholders & Organic Farming Value Chain

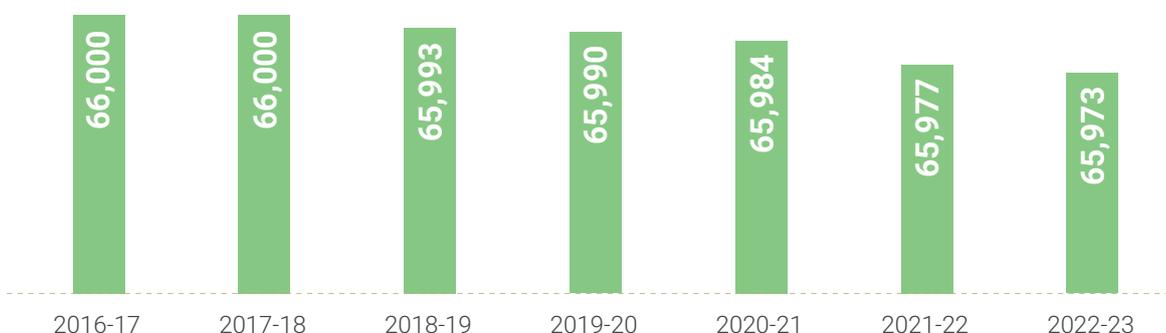


Farmers

Farmers in Sikkim form the backbone of the state's agricultural ecosystem. Their main responsibilities include growing, harvesting, and sometimes processing their produce. Many of these farmers draw on traditional knowledge and practices, honed over generations, to navigate the challenging Himalayan terrain.

For selling their crops they interact directly with dealers and Farmer Producer Organizations (FPOs) & sell their harvest. There are over 65,000 farming families in Sikkim engaged in organic agriculture, practicing it across the state's total agricultural land of approximately 75,520 ha. The small and marginal farmers with less than 2 ha of area account for more than 79% of the total land holding but possess only 39% of the area.

Over the past seven years, the number of farmers actively farming in Sikkim has remained similar:



Farmer Producer Organisations (FPOs)

FPOs play a crucial role as stakeholders in the organic farming sector in Sikkim. These entities, comprising small and marginal farmers, aim to achieve economies of scale by pooling resources and collective action.

They facilitate access to organic inputs and technologies for their members. They negotiate better prices for seeds, fertilizers, and other inputs necessary for organic farming. By doing so, they lower the cost of transitioning to and maintaining organic practices.

They organize workshops and training sessions on organic farming techniques, certification processes, and market trends. This knowledge empowers farmers to improve their organic farming practices and meet certification standards.

The vital role of FPOs in socio-economic development in Sikkim, particularly is uplifting the smallholder farmers and in attaining the government's goal of doubling farmers' income.

Currently there are 71 FPOs under MOVCD-NER Scheme and 17 under NABARD in Sikkim.

Source ▶ [13] NABARD - State Focus Paper 2022-23 & 2023-24

[14] IndiaSpend - Newsletters

*Mission Organic Value Chain Development



Certification Bodies

Certification bodies in Sikkim are integral to the state's organic sector, upholding the standards and practices that define organic products. Specifically, in Sikkim, these bodies oversee the certification process which validates that the products meet organic farming criteria.

Certified operators inspect and verify compliance, and the certification body makes the final decision and issues a Scope Certificate, which stays valid for one year. Accredited certification bodies issue Transaction Certificates (TCs), which are required for trading organic products. These TCs guarantee product identity and traceability throughout the supply chain.

There are 37 certification bodies, accredited by the Agricultural and Processed Food Products Export Development Authority (APEDA) under the National Programme for Organic Production (NPOP), operating across India. Of these, 14 are public-sector organizations offering cost-effective certification services, while the rest are private agencies that typically charge higher fees



Food Processing Entrepreneurs/Industries

Food processing entrepreneurs play a vital role in extending the shelf life and marketability of Sikkim's agricultural output. They take raw agricultural products directly from farmers or through FPOs and transform them into value-added products with a longer shelf life and wider appeal to consumers. This processing not only increases the product's value but also reduces spoilage and allows farmers to sell their produce throughout the year. Once processed, food entrepreneurs utilize various channels to sell their products. They directly sell to dealers, supermarkets, or directly to consumers through local markets, online platforms, or even tourist destinations.

To promote such entrepreneurship state has launched various schemes & initiatives.

- ▶ Commerce & Industries Department of the Government of Sikkim has launched "Skilled Youth Start-Up Scheme (SYSS) in Aug, 2020. Its vision is to generate equitable entrepreneurial opportunities in rural as well as urban areas of Sikkim, particularly among the educated unemployed youth to become self-employed by setting up Manufacturing/ service/Business/Co-Operative/Agricultural & Allied activities by availing loans from the state government.
- ▶ Under the Atal Innovation Mission (AIM) by Niti Aayog, incubation centres have been established in Sikkim. One such example is the AIC-SMU Technology Business Incubation Foundation, which is among the 100 world-class incubators set up to support innovative ideas in the state.

**Sikkim has 19 Food Processing Units
that promote sustainable economic growth.**



Source ▶ [15] Government of India - Ministry of Food Processing Industries

Food Godowns

Food godowns are integral to the infrastructure that supports organic farming in Sikkim. Food godowns minimize post-harvest losses by providing a controlled environment that protects organic produce from spoilage, pests, and adverse weather. Godowns dedicated to organic produce facilitate the separation from non-organic produce, essential for certification and preventing contamination. They also maintain records crucial for traceability, meeting a key market requirement for organic products.

There are currently 35 godowns operating in Sikkim.

Dealers

Dealers act as a critical link between farmers and consumers, ensuring a smooth flow of agricultural products within the state and beyond. They purchase agricultural products in bulk, both raw and processed, from farmers and food processing businesses. Primarily, they handle the logistics of getting the produce from the farm to the market. This includes transportation, storage, and sometimes even packaging, which are essential services that help maintain the quality and integrity of organic products during transit and storage.

Collection Centres

Collection points serve as central and accessible locations where farmers can bring their crops, streamlining the aggregation process. These points enable traders to fulfill large orders by consolidating produce from numerous farmers, ensuring the storage of produce in optimal conditions before delivery. This setup significantly reduces transportation costs by minimizing the distance individual farmers need to travel to market their goods. **In Sikkim, there are three government-operated collection and processing centres located in Melli, Birdang, and Rangpo, along with two privately owned facilities in Majitar and Ranipool.**

Exporters

Exporters specialize in navigating the complexities of international trade, opening new markets for Sikkim's organic products. They identify demand in foreign countries and establish connections that local farmers often cannot achieve on their own. There are many initiatives promoting exports in Sikkim. One of such initiatives is Trade Infrastructure for Export Scheme (TIES) under Ministry of Commerce and Industry. The objective of the scheme is to provide assistance to State Governments for creating appropriate infrastructure for the development and growth of exports.



Source ► [16] Government of Sikkim - List of Food Godown





Government Agencies

In Sikkim, various government agencies actively engage in enhancing the organic farming value chain, ensuring the seamless transition from production to marketing. **These agencies undertake critical roles throughout the lifecycle of organic farming.**

Sikkim Organic Farming Development Agency (SOFDA)

SOFDA under the State's Department of Agriculture, leads the charge in implementing organic farming policies. **Previously known as Sikkim Organic Mission**, it organizes training for farmers, facilitates the certification process, and conducts organic awareness campaigns. Additionally, it coordinates with national agencies such as APEDA, Marine Products Export Development Authority (MPEDA), and National Bank for Agriculture and Rural Development (NABARD) to support infrastructure development and logistics for the export of organic products.

Sikkim State Cooperative Supply and Marketing Federation Ltd (SIMFED)

SIMFED plays a pivotal role in promoting organic agriculture in Sikkim. It acts as a vital bridge between organic farmers and the market, ensuring that their produce reaches consumers efficiently and that farmers receive fair and timely compensation. SIMFED facilitates the procurement and distribution of organic products and also supports value addition through the supply of organic processed goods. Through its initiative, SIMFED RETAILS, the organization markets and distributes organic inputs.

Sikkim IFFCO Organics Ltd (SIOL)

SIOL began as a joint venture between Government of Sikkim and M/S IFFCO (Indian Farmers Fertilizer Cooperative Limited) with an objective to create an organic value chain in the State and currently, the entire shareholding has been transferred to the State Government and has now become a Government owned company. As a part of creation of the value chain, SIOL has set up an integrated processing facility in the State, for the processing of the following 4 commodities viz. , large cardamom, ginger, turmeric and buckwheat.

Agricultural and Processed Food Products Export Development Authority (APEDA)

APEDA significantly contributes by promoting the export of organic products from Sikkim. APEDA aids in navigating international markets, ensuring compliance with global organic standards, and enhancing the global competitiveness of Sikkim's organic produce. Two notable infrastructure facilities developed by APEDA include the Sikkim Supreme Factory, a food processing unit, and an integrated pack house in Rangpo.



Organic Farming Value Chain



Policies & Initiatives for Organic Farming in Sikkim

State & Central Governments' Initiatives

Initiatives under State Government

1

Sikkim Policy on Organic Farming 2010

Ministry of Agriculture and Farmers' Welfare

1

Mission Organic Value Chain Development

2

Mission for Integrated Development of Horticulture (MIDH) Scheme

3

National Agriculture Infra Financing Facility (NAIFF) Scheme

Ministry of Food Processing Industries (MoFPI)

1

Pradhan Mantri Kisan Sampada Yojana

2

Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme

3

Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)

Ministry of Commerce and Industry

1

Financial Assistance Scheme of APEDA

Ministry of Skill Development and Entrepreneurship

1

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)



Initiative under State Government

Sikkim Organic Mission was launched on 15 August 2010. It aims to minimize the usage of agrochemicals and other dangerous substances in different agro-based plants and expand the State's preserved traditional agricultural knowledge.

The following are the objective of Sikkim Organic Policy:

- ▶ To make farming sustainable, remunerative, and respectable.
- ▶ To enhance natural soil fertility and productivity.
- ▶ To ensure soil and water conservation.
- ▶ To ensure agricultural biosecurity and food and nutritional security.
- ▶ To ensure seed and food sovereignty.
- ▶ To promote biodiversity based ecological farming.
- ▶ To ensure quality control in organic inputs and agricultural produce.
- ▶ To provide safe agriculture products and commodities for enabling human health promotion.
- ▶ To conserve and extend traditional knowledge related agriculture.





Schemes under **Ministry of Agriculture and Farmers' Welfare**

▶ 1

Mission Organic Value Chain Development (MOVCD)

- ▶ The scheme aims at development of certified organic production. It also endeavours to link growers with consumers and to support the development of entire value chain starting from inputs, seeds, certification, to the creation of facilities for collection, aggregation, processing marketing and brand building initiative.
- ▶ Further, the scheme aims at facilitating partnerships between farmers and organic businesses: Local enterprises and/ or Farmer Producer Companies based on back-to-back long-term trade relations with clients in domestic and export markets.

▶ 2

Mission for Integrated Development of Horticulture (MIDH) Scheme

The Government of India has established the Mission for Integrated Development of Horticulture (MIDH) in 2014, a centrally sponsored scheme dedicated to the holistic growth of the horticulture industry.

This initiative encompasses a wide range of products, including fruits, vegetables, root crops, mushrooms, spices, flowers.

Financial contributions for development programs under MIDH vary regionally. With the central government providing 60% in most of states and 90% in the North-eastern and Himalayan regions, reflecting a commitment to equitable development.

▶ 3

National Agriculture Infra Financing Facility (NAIFF) Scheme

The Department of Agriculture & Farmers Welfare launched the National Agriculture Infra Financing Facility (NAIFF) in July 2020, a one-stop online platform that streamlines access to funding for affordable and sustainable post-harvest infrastructure projects.

This initiative unites various government schemes (central and state) to boost infrastructure development at farm gates and aggregation points across the country.





Schemes under **Ministry of Food Processing Industries (MoFPI)**

▶ 1

Pradhan Mantri Kisan Sampada Yojana (PMKSY)

The Pradhan Mantri Kisan Sampada Yojana (PMKSY) launched in 2017 aims to improve the food processing sector through a comprehensive approach.

Its objectives are:

- ▶ To modernize and enhance the infrastructure of the food processing sector across the country.
- ▶ To create both direct and indirect employment opportunities in rural areas through the setup of food processing units.
- ▶ To cut down agricultural waste by improving the supply chain from farm to market.
- ▶ To enhance the safety and quality of processed foods, ensuring the health and satisfaction of consumers.
- ▶ To boost the export of processed foods by adhering to international standards.
- ▶ To support farmer groups, cooperatives, and enterprises by offering them the necessary backing to scale their processing activities and access broader markets.





▶ 2

Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme (PMFME)

PMFME launched in 2020 under the **Aatmanirbhar Bharat Abhiyan**, the scheme aims at streamlining access to credit for entrepreneurs, Farmer Producer Organizations (FPOs), Self Help Groups (SHGs), and cooperatives.

Its objectives are:

- ▶ To increase access to finance for micro food processing enterprises by providing credit-linked subsidies.
- ▶ To upgrade technology in the micro food processing sector for improving product quality and efficiency.
- ▶ To formalize micro food processing enterprises to bring them into the organized sector.
- ▶ To provide support for marketing and branding to micro enterprises to help them scale up their operations and reach wider markets.
- ▶ To enhance the capacity of micro food processors through training and skill development.
- ▶ To create employment opportunities, particularly in rural areas, by supporting micro food processing enterprises.

- ▶ To promote entrepreneurship among women, SCs, STs, and other disadvantaged groups by prioritizing their involvement in the scheme.
- ▶ To strengthen the supply chain of the agri-food sector by integrating micro food processing enterprises with farmer producer organizations (FPOs) and self-help groups (SHGs).
- ▶ To improve income of farmers and micro food processors by value addition to agricultural produce.

▶ 3

Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)

The Government of India's **Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)** launched in 2021.

Its objectives are:

- ▶ To create global food manufacturing champions.
- ▶ To strengthen the Indian brand of food products for global visibility and wider acceptance in the international markets.
- ▶ To Increase the employment opportunities of off-farm jobs.
- ▶ To ensure remunerative prices of farm produce and high





Schemes under **Ministry of Commerce and Industry**

Financial Assistance Scheme (FAS)

The **APEDA's FAS scheme**, which runs from 2021-22 to 2025-26, is designed to support the export of agricultural products by providing financial assistance to exporters.

Its objectives are;

- ▶ To enhance the competitiveness of Indian agricultural exports by providing financial support to exporters for infrastructure development, quality improvement, and value addition.
- ▶ To promote agricultural export diversification by encouraging the export of non-traditional and value-added products to new and emerging markets.
- ▶ To facilitate market access and compliance with international standards by assisting exporters in obtaining necessary certifications, testing, and quality control measures.
- ▶ To support capacity building for exporters and other stakeholders through training programs, workshops, and exposure visits, aimed at improving export readiness and market knowledge.
- ▶ To encourage the adoption of modern technologies and practices in the production, processing, and packaging of agricultural products, thereby improving the overall quality and competitiveness of Indian exports.
- ▶ To assist in the development of export-oriented infrastructure such as cold storage, pack houses, and processing units, enabling efficient handling, storage, and transportation of perishable agricultural commodities.
- ▶ To foster research and development initiatives that contribute to the innovation and improvement of agricultural export processes, products, and technologies.
- ▶ To provide financial assistance for participation in international trade fairs, exhibitions, and buyer-seller meets, enhancing the visibility and market presence of Indian agricultural products globally.
- ▶ To promote sustainable agricultural practices by supporting initiatives that lead to environmentally friendly and socially responsible agricultural production for export markets.





Schemes under **Ministry of Skill Development and Entrepreneurship**

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

PMKVY launched in 2015 to encourage and promote skill development in the country by providing free short duration skill training and incentivizing this by providing monetary rewards to youth for skill certification.

Its objectives are:

- ▶ To encourage and promote skill development in India by providing free short-duration skill training.
- ▶ To incentivize Indian youth through monetary rewards for skill certification, thereby motivating them to take up skill training.
- ▶ To enhance the employability of Indian youth, making them suitable for the current job market and capable of securing employment.
- ▶ To enhance economic growth of country by improving the productivity of the workforce through quality training programs that are relevant to current industry needs, contributing to the economic growth of the country.
- ▶ To promote entrepreneurship among the youth by providing them with the necessary skills and knowledge to start their own businesses.



Export Compliance for Organic Products in India

National Programme for Organic Production (NPOP) is being implemented by the Department of Commerce, Ministry of Commerce & Industry, Govt of India for exports and is notified under the Foreign Trade Development Regulations (FTDR) Act 1992 since 2001.

In the domestic market, NPOP is notified under FSSAI's regulation Food Safety and Standards (Organic Food) Regulations, 2017 as one of the options, the other being the participatory guarantee system (PGS) implemented by Ministry of Agriculture and Farmer's Welfare (MoA&FW).



In the domestic market, all organic foods should be certified under either PGS or NPOP. Organic produce which is directly sold to the end consumer by a small original producer or producer organization is exempted from certification. Small original producer or producer organization is the one whose annual turnover is not exceeding Rs 12 Lakh per annum.

NPOP

The National Programme for Organic Production (NPOP) provides Standards for organic production systems, criteria and procedure for accreditation of Certification Bodies, inspection and certification of operators and the National (India Organic) Logo and the regulations governing its use. The standards and procedures under the NPOP have been formulated in harmony with other International Standards regulating import and export of organic products.

The institutional mechanism involves a third-party certification system of organic processes and organic produce is certified across the supply chain by a certification body (Govt. or private) duly accredited by the National Accreditation Body (NAB) operating under NPOP. The NAB accredits Certification Bodies under NPOP and they are monitored periodically for maintaining a uniform and credible system of certification. Presently, there are 37 active Certification Bodies, which include 14 State Certification Bodies.

NPOP is the primary organic regulatory standard of the Country, it is accepted by the importing countries and has been a key driver for market access of organic products APEDA has been designated as the secretariat for implementation of the NPOP .

Traceability

A key aspect of compliance is traceability, which is managed through the TraceNet system under APEDA. TraceNet is an internet based electronic service for the stakeholders for facilitating process certification for export of organic products It allows for the tracking of organic

products from the farm to the consumer, ensuring the integrity of the organic supply chain.

Labelling and Packaging

Organic products exported from India must adhere to specific labelling guidelines outlined by NPOP. This includes the mandatory use of the India Organic Certification Mark on the label, along with details about the producer, certification agency, and other relevant information. Labelling must comply with the importing country's organic standards as well.

International Equivalence

The NPOP standards for crop production have been recognized by the European Commission and Switzerland as equivalent to their country's standards and is also accepted by Great Britain. Mutual Recognition Agreement (MRA) for organic products with Taiwan has been implemented w.e.f 08.07.2024. Negotiations for an MRA with Australia are at an advanced stage.

PGS – India

It is a quality assurance initiative that is locally relevant and operates outside the framework of third party certification. It emphasizes the participation of stakeholders, including producers and consumers. In tune with the international trends and The International Federation of Organic Agriculture Movements' (IFOAM) PGS Guidelines, PGS India system is also based on participatory approach, a shared vision, transparency and trust.



Section B Market Insights

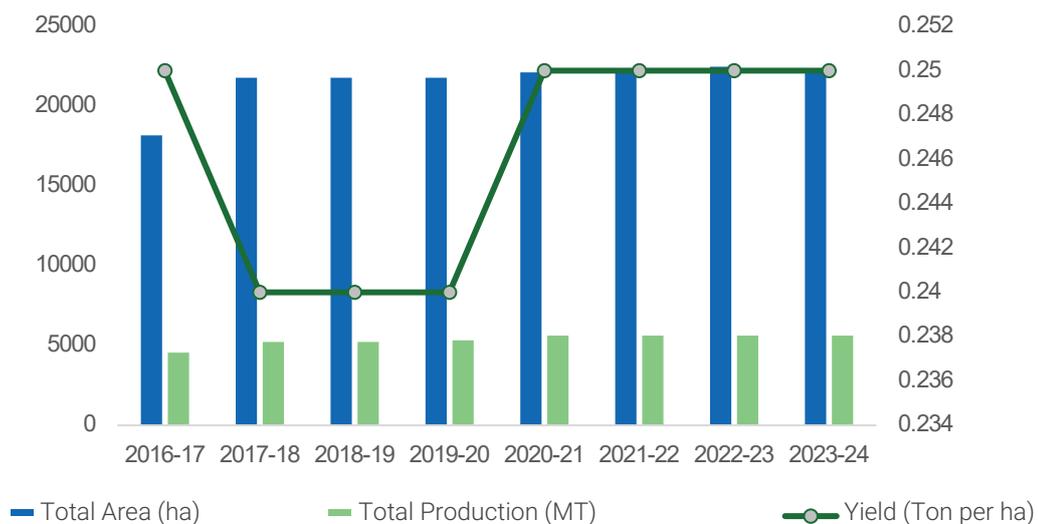
Production

Sikkim is renowned for its high-quality organic produce, including spices, fruits, and various other crops. This analysis delves into the production trends of key organic crops in the state. Detailed data is available for large cardamom and ginger. However, no complete records could be found for turmeric and buckwheat.

Large Cardamom

Parameter	Total Area (ha)	Total Production (MT)	Yield (MT per ha)
2016-17 ▶	18,173	4,565	0.25
2017-18 ▶	21,797	5,230	0.24
2018-19 ▶	21,780	5,224	0.24
2019-20 ▶	21,778	5,328	0.24
2020-21 ▶	22,132	5,614	0.25
2021-22 ▶	22,146	5,620	0.25
2022-23 ▶	22,473	5,626	0.25
2023-24 ▶	22,149	5,626	0.25

Y-o-Y Data



The data shows a general increase in total area for large cardamom cultivation over the observed period, indicating expanded cultivation.

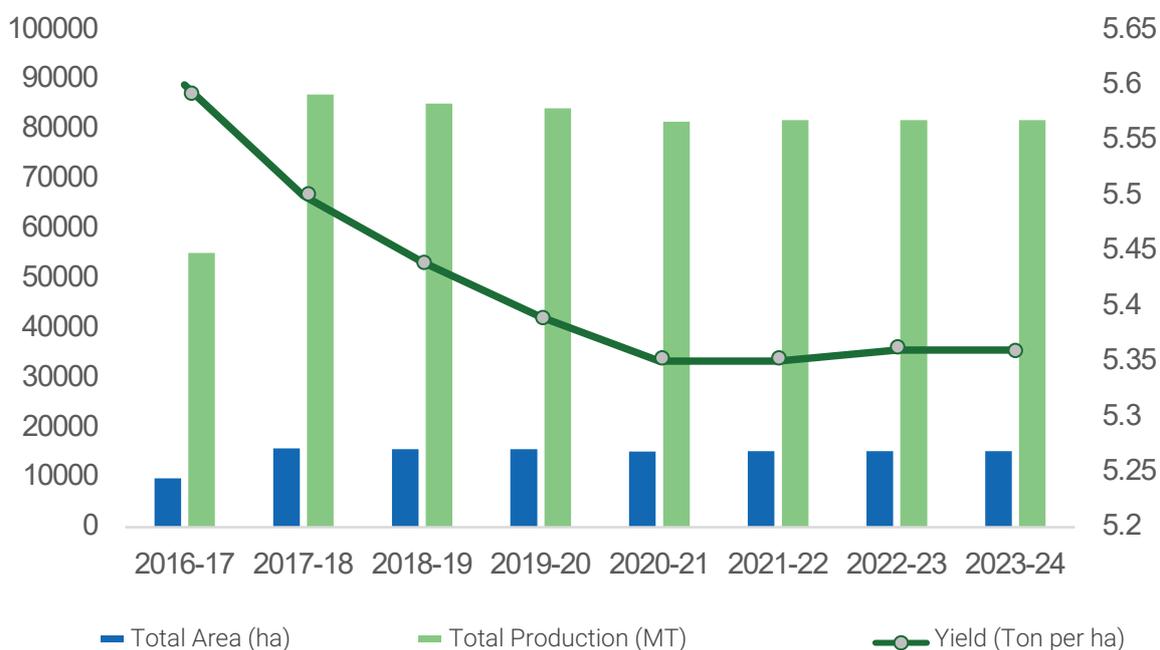
Production also rose reflecting improved output. However, yield per hectare fluctuated and was much lower than that of ginger.

Source ▶ [18] Spices Board India - Annual Reports

Ginger

Parameter	Total Area (ha)	Total Production (MT)	Yield (MT per ha)
2016-17 ▶	9,841	55,137	5.60
2017-18 ▶	15,799	86,955	5.50
2018-19 ▶	15,638	85,116	5.44
2019-20 ▶	15,632	84,194	5.39
2020-21 ▶	15,222	81,500	5.35
2021-22 ▶	15,276	81,799	5.35
2022-23 ▶	15,277	81,815	5.36
2023-24 ▶	15,278	81,815	5.36

Y-o-Y Data



The data reveals that the increase in the total area of ginger cultivation has been met with a proportional increase in total production, indicating effective use of the expanded area. Although there was a peak in yield per hectare in

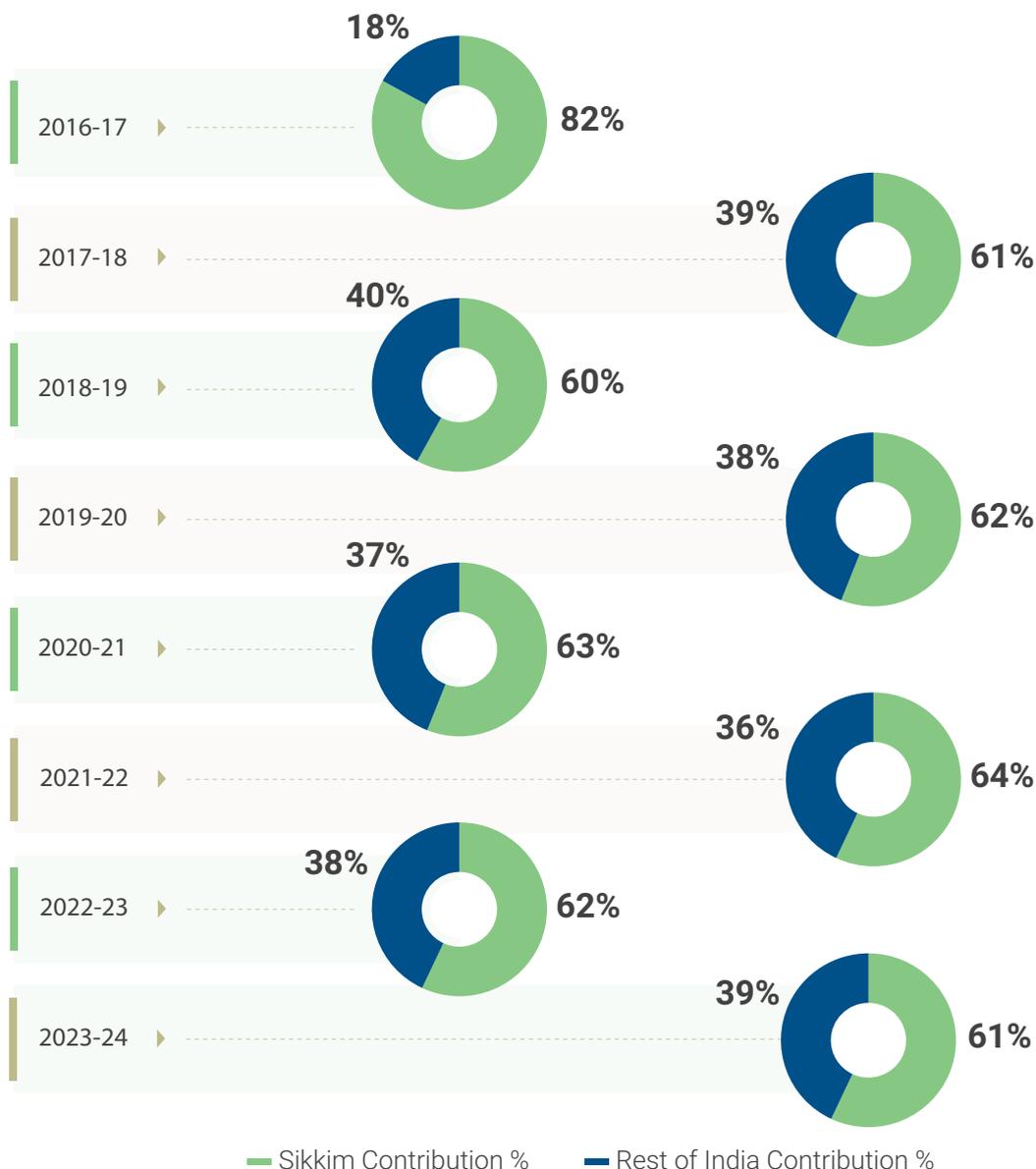
2018-19, the subsequent slight reduction in yield did not significantly affect the overall production levels, which suggests that the expansion in area under cultivation was sufficient to sustain the higher production figures.

Source ▶ [19] CEIC - Production of Horticulture Crops in Major Indian States: Ginger

Sikkim Contribution in National Production

Sikkim contributes to India's organic agriculture sector, primarily through its production of large cardamom. This high-quality crop is a major component of Sikkim's agricultural output and plays a crucial role in the national market. While data is available for large cardamom and ginger, no complete records could be found for turmeric and buckwheat.

Large Cardamom

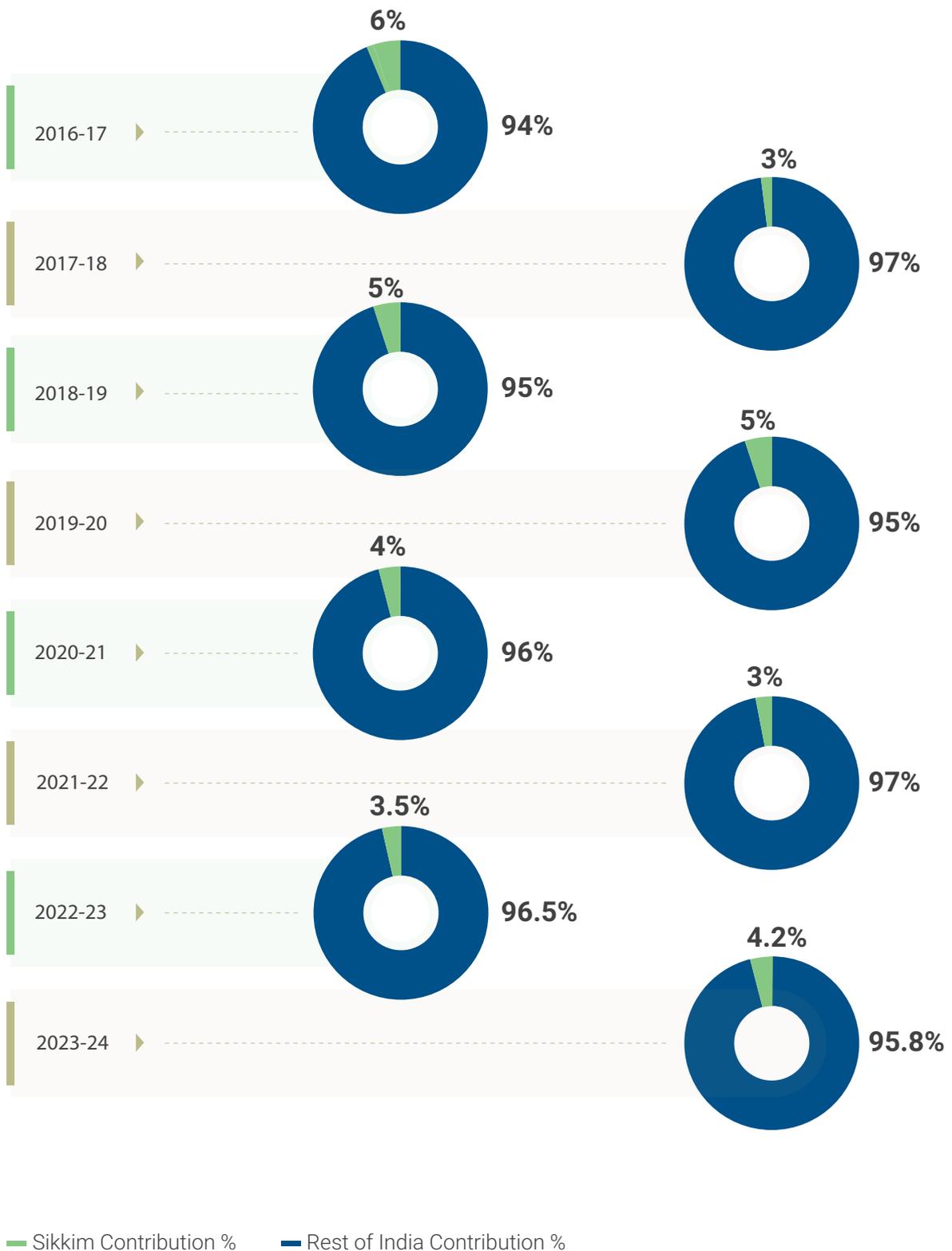


The data illustrates a marked change from 2016-17 to the following years, where Sikkim's dominance in large cardamom production reduced considerably. Despite this decrease,

Sikkim has consistently maintained over half the share of the country's production from 2017-18 to 2023-24, highlighting its continued importance in this agricultural sector.

Source ▶ [20] Spices Board India - Annual Reports

Ginger



The contribution of ginger from Sikkim in the overall national production has decreased to 4.2% in FY 2023-24 from 6% in FY 2016-17.

Source ▶ [21] APEDA – Agriexchange

The data shows that Sikkim has contributed a small fraction to India's ginger production, with the vast majority coming from other regions of India.

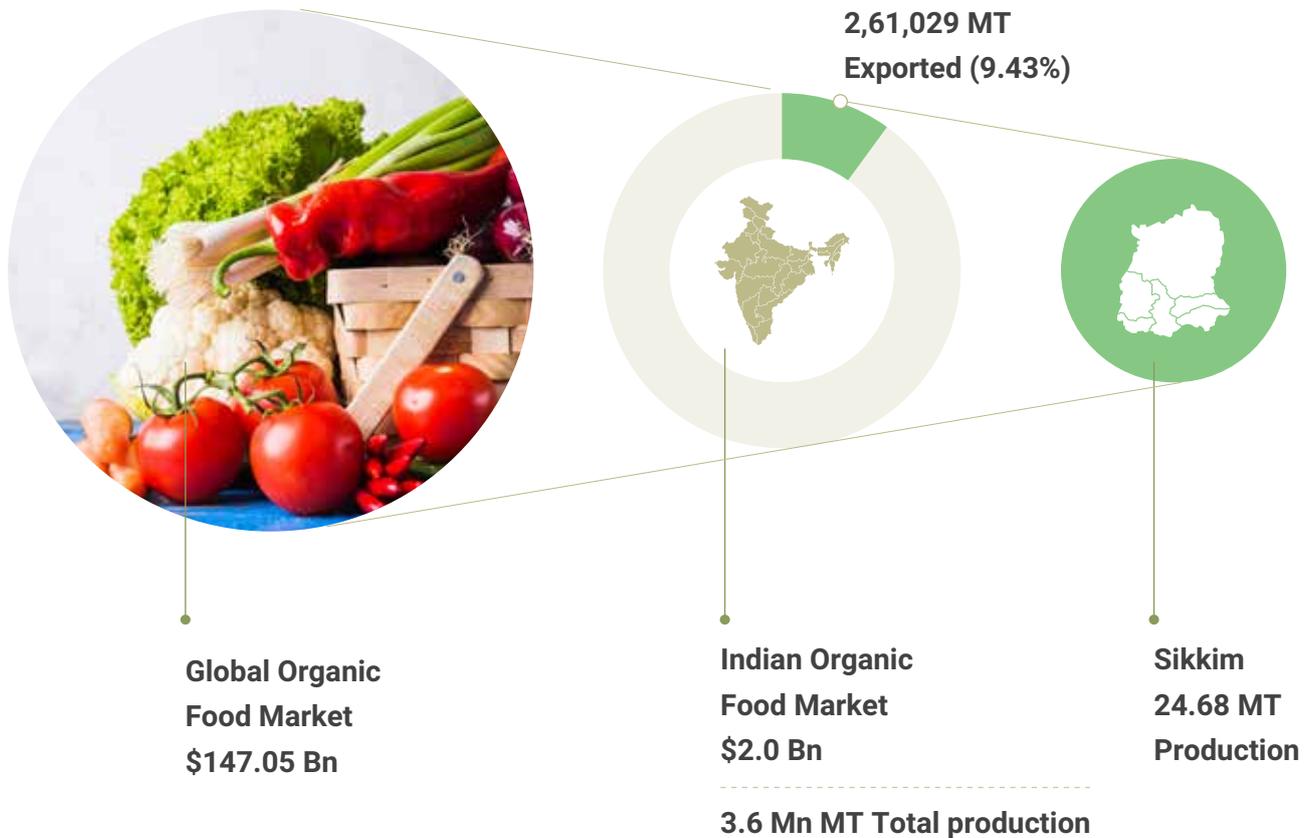
Prospective Market for Organic Farm Product 2023

The global organic food market size has grown rapidly in recent years. **It is expected to grow from \$147.05 Bn in 2023 to \$300 Bn in 2035 at a CAGR of 7.45%.**

Market Trend for Organic Farm Produces

The organic food market has witnessed remarkable growth in recent years, with consumers increasingly opting for healthier and more sustainable food choices.

The global organic food market was valued at **\$147.05 Bn** in 2023. Indian organic food market was valued at **\$2.0 Bn** and accounted for **1.4%** of the global market in 2023.



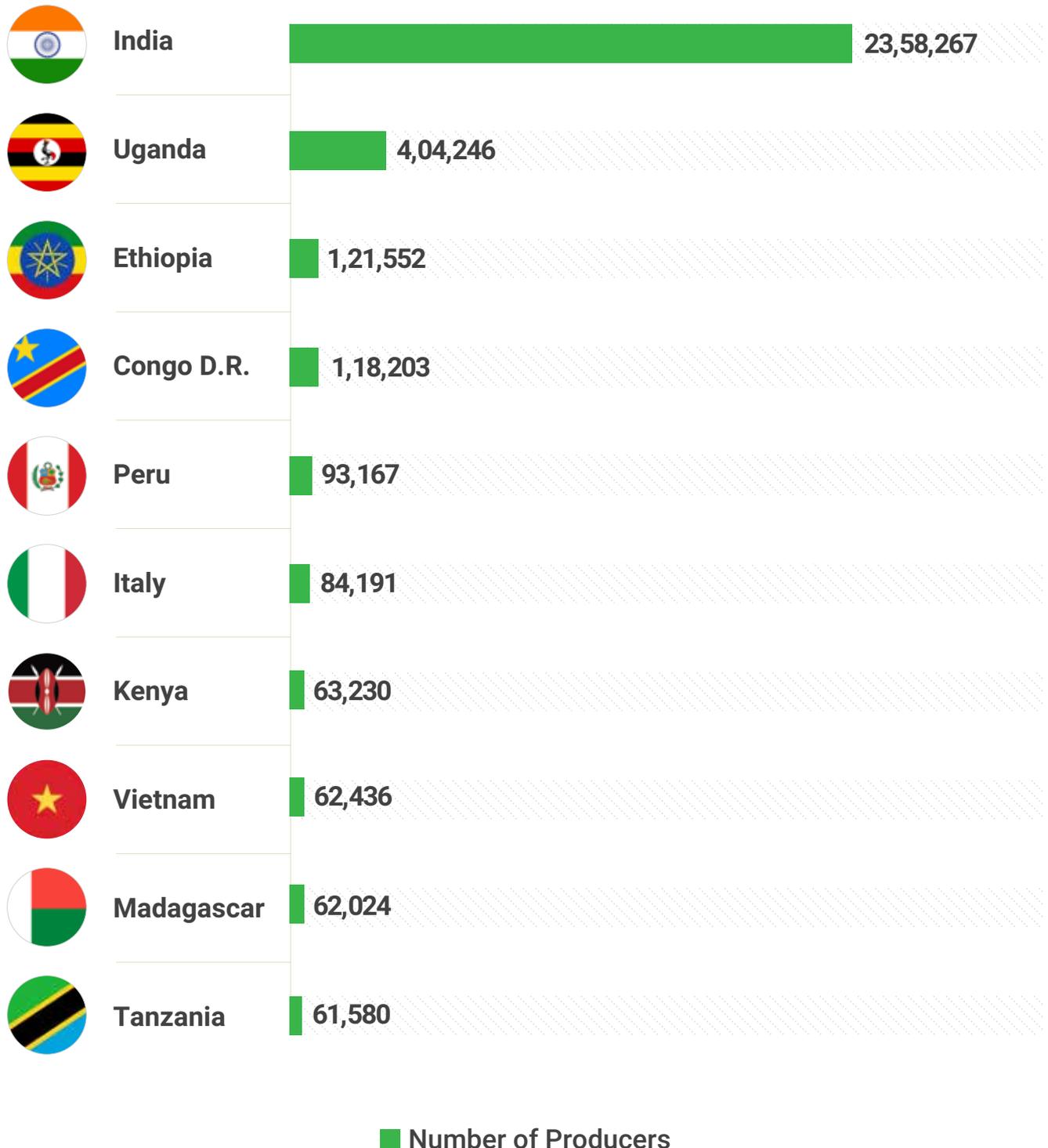
Source ▶ [22] FiBI & IFOAM -Organics International The World of Organic Agriculture 2025
 [23] Crisil & APEDA Report - Study of Indian Organic Market & Export Promotion Strategy 2024
 [24] APEDA NPOP Portal

World Organic Market: Key Indicators and Top Countries

Indicator	World	Top countries
▶ Countries with organic activities	2023: 188 Countries	
▶ Organic agricultural land	2023: 98.9 Mn ha (2000: 15 Mn ha)	Australia ▶ 53.0 Mn ha India ▶ 4.5 Mn ha Argentina ▶ 4.0 Mn ha
▶ Organic share of total agricultural land	2023: 2.1%	Liechtenstein ▶ 44.6% Austria ▶ 27.3% Uruguay ▶ 25.4%
▶ Increase of organic agricultural land 2022/23	2.5 Mn ha (+2.6%)	Uruguay ▶ 8,31,287 ha (+30.3%) China ▶ 5,22,267 ha (+18%) Spain ▶ 3,16,550 ha (+11.8%)
▶ Wild collection and further non-agricultural areas	2023: 30.2 Mn ha (1999: 4.1 Mn ha)	Finland ▶ 6.9 Mn ha China ▶ 2.9 Mn ha India ▶ 2.9 Mn ha
▶ Producers	2023: 4.3 Mn Producers (1999: 2,00,000 Producers)	India ▶ 23,58,267 Uganda ▶ 4,04,246 Ethiopia ▶ 1,21,552
▶ Organic market	2023: \$ 147.5 Bn (2000: \$ 16.3 Bn)	US ▶ \$ 63.79 Bn Germany ▶ \$ 17.41 Bn China ▶ \$ 13.62 Bn
▶ Per capita consumption	2023: \$ 18.4	Switzerland ▶ \$ 506 Denmark ▶ \$ 391 Austria ▶ \$ 316
▶ Number of countries/ territories with organic regulations	2023: 75 (Fully Implemented) 14 (Drafting)	

Source ▶ [25] FiBL & IFOAM -Organics International The World of Organic Agriculture 2025

Top 10 Countries with the Most Organic Producers 2023

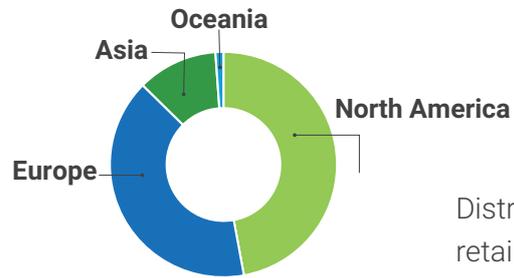


Source ▶ [26] FiBL & IFOAM -Organics International The World of Organic Agriculture 2025

Retail Sales of Organic Products

World
\$ 147 Bn

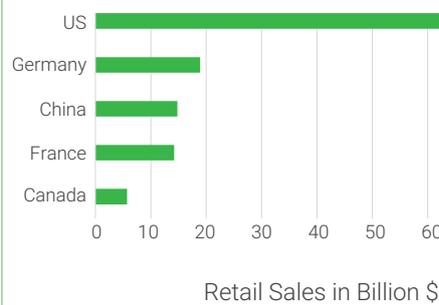
The largest single market was the US with \$ 63.8 Bn, followed by the European Union (\$ 50.3 Bn). By region, North America had the lead (\$ 69.1 Bn) followed by Europe lead (\$ 59.1 Bn) and Asia (\$ 16.8 Bn).



Distribution of retail sales by region 2023.

Northern America
\$ 69 Bn

The countries with the largest markets for organic food were the US with \$ 63.8 Bn, Germany (\$ 17.4 Bn), China (\$ 13.6 Bn) and France (\$ 13.1 Bn).

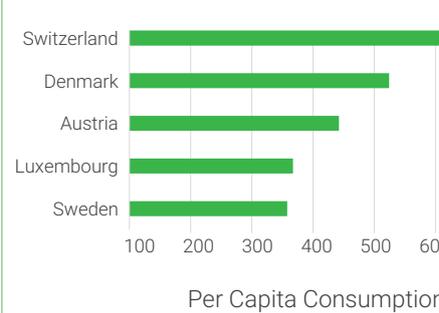


The five countries with the largest markets for organic food in 2023.

\$ 506

spent per person in Switzerland

Switzerland had the highest per capita consumption worldwide, followed by Denmark, Austria, Luxembourg, and Sweden.

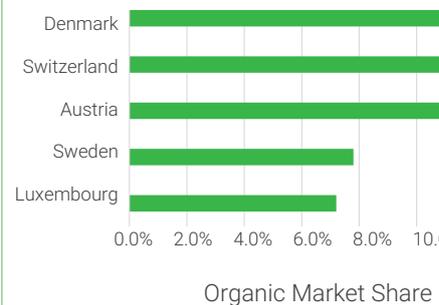


Top five countries with the highest per capita consumption 2023.

12%

of the market in Denmark was organic

The highest organic share of the total market was in Denmark, followed by Switzerland, Austria, Sweden and Luxembourg.



The five countries with the highest organic shares of the total market in 2023.

The increasing demand for organic products in the US reflects a growing consumer awareness and preference for foods and goods that are produced using methods that are environmentally sustainable and free from

synthetic fertilizers and pesticides. This trend has opened up expansive avenues for Indian exporters, who offer a diverse array of organic commodities ranging from processed foods to medicinal plant products.

Source ▶ [27] FiBL & IFOAM -Organics International The World of Organic Agriculture 2025



Global Consumer Mindset



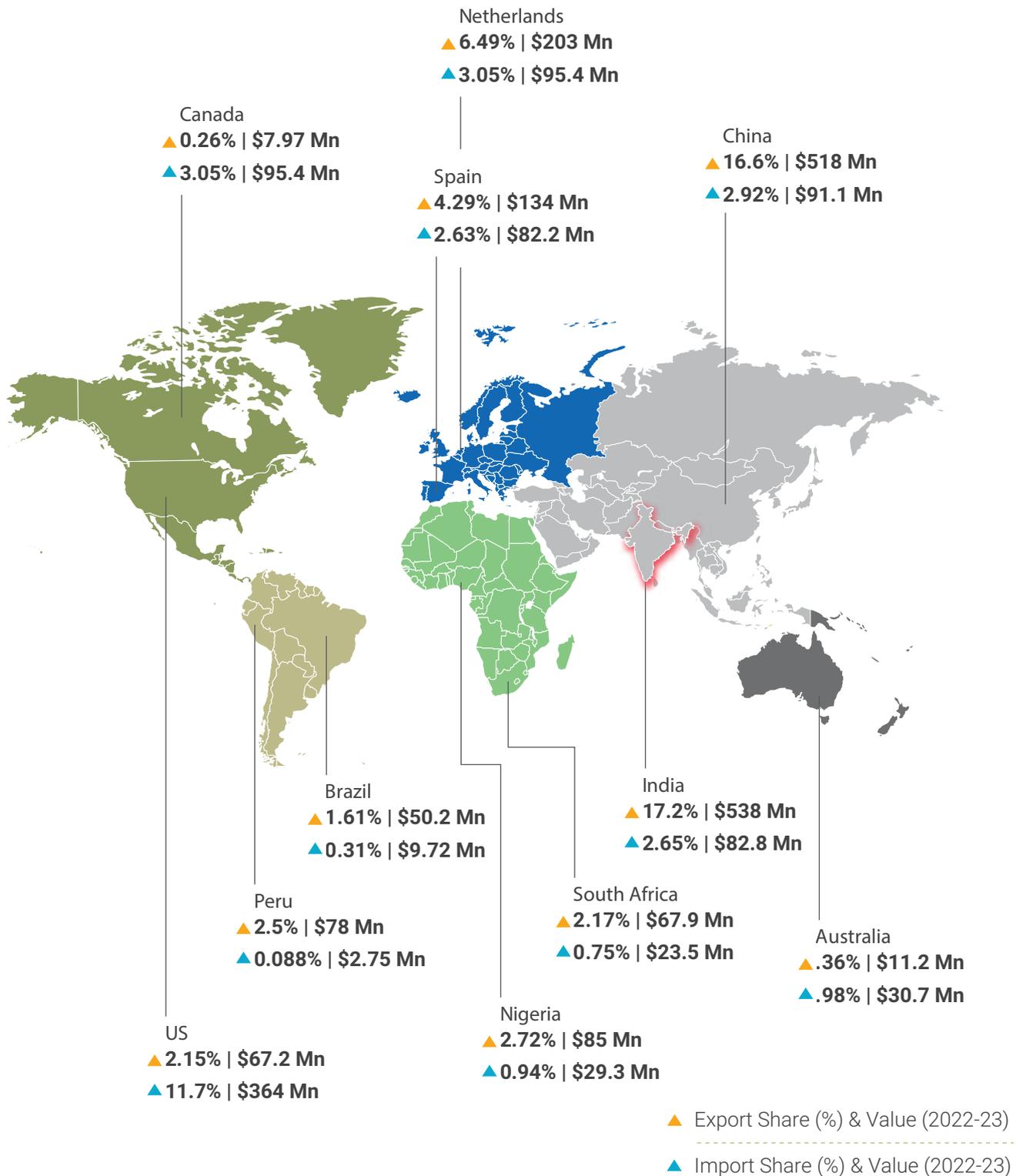
In a study conducted by Mintel, it becomes evident that **Western consumers are increasingly gravitating towards organic products, showcasing a significant shift in mindset towards health, wellbeing, and environmental concerns.**

Following are some of the trends that have been observed.

- ▶ Launch of organic food and drink globally have increased from **6%** to **10%** between August 2009 and July 2019.
- ▶ Europe leads in organic food and drink innovation, with nearly a fifth of all new products carrying an organic claim.
- ▶ France, Germany, and Spain are the top innovators in the European organic market.
- ▶ North America's organic food and drink launches rose from **9%** in 2009 to **15%** in 2019.
- ▶ Asia Pacific, Latin America, and the Middle East and Africa saw a slight increase in organic launches, with around **4%** of food and drink launches being organic in these regions from August 2018 to July 2019.
- ▶ The European organic sector has seen a growth in products with "suitable-for" (free-from) and ethical claims, rising to **43%** and **41%** respectively.
- ▶ Almost half of the vegan food and drink products launched in the past twelve months were also organic.
- ▶ Young consumers, particularly Spanish Gen Z are more price tolerant for organic products

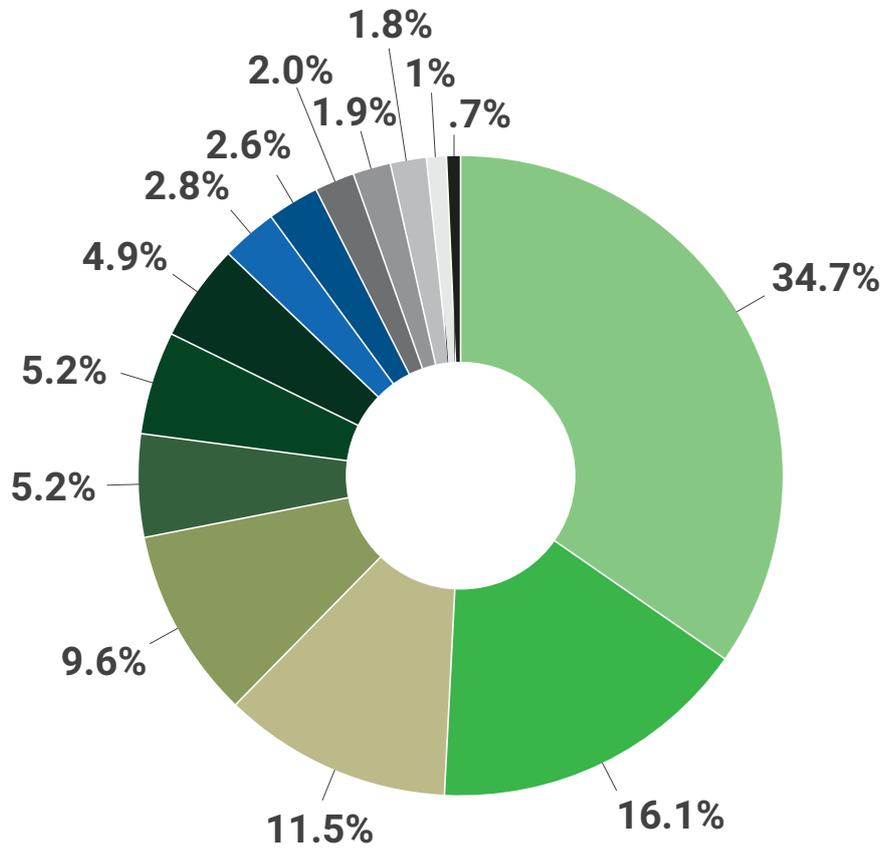
Global Spice Market

The global organic spice market is driven by increasing consumer demand for natural and healthier food options. As people become more health-conscious and seek products free from synthetic additives, organic spices offer a flavorful and sustainable choice that aligns with these preferences.



Source ▶ [29] The Observatory of Economic Complexity

Major Contributor in Indian Spice Export Basket 2023-24



Items	Value (₹Lakhs)
Chilli	12,49,248.45
Cumin	5,79,723.43
Spice Oil & Oleoresins	4,12,300.59
Mint Products	3,43,919.81
Turmeric	1,87,586.79
Others	1,86,808.08
Curry Powder/Paste	1,75,727.66

Items	Value (₹Lakhs)
Cardamom(s)	99,959.85
Coriander	94,820.97
Pepper	73,648.88
Fennel	66,960.91
Ginger	64,688.57
Other Seeds	36,177.50
Fenugreek	26,612.76

Source ▶ [30] Spices Board India

Rising Demand for Sikkim's Products in the International Market

Consumers worldwide are becoming more health-conscious and environmentally aware, seeking products that are not only beneficial to their health but also sustainably produced. There is an opportunity for Sikkim as a fully organic state to capitalize on this trend by positioning itself as a premier source of high-quality, organic products on the global stage.

Indian Cash Crops Export

		Large Cardamom	Ginger	Turmeric
2017-18	Qty of Export (MT)	760	22,605	1,07,300
	Value of Export (₹ Lakh)	5,646	21,607	1,03,567
2018-19	Qty of Export (MT)	1,040	18,150	1,33,600
	Value of Export (₹ Lakh)	7,505	19,602	1,41,616
2019-20	Qty of Export (MT)	1,310	60,410	1,37,650
	Value of Export (₹ Lakh)	7,090	52,905	1,28,690
2020-21	Qty of Export (MT)	1,220	1,45,974	1,83,868
	Value of Export (₹ Lakh)	9,636	84,982	1,72,264
2021-22	Qty of Export (MT)	1,981	1,45,974	1,52,758
	Value of Export (₹ Lakh)	15,448	83,651	1,53,442
2022-23	Qty of Export (MT)	1,884	50,885	1,70,085
	Value of Export (₹ Lakh)	13,720	43,246	1,66,699
2023-24	Qty of Export (MT)	1,281	60,833	1,62,019
	Value of Export (₹ Lakh)	14,815	64,689	1,87,587

Source ▶ [31] Spices Board India - Annual Reports

Top 4 Destinations Accounts for ~90% of the Total Indian Organic Export (FY 2024)



Canada | 4% share

Major categories exported

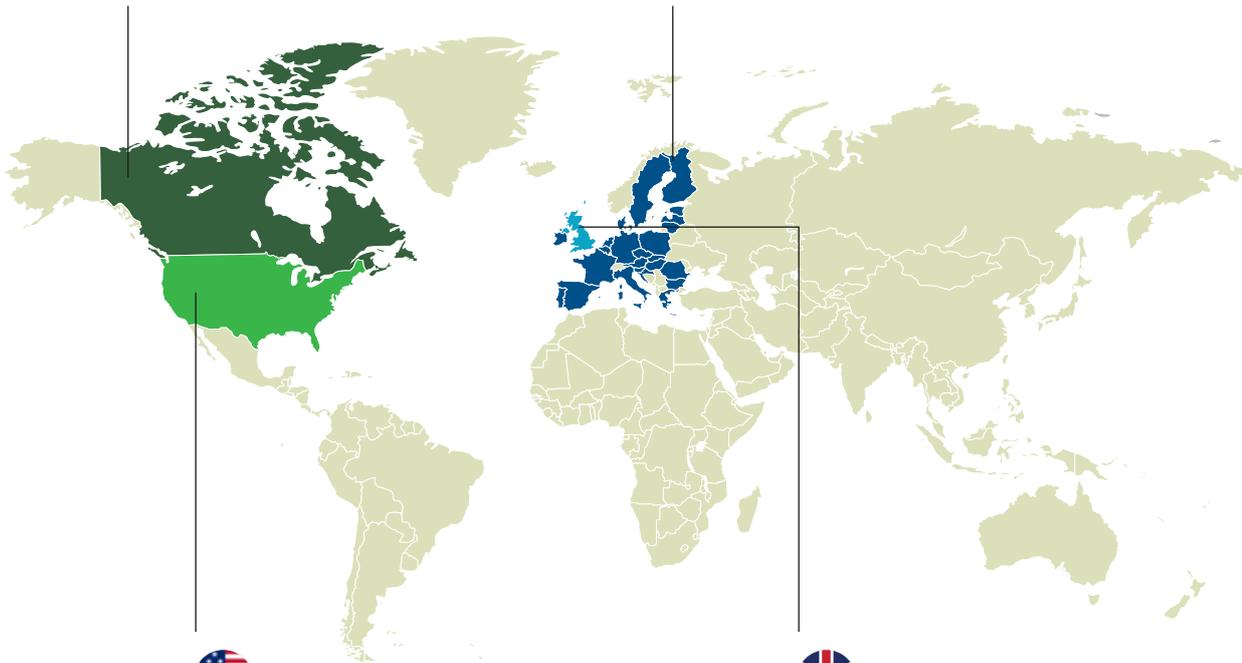
- ▶ Processed food (50%)
- ▶ Oilseeds (19%)
- ▶ Medicinal plant products (10%)
- ▶ Pulses (7%)
- ▶ Cereals & Millets (4%)



European Union | 33% share

Major categories exported

- ▶ Cereals & Millets (23%)
- ▶ Processed food (23%)
- ▶ Medicinal plant products (13%)
- ▶ Tea (12%)
- ▶ Coffee (9%)



United States | 49% share

Major categories exported

- ▶ Processed food (29%)
- ▶ Medicinal plant products (18%)
- ▶ Cereals & millets (13%)
- ▶ Spices & condiments (10%)
- ▶ Sugar (6%)



United Kingdom | 4% share

Major categories exported

- ▶ Fodder (23%)
- ▶ Processed food (20%)
- ▶ Tea (16%)
- ▶ Medicinal plant products (13%)
- ▶ Cereals & Millets (9%)

Source ▶ [32] Crisil Report 2024

Potential Export Market for Sikkim's Organic Products

Cash Crop	Turmeric	Ginger	Large Cardamom
Prospective Countries for Export	<ol style="list-style-type: none"> 1. US 2. Germany 3. Malaysia 4. Morocco 5. Netherlands 	<ol style="list-style-type: none"> 1. US 2. Netherlands 3. Germany 4. Japan 5. UK 	<ol style="list-style-type: none"> 1. UAE 2. Pakistan 3. Saudi Arabia 4. US 5. UK

Turmeric

The Global Turmeric Market size was forecasted to be valued at **USD 4.5 Bn** in 2023. The market is expected to expand at **5.5% CAGR**, generating lucrative revenue by 2033.

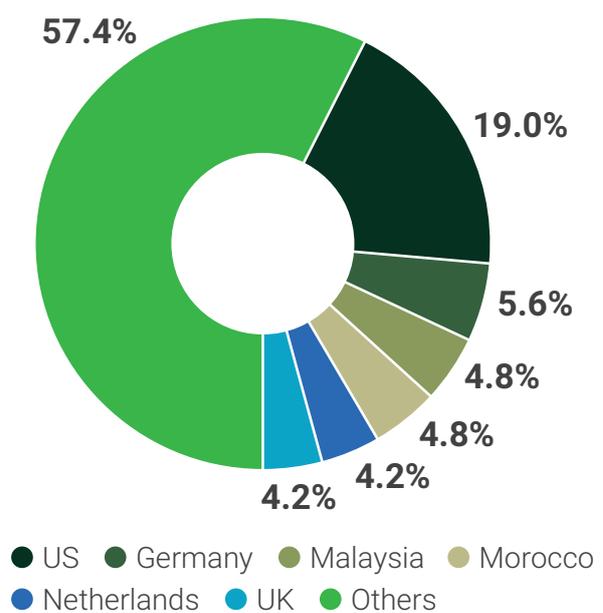
India is the largest producer and exporter of turmeric in the world. India exported **USD 225 Mn** worth of turmeric, making up about **69.7%** of the global turmeric export market in FY 23-24. The state of Telangana was the leading producer of turmeric in India. Maharashtra and Karnataka were second and third in the ranking.

India primarily exports turmeric in the forms of fresh turmeric, dried turmeric, turmeric powder, and turmeric oleoresin. Among these, dried turmeric sees the highest demand, while turmeric oleoresin is experiencing the fastest growth rate.

In FY 2023-2024, the US emerged as the largest importer of turmeric, with significant demand also coming from Malaysia, Morocco and European countries such as Germany and the Netherlands.

These countries can be seen as potential consumers for organic turmeric produced in Sikkim. Given the global trend towards healthier and more natural food ingredients, organic turmeric from Sikkim can stand out as an attractive option for these markets.

Import % Turmeric 23-24



Source ▶ [33] Tridge - Global Agri-Food Data
 [34] Ministry of Food Processing Industries

Ginger

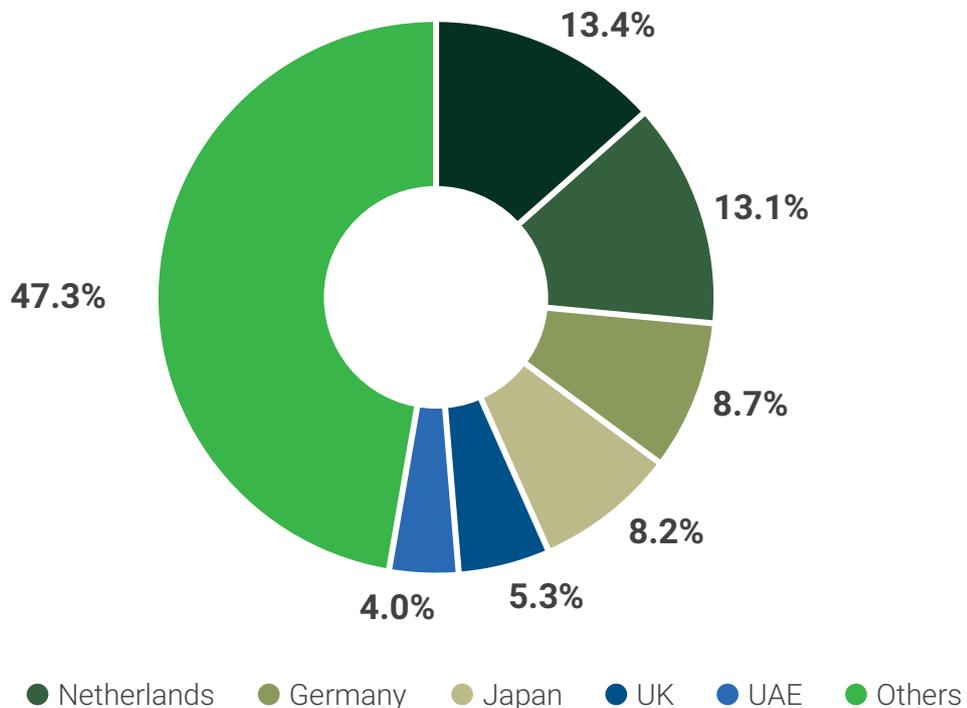
The Global Ginger Market size was valued at **USD 4.5 Bn** in 2023 and is estimated to grow at a CAGR of around **6.9%** during the forecast period, i.e., 2024-30.

India is Sixth largest exporter of Ginger. In FY 23-24, India exported ginger worth **\$77.6 million**, accounting for nearly **6.5%** of global exports. The state of Madhya Pradesh, with over 692 TH MT was the leading producer of Ginger in India with share of **31.18%** of India's total production. Karnataka and Assam were second and third in the ranking.

Some of the value-added organic ginger products include ginger oil, oleoresin, candy, puree, powder, beer, and paste. These products are utilized across various industries such as food, pharmaceuticals, cosmetics, and others. The food industry is currently the largest segment for processed organic ginger products due to their wide application in items like breads, bakery goods, smoothies, and curries.

US, Netherlands and Germany were the largest consumer of ginger in FY 23-24 , amounting to 35 % of the total exported value. Japan, UK and UAE also created a significant demand. These nations could potentially be key buyers of Sikkim's organic ginger.

Import % Ginger 23-24



Source ▶ [35] Tridge - Global Agri-Food Data

Large Cardamom

The global cardamom market, including large cardamom, is projected to grow significantly. Between 2022 and 2027, the market is expected to increase by USD 185.83 Mn, with a growth rate (CAGR) of **3.12%**.

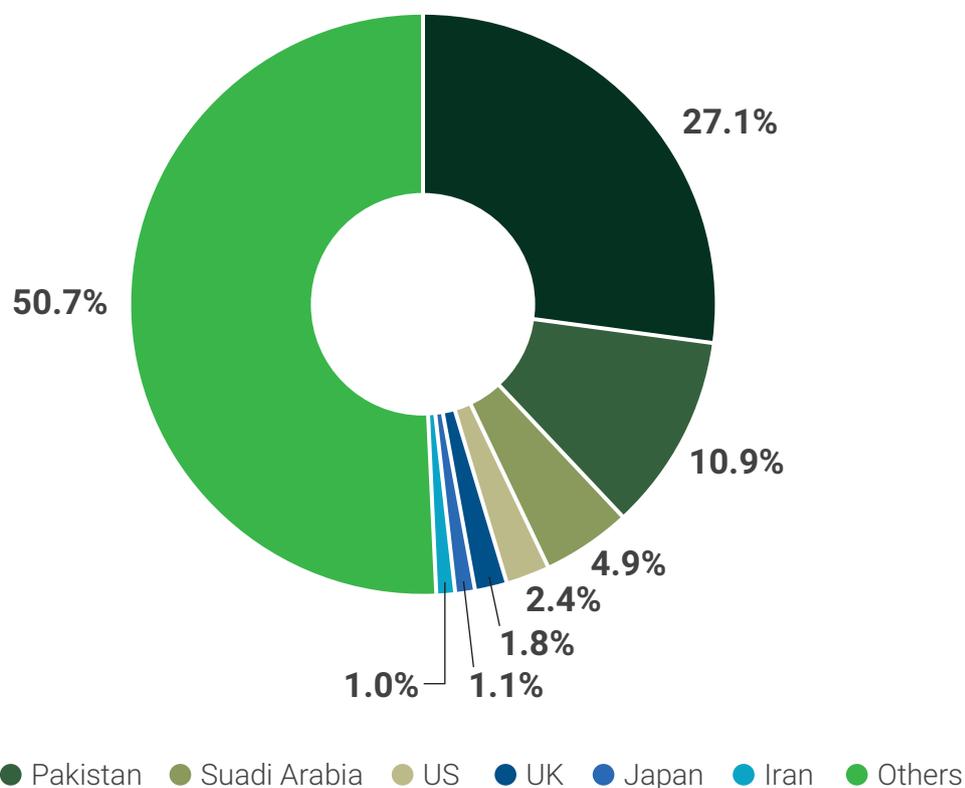
Large cardamom is native to Bhutan, India, and Nepal. However, most of the large cardamom produced in these countries is exported with little value addition or product diversification. The harvested and dried capsules are typically exported in their raw form, with only basic processing such as tail cutting, grading, and packaging in 40 kg sacks. Exporting value-added products such as cardamom tea masala, cardamom biryani powder, cardamom mouth

freshener, table runners and other products from cardamom stalk fibers can provide increased profit margins and a competitive edge.

Nepal is the world's largest exporter of large cardamom, followed by India and Bhutan. In FY22-23, India exported large cardamom worth **\$17 million**. During the same period, Sikkim produced 6,222 metric tons, accounting for **68.6%** of the country's total large cardamom production.

Some of the major importing countries include United Arab Emirates, Pakistan, Saudi Arabia, the US, UK, Japan and Iran. These nations represent promising markets for organic Large Cardamom cultivated in Sikkim.

Import % Large Cardamom 22-23



Source ▶ [36] Food and Agriculture Organization of the United Nations

Section C Findings



Field Observation



Farm Production

Sikkim's major crops contribute modestly to national production, with ginger accounting for 4.2% of the total output in FY 2023–24

Collection & Processing

Sikkim's capacity to meet sizeable export demands is hampered by having only 19 processing centres, most of which are privately owned and lack large-scale capacity.

Trading

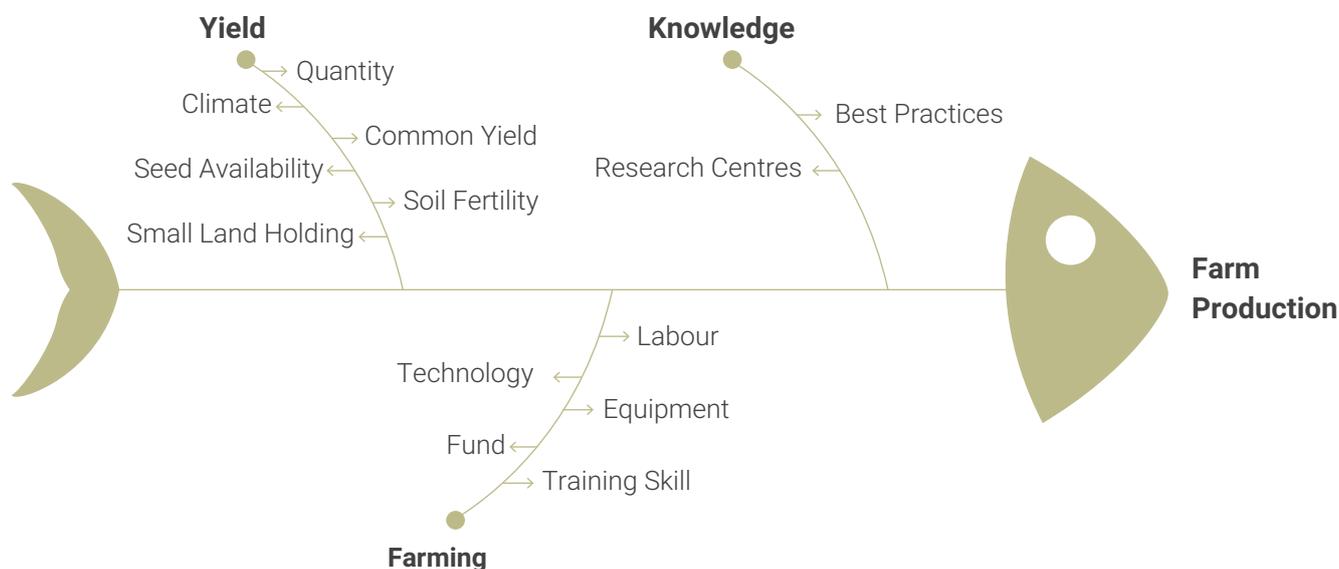
The absence of auction centres in Sikkim compels local dealers to travel to Siliguri and Kalimpong markets in West Bengal to sell their organic produce.

Promotion

The limited use of geographical indication tags for Sikkim's organic produce hinders the state's efforts to promote and protect its distinctive identity and enhance its market reputation.



Farm Production



The farm production in Sikkim is dependent on several factors, primarily revolving around the quality of yield, farming techniques employed by farmers, and their overall knowledge of agricultural practices. These three factors are interconnected, collectively impacting farm output in the region.

Yield

- ▶ The government supplies organic seeds to farmers free of charge. However, farmers have a perception that these seeds are not of good quality due to low yield.
- ▶ The inaugural seed bank was established in Lingee, South Sikkim, in 2020. This initiative aims to identify, preserve, and rejuvenate indigenous crop species and varieties.

However, there is still shortage of seed banks in Sikkim contributing to the loss of traditional and indigenous crop varieties.

- ▶ In Sikkim, small and marginal farmers account for more than 79% of the total land holdings but possess only 39% of the area. From the below table, it can be observed that the average land holding of small/marginal farmer is only 0.62 ha.

Classification of Holding	Land Holding		Area	
	Nos.	% to total	In ha	% of total
<= 1 ha	44,294	61.92%	18,073	19.88
>1 To <=2 ha	12,767	17.85%	17,756	19.54
>2 To <=10 ha	14,104	19.72%	48,722	55.64
>10 ha	367	0.51%	6,315	6.94
Total	71,532	100	90,865	100

*Data as published in state focus paper 2024-25

Source ▶ [37] NABARD - State Focus Paper 2024-25

- ▶ Climate change impact at the global level has become a major concern today and Sikkim is no exception. The climate change has contributed to unpredictable or erratic rainfall pattern, drying up of local springs and streams, shift of sowing and harvesting period of crops, etc.
- ▶ The production of organic products in Sikkim, represents a growing opportunity within India's organic sector. While the current production base is relatively modest, it offers significant potential for scaling up and achieving threshold volumes for broader distribution through strategic market channels. For example, while **ginger is one of the major producing crop in Sikkim, but its share in national production for the FY 2023-24 is modest 4.2%.**
- ▶ Protecting crops from monkeys and wild animals is a major issue which has increased in the last two years.
- ▶ Youth in Sikkim prefer to join other occupations than farming. So there is an acute shortage of labourers which forces farmers to manage most tasks independently without any labour support.
- ▶ Farmers in Sikkim also face lack of funds to build barriers or nets to protect their crops or even buy small processing tools which would help them with a better bargain. Lack of awareness regarding various funding and insurance schemes such as Prime Minister Fasal Bima Yojna further disincentivizes organic farming.

Farming

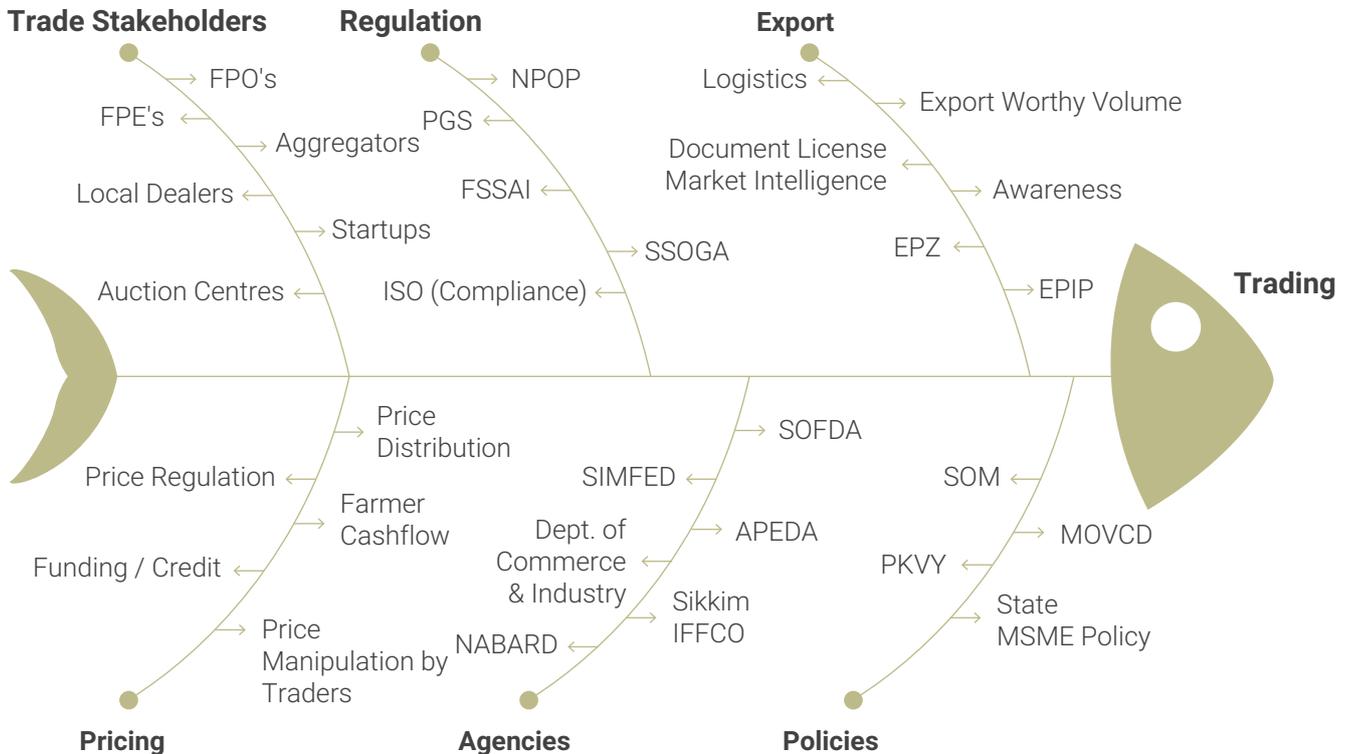
- ▶ The challenges in organic farming in Sikkim include frequent pest and disease outbreaks and the limited availability of organic inputs to address them, resulting in reduced yields.
- ▶ Farmers are migrating to lowland areas such as Siliguri as there is no ban on using chemicals in farming leading to high yield which they export and even supply to other states including Sikkim.



Knowledge

- ▶ Generally, volumes produced get grouped by farmers & sold alongside the road. But ideally, produce should be aggregated at assembly points. Also, presently, due to infrastructure gaps, laborers carry the produce on their heads, leading to quantity losses.
- ▶ The state adopted organic farming in 2003. To promote organic farming, Ministry of Agriculture in 2016 approved the setting up of National Organic Farming Research Institute (NOFRI) in Gangtok, Sikkim, to extend research and technological support to organic farming systems in the country. However, more such research centres should be opened in Sikkim focusing on organic products.

Trading



There are six major aspects that affect trading of organic products in Sikkim. Breaking down the causes (problems/issues) under each major bone of the fishbone analysis, ultimately leading to understand the effect of impacting the trading of organic produce in Sikkim:

Trade Stakeholders

- ▶ Farmers prefer to deal in the traditional engagement of trading of farm products due to which local dealers get the most profit by purchasing the goods directly from farmers at a cheaper price and selling at a high margin.
- ▶ Though Govt has implemented a better trade ecosystem with establishment of FPOs, the expertise of FPOs is not being utilised by farmers as they are directly dealing with local dealers.
- ▶ There are no auction centres available in Sikkim, requiring local dealers to travel to Siliguri and Kalimpong markets of West Bengal for selling organic produce.
- ▶ There is lack of aggregation of organic products in the state leading to organic products getting sold along with conventional crops at Siliguri, Kolkata and Delhi. Therefore, the yields don't get the price appreciation.

Regulations

- ▶ For export of organic products, it has to be certified by an accredited certification body under NPOP.
- ▶ Trade of organic products is through transaction certificates issued by the accredited certification bodies. It ensures traceability of the organic products across the supply chain.
- ▶ PGS-India standards have been defined in tune with National Standards for Organic Production (NSOP) prescribed under National Programme for Organic Production (NPOP) to maintain uniformity in organic production process and quality of organic products in the country.
- ▶ Exporters are subject to periodic inspections and audits to retain their organic status. Non-compliance may result in suspension or cancellation of certification.

Export

- ▶ **Sikkim's only airport, Pakayong airport does not support cargo movement.** There is no railway station located in Sikkim. This leads to lengthy process and time-consuming transportation of farm products to get evacuated from Sikkim to nearest port / airport city.
- ▶ The terrain of Sikkim is challenging as the road infrastructure does not allow the movement of heavy vehicles adding to the cost of logistics. Most of the roads except the national highways can only accommodate vans and small trucks of 2 to 4 Ton capacity for carrying goods.
- ▶ Delay in issuing export licenses occurs due to a lack of awareness regarding the required documentation.
- ▶ Sikkim faces hurdle in consolidating enough yield to make exports economically viable. Therefore, there is currently no major export demand.



Policies

- ▶ Sikkim state has implemented MSME policy, intended to provide support to small and medium scale industries. With support of Central Govt., MSME-development & facilitation office has been established at Gangtok, Sikkim for techno-economic support to the small enterprises.
- ▶ However, there is shortage of fund with the state for organizing large scale training programs like Entrepreneurship Development Programs, Skill Development Programs, Management Programs, etc.
- ▶ In Year 2023, MSME division had taken many developmental initiatives. More focused approach is required for promoting export from the state.
- ▶ Mission Organic Value Chain Development (MOVCD) for North Eastern Region's organic policy aims at development of entire value chain starting from inputs, seeds, certification, to the creation of facilities for collection, aggregation, processing, marketing and brand building initiative.
- ▶ An assistance of Rs. 46,575/ha for 3 years is provided under MOVCD for creation of FPO, support to farmers for organic inputs, quality seeds/planting material and training, hand holding and certification. Financial assistance of Rs 32500/ ha for 3 years is provided to farmers for on- farm /off –farm organic inputs under the scheme.
- ▶ As per the report published in Open Government Data Platform India, farm area of **16,650** Ha had been cultivated in year 2021-22 under MOVCD, out of **78,000** Ha of agricultural land of the state, which is merely **20%** utilization.

Agencies

- ▶ In Sikkim, various agencies are functioning including, NABARD, Sikkim IFFCO, APEDA, SOFDA, SIMFED for supporting, promoting, processing and marketing the organic products.
- ▶ There is lack of coordination amongst various agencies in promoting the export activities and spreading awareness, which limits their ability to support the ecosystem.

Pricing

- ▶ Sikkim's organic market suffers due to a lack of price discovery on real-time basis. This allows local dealers to potentially manipulate prices, harming both producers and consumers.
- ▶ Farmer prefers selling in local market due to faster realisation of cash as compared to selling in organised market.



Promotion



Schemes

- ▶ Businesses in Sikkim are missing out on financial support due to insufficient outreach programs which fail to effectively inform them about available assistance schemes.
- ▶ PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth) – PM PRANAM was launched with aim to promote the balanced use of chemical and alternative fertilisers, generating awareness of regenerative agriculture.
- ▶ **The Sikkim Skilled Youth Startup Scheme suffers from low youth engagement leading to under-utilisation of the potential.**
- ▶ There is a communication gap which hinders entrepreneurs from accessing and understanding opportunities under the Prime Minister's Employment Generation Programme initiative.

Identity

- ▶ There is a missing identity of organic produces like ginger, turmeric, and large cardamom in world.
- ▶ Sikkim's signature organic products, including ginger, turmeric, and large cardamom, lack intellectual property protection in the form of Geographical Indication. This absence limits the state's ability to safeguard the unique identity and market reputation associated with its organic produce.

Activities

- ▶ Limited tailored training programs to address the specific needs of local exporters for exporting organic produces.
- ▶ Fewer trade fair events were held, resulting in low footfall and limited participation.

Collection & Processing



The collection and processing of organic produce in Sikkim significantly depend on scaling up the factors mentioned below. As these factors develop, the states' organic produce will reach its maximum potential. They serve as crucial links between production and reaching the end customer, ensuring that Sikkim's organic produce can successfully reach wider markets.

Logistics

- ▶ Small farmers face difficulties in accessing markets and in acquiring market information resulting in post harvest waste. Also, farmers rarely operate as farmer groups due to which they have to endure high production costs because of lack of economies of scale.
- ▶ Sikkim, being a hill state, face challenges in accessing markets due to high transposition costs. This poses a major hurdle for organic producers in reaching consumers efficiently. The average distance between farms and markets is approximately 70 kilometres, compounded by the challenging terrain of the region. This geographical barrier restricts market access for producers, hindering the efficient movement of agricultural produce.
- ▶ Presence of multiple intermediaries in the value chain increases handling charges and freight costs, leading to a build-up in the cost of produce & distribution. Also, it has been observed during our study that organic producers struggle with access to aggregation points and distribution channels, leading to high costs associated with collecting and transporting produce to consumer markets. The lack of organized markets further complicates the situation, with produce moving through informal channels within and outside the state.

Quality Control

- ▶ There is scarcity of lab testing facilities in Sikkim due to which exporters prefer to sell their products to dealers/exporters of other states where these facilities are available. Against the 3 testing laboratories proposed, FSSAI, New Delhi has considered for setting up of 1 laboratory. Proposal for setting up of the laboratory is pending with FSSAI, New Delhi for approval.
- ▶ The Sikkim State Organic Certification Agency has accreditation for undertaking certification as per NPOP. The accreditation for NOP is pending with United States Department of Agriculture (USDA).

Infrastructure

- ▶ While interacting with FPOs during our field visits, they raised the concern of lack of aggregation & storage facilities which hampers their normal functioning. Exporters also highlighted that the lack of aggregation facilities forced them to source from multiple locations across Sikkim thereby compromising on the product standardization.
- ▶ While interacting with exporters, they highlighted that more processing units are required at various districts of Sikkim, though most of the exporters have their own processing units but the capacity of those units is not sufficient to take care of large export orders. **Currently, there are only 19 processing centres as per MOFPI (Ministry of Food Processing Industries, Government of India) and the ones which are there are owned by private players that have limited capacity.**

- ▶ The temperature of Sikkim has increased in recent years & scarcity of cold storages results in high post-harvest losses. Currently, there are only two cold storages in Sikkim located in Melli and Rangpo.
- ▶ According to the report by the Institute of Competitiveness in partnership with Niti Aayog, Sikkim lacks in Expansion of areas under Export Promotion Industrial Parks, Export Processing Zones (EPZs), and Special Economic Zones (SEZs) which directly impact the exports.

Post Harvest Management And Minimizing Losses

- ▶ It has been researched during our study that due to inadequate infrastructure and transportation facilities, around 25% of produce currently goes to waste. Proper storage, packaging, and transportation facilities are essential to minimize wastage and improve overall efficiency in the supply chain. Also, currently, collection happens either through small vehicles or via head loads which leads to adding in the wastage of products and overall price of the product.
- ▶ During the field visits, it was observed that farmers growing ginger and cardamom hardly undertake cleaning, grading, and sorting. Cardamom farmers undertake drying but the produce is sold without proper grading or sorting. As a consequence, farmers are unable to capture the maximum potential value for their crops.

Key Case Studies



Ginger

Ginger cultivation is hampered by frequent mould infestations due to long shipment durations and inadequate storage facilities, significantly impacting quality and marketability.

Large Cardamom

Large cardamom production faces severe challenges during the monsoon season when extensive drying is required, often leading to delays and quality degradation.

Turmeric

Turmeric exports are hindered by inconsistencies in curcumin content across different regions of Sikkim, making it difficult to ensure uniform quality for international markets.

Buckwheat

Buckwheat thrives in Sikkim's climate, but its potential is underutilized due to a lack of processing facilities and limited market linkages, restricting its export growth.



► Case Study 1

Ginger

Ginger, locally known as "Adua" is an important spice/cash crop grown in Sikkim since time immemorial, occupying an area of about 15,278 ha producing 81,815 MT of ginger.

Area of Procurement

Mangalbaria belt of west Sikkim

Following are the main steps involved in transportation of ginger

- Procurement from farmers of West Sikkim
- Pooling/ collection at Birdang factory (operated by SIMFED), West Sikkim within 24 hours of procurement during harvest season.
- Initial grading, sorting and standardization.
- Initial drying in furnace followed by drying under the Sun.
- The entire time consumed from processing to bagging is 2-3 days.
- Further 2 days are required for obtaining the transit certificate and identifying buyer/trader.
- Transportation to Siliguri by Reefer vehicle and which approximately takes 5 hours.
- Accommodation in large container vehicle in Siliguri regulated market and sending to Kidderpore Dock Kolkata which takes approximately 18-20 hours.
- Next step involves loading in small vessel at Kidderpore dock. Sometimes, delays are encountered in placement of vessels at the dock.
- Transshipment of cargo from small vessel to mother vessel en-route to Paris. It takes 18-20 days to reach Paris from Kolkata.
- Further, 2 days are taken for document processing at the receiver destination.



After proper
Grading and
Segregation

Supply Chain of Ginger



Difficulties Faced

- ▶ Long shipment duration, coupled with the perishable nature of ginger, leads to in severe infestation of mould
- ▶ Organic produce perishes sooner than produce with chemical applications. Therefore, consignments get rejected for not being up to mark
- ▶ This leads to payment of penalty for rejected consignment





► Case Study 2

Large Cardamom

Large cardamom, a member of the Zingiberaceae family, is the main cash crop cultivated in the sub-Himalayan state of Sikkim.

Large cardamom's annual production is over 4,500 MT from a total cultivation area of about 23,500 ha. The annual production varies from 4,500 to 5,000 MT.

Area of Procurement

Dzongu areas of North Sikkim

Following are the main steps involved in transportation of large cardamom

- Procurement from farmers of Dzongu.
- Drying and initial processing at village level using locally available fuel source. Cardamom capsules are required to be dried immediately after harvesting to bring down moisture content to less than 10%. This step takes around 15 days.
- Pooling/ collection at collection centre in Singtam where further processing is done. In total it takes 2 days to reach Singtam and complete processing there.
- Further 2 days are required for obtaining the transit certificate and identifying buyers/traders.
- Transportation of Produce to Siliguri. In total 2 days are required to reach Siliguri and complete process of grading , sorting and bagging.
- Next step involves transportation to Mumbai by either air or road. By road it takes approximately 8-10 days and by air time of 1 day is required to reach Mumbai.
- It takes 1-2 days at Mumbai to complete export documentation.
- From Mumbai, exporting to Dubai by air takes approximately 4 hours.
- 2 more days are taken for document processing at Dubai.



Supply Chain of Large Cardamom



Difficulties Faced

- ▶ During the process of drying in the open, large cardamom rots fast during rainy and overcast days
- ▶ High transportation cost
- ▶ Poor road facilities



► Case Study 3

Turmeric

The Turmeric (*Curcuma longa*) is an important spice used conventionally as a natural food colorant and as an additive for imparting to food orange yellow colour, flavor and aroma. It is a major source of the polyphenol curcumin which is responsible for rendering antiseptic and anti-inflammatory property. It is widely used in the cosmetic industry and dye plants.

Popular varieties of turmeric grown in Sikkim - Lakadang, Megha Turmeric 1

Area of Procurement

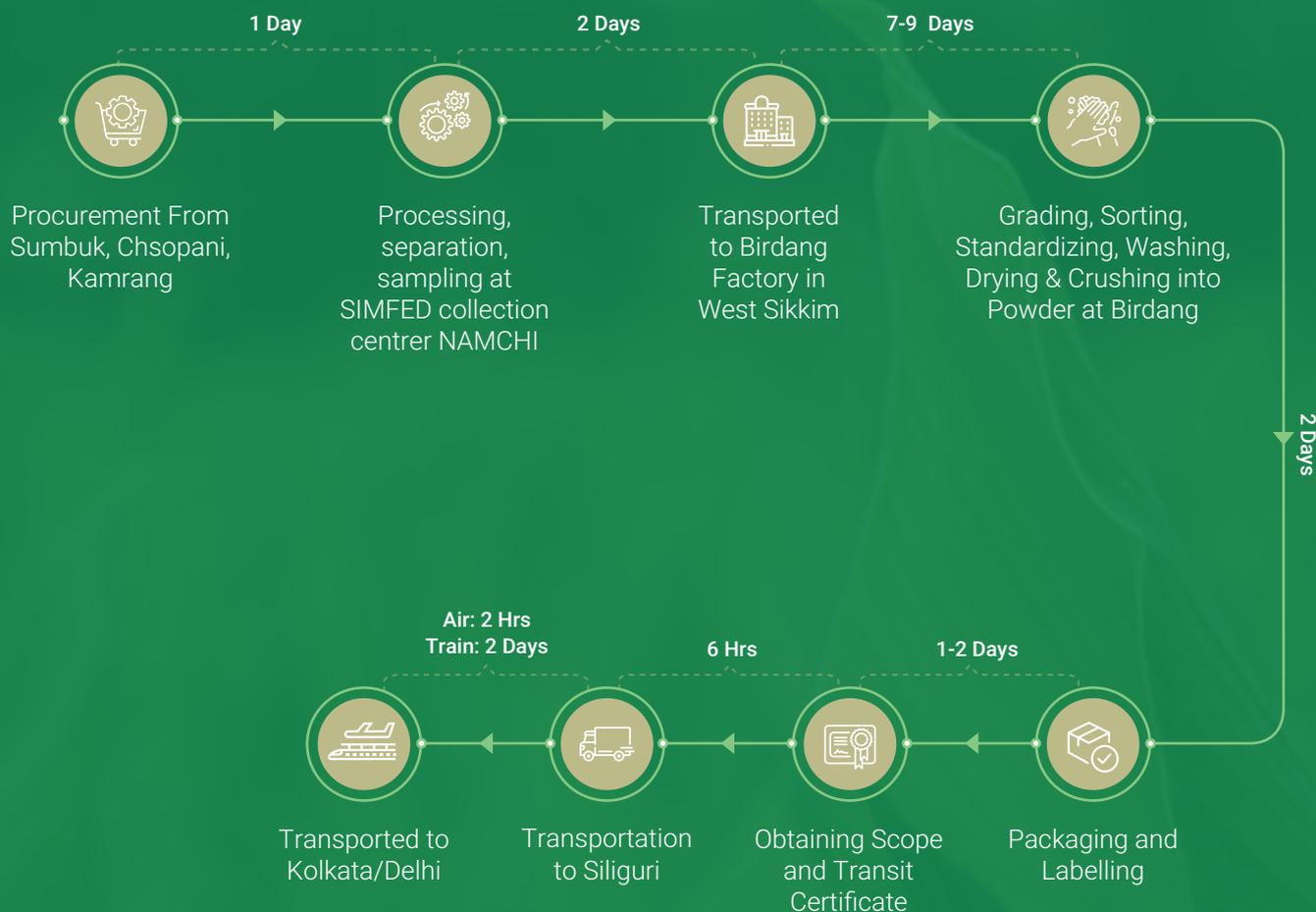
Collected from Namchi - Kamrang, Sumbuk, Chisopani

Following are the main steps involved in transportation of turmeric

- Procurement from farmers of South Sikkim.
- Processing, separation and sampling is carried out at SIMFED collection centre in Namchi which takes around 1 day.
- Further, grading, sorting, standardizing, drying and crushing at Birdang factory takes approximately 7 to 9 days.
- Packaging and labelling in Birdang takes around 2 days.
- After packaging, obtaining of transit certificate is the next step which takes 1 to 2 day.
- Transportation from Birdang factory to Siliguri which takes around 6 hours.
- Transportation to Kolkata/Delhi from Siliguri is either by train or airplane. Train takes approximately 2 days and flight transports within a day.



Supply Chain of Turmeric



Difficulties Faced

- ▶ Variable curcumin content
- ▶ High transportation cost and poor road facilities
- ▶ Challenge in getting transit certificate



► Case Study 4

Buckwheat

Buckwheat is an important crop of the mountain regions, specifically at elevations above 1,400 m. Farmers of the state generally grow buckwheat on residual fertility without adding other nutrient input. However, it removes 47 kg nitrogen, 22 kg phosphorus and 40 kg potassium from the soil for each hectare planted and gives a yield of 1.0 MT/ha. Buckwheat does not respond well to nitrogen fertilization; hence, nitrogen should be applied on soil test value.

Area of Procurement

Procured mainly from Dzongu

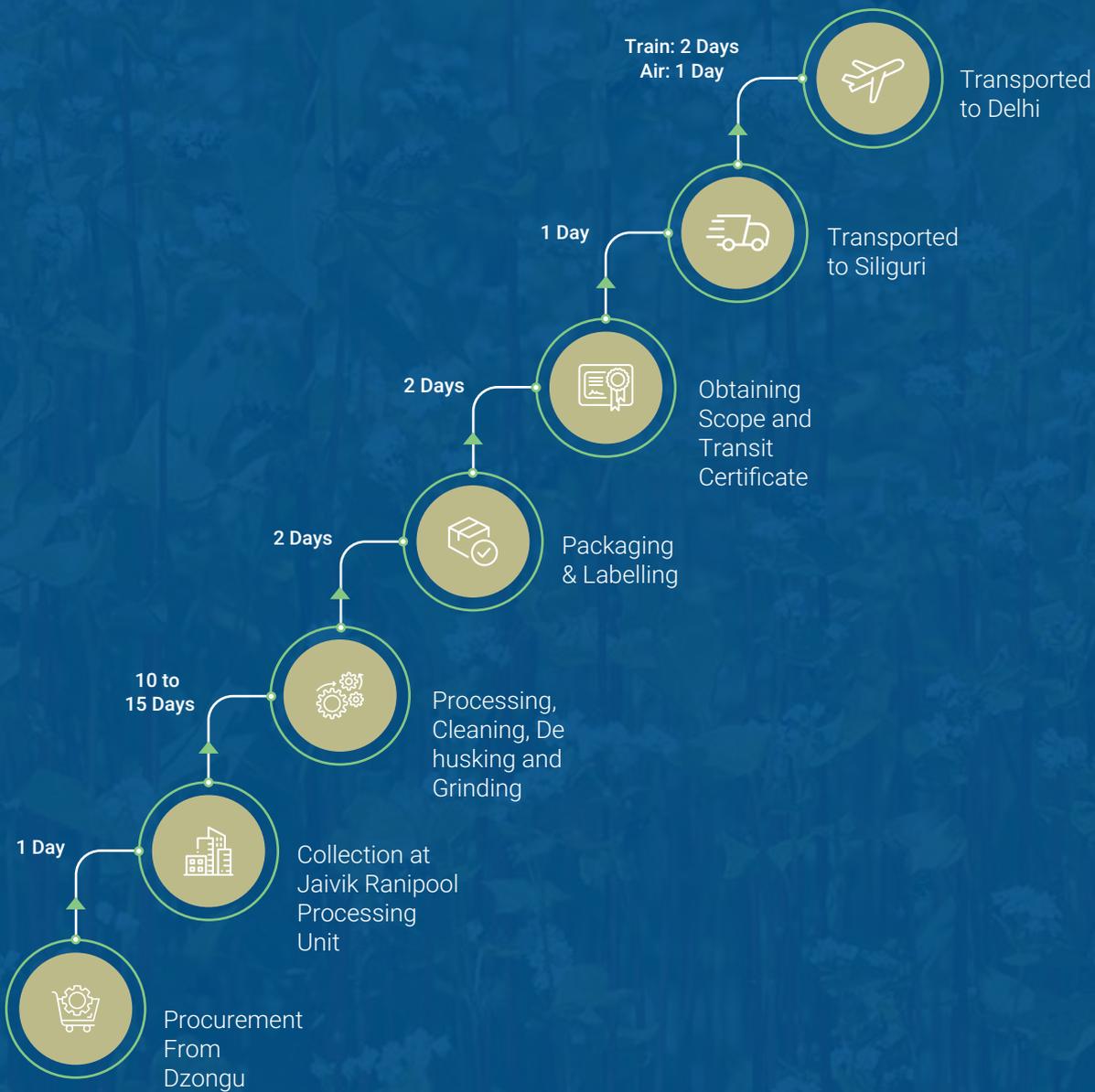
The main steps involved in the transportation of Buckwheat are

- Procurement from farmers of North Sikkim-Dzongu.
- Pooling/ collection at Jaivik Ranipool processing factory, Sikkim which takes around 1 day.
- In processing unit, grading, sorting, cleaning, de-husking and grinding takes place. This stage requires 10 to 15 days.
- Packaging and labelling nearly takes 2 days.
- After packaging, obtaining of transit certificate is the next step which takes 1 to 2 days.
- From jaivik Ranipool processing factory, produce is transported to Siliguri within a day.
- Transportation to Delhi from Siliguri is either by train or airplane. Train takes approximately 2 days and flight transports within a day.





Supply Chain of Buckwheat



Difficulties Faced

- ▶ High transportation cost and poor road facilities
- ▶ Farmers are hoping to be fairly compensated for the extra costs and effort involved in organic production
- ▶ Challenge in getting transit certificate

Key Challenges



Lack of Infrastructure Support

Although APEDA recognizes 120 laboratories under the general category for certifying agricultural food products and 80 specifically for testing organic products, none are situated in the North East, including Sikkim.

Unorganized Aggregation Centres

Farmers often sell their produce in open markets through middlemen due to the lack of formal aggregation centres.

No Price Discovery of Organic Farm Products

Sikkim's organic produce fails to achieve a premium price, often due to reliance on subsidized production costs rather than the unique value proposition of organic produce.

Gaps in Export Awareness

Farmers prefer immediate cash from informal traders over the more demanding formal market and export processes, which require more time, effort, and adherence to stricter quality standards.

Lack of Geographical Indication Tagging

Despite its production potential, Sikkim has limited its GI tag filings to Large Cardamom and Dalle Khursani (Cherry Pepper).

Institutional Challenges

The presence of multiple agencies with overlapping regulatory scopes complicates the testing and certification processes.

High Cost of Export

The high cost of exporting organic produce from Sikkim is primarily due to expenses incurred in transportation, processing, and international trade regulations.

Lack of Infrastructure Support

Organic produce has a short shelf life, which makes its transportation difficult. **Due to Sikkim's poor connectivity, any produce needs to be sent 80–150 km away to Bagdogra airport in West Bengal before it can be exported.** This becomes a huge challenge for marginal farmers living in areas such as the villages in Namchi.

Scarcity of Cold Storage Facilities

In Sikkim the number of cold storages and the capacity is the lowest compared to the neighbouring states. Sikkim has 2 cold storages with the capacity of 2,100 MT whereas Assam has 42 cold storages with a capacity of 2,02,096 MT.

The total production for the horticulture crops in Sikkim was 306.8 Th MT for the year 2023-24 whereas the cold storage capacity in Sikkim is 2,100 MT which is not even 1 % of the total production of the state.

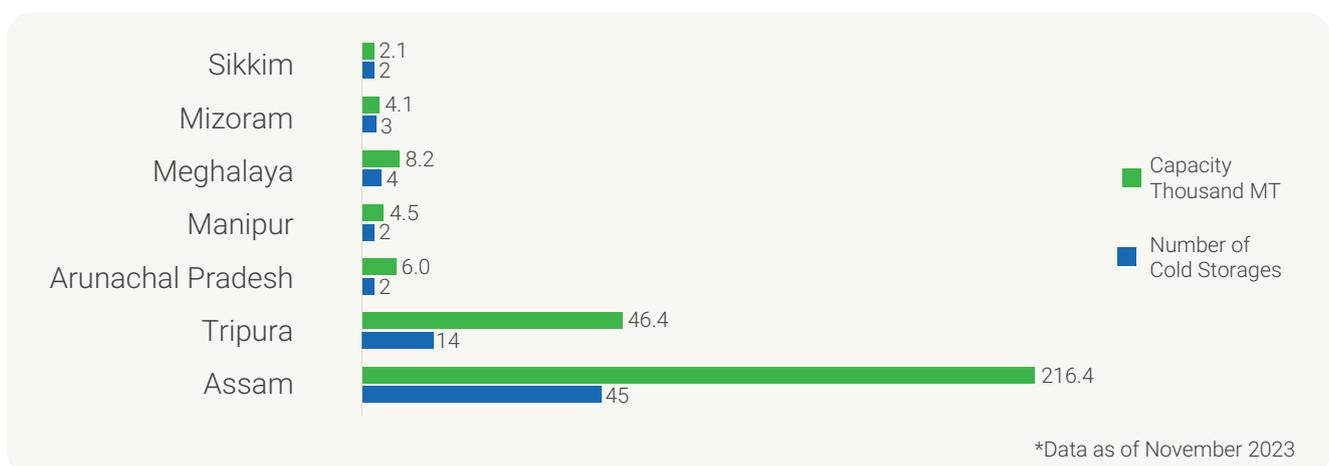
The scarcity of cold storages in Sikkim leads to many problems which hinders the export of organic produce to potential international

markets. For e.g. in case of ginger it was observed that the major constraint in marketing is the lack of proper infrastructure, i.e. space, sheds, storage facilities which results in poor storage of ginger and hampers the overall quality of production.

Transport from the assembly markets to the markets outside Sikkim is expensive, and also restricted to 2 tonne trucks due to bad road infrastructure. This affects the timely dispatch of produce due to which farmers desperately sell the produce at lower prices than the actual potential of the produced crop.

Due to limited aggregation points, farmers are forced to sell their produce in scattered locations. This results in unpredictable and inconsistent deliveries at assembly points. Consequently, traders are forced to travel to various smaller markets to gather enough produce for their needs.

Statewise Distribution of Cold Storages



Source ▶ [39] Press Information Bureau (PIB) - Ministry of Agriculture & Farmers Welfare

No Testing Laboratories

In Sikkim, the lack of access to Export Inspection Council (EIC) laboratories, which are responsible for issuing certifications associated with export market requirements and certifications of all export consignments, poses a big challenge.

Of the 71 approved external labs and 8 inspection-agency-run labs located throughout India, 80% are concentrated in relatively more developed states like Andhra Pradesh, Tamil Nadu, Maharashtra, and Kerala.

The North Eastern Region (NER) does not have a single EIC or external agency laboratory. Agricultural and Processed Food Products Export Development Authority (APEDA) has certified 120 laboratories across India for certifying agricultural and processed food products. However, none are located in the North East. The closest ones are in West Bengal. As a result, samples have to be sent to the neighbouring state for testing, leading to higher costs and delays.

APEDA-certified labs		Organic Product Testing Labs		Export Inspection Council			
All-India	NER	All-India	NER	All-India		NER	
				Approved external laboratory	Inspection agency	Approved external laboratory	Inspection agency
120	0	80	0	71	8	0	0

*As of December 2024

Poor Border Infrastructure

- ▶ Sikkim faces key challenges with its border infrastructure. There are 3 main interstate checkposts, namely Melli, Rangpo, and Rhenock. These border points suffer from poor traffic management. There are long queues of trucks at the border, causing delays in clearance and border transit.
- ▶ Sikkim shares borders with three countries - Nepal, Bhutan and China. There is no formal trade route with Nepal and Bhutan. Between Sikkim and China, Nathu La pass is the border trading post, which remains closed during winter season from December to April.

Source ▶ [40] APEDA certified labs

[41] Export Inspection council

[42] APEDA Organic Testing labs

Unorganized Aggregation Centres

Local Markets & Production Areas of Cash Crops



Large Cardamom
Production Areas



Ginger Production
Areas



Turmeric
Production Areas



Local Area Market

The transition to fully organic agriculture by farmers in Sikkim represents a significant shift towards sustainable farming practices

However, transition to organic farming constitutes various challenges such as the lack of developed post-harvest infrastructure, low farm income and market opportunities.

This hinders the farmers' ability to fully capitalize on the benefits of organic farming.

For horticultural crops, which are a focus in Sikkim, the absence of prompt transportation solutions to commercial centres or cold storage facilities within the state critically affects the quality and shelf life of the produce.



Access to aggregation points is another significant hurdle for Sikkim's farmers, distancing them from vital distribution channels. Most small-scale farmers in Sikkim resort to selling their produce in open markets such as Singtam, Rishi, and Jorethang, either directly to dealers or through middlemen. These middlemen play a crucial role in the local agricultural economy, often visiting farms to collect produce which they then sell to local merchants or wholesalers in larger cities like Siliguri or Guwahati. The reliance on this method is especially pronounced in remote areas with limited road access, where farmers face logistical and financial challenges in bringing their produce to market.

The limited market participation by smallholders is further exacerbated by the lack of market access and supportive mechanisms. This limitation not only depends on the farmers' ability and willingness to engage with the market but also on the functionality of the markets they can access.

For instance, large cardamom producers in West Sikkim, located in isolated hill pockets, typically sell their produce to local aggregators, who collect it at their convenience. This method, while practical, underscores the need for more structured and accessible market systems.

The roles of the Sikkim State Co-operative Supply and Marketing Federation Ltd (SIMFED) and the North Eastern Regional Agricultural Marketing Corporation Ltd (NERAMAC) in the aggregation and distribution of organic produce are crucial.

Operating procurement centres at the sub-divisional level, SIMFED and NERAMAC aim to alleviate some of these challenges by aggregating produce from individual farmers for transportation to markets. Nevertheless, their efforts are often hindered by the absence of organized wholesale markets within Sikkim, which constitutes a significant bottleneck in the supply chain.



No Price Discovery of Organic Farm Products

Organic farm products, notably from regions like Sikkim, offer a unique value proposition due to their sustainable and environment friendly cultivation practices. However, the pricing dynamics for these products, especially organic ginger and buckwheat, reveal a significant disparity between their market value and the prices they actually fetch.

This discrepancy primarily stems from the pricing strategy adopted by Sikkim's farmers, which relies on a production cost analysis. Such an approach often results in undervaluation, as the actual costs of seeds, fertilizers, and crop production are heavily subsidized by the Government of Sikkim, masking the true market cost.

The major portion of the incurred costs relates to collection and transportation, not the actual cultivation. Despite the general expectation that organic products should command a premium due to their quality and sustainable production methods, organic ginger and buckwheat in Sikkim are sold at non-premium prices through the available market channels.

This situation is particularly noticeable in markets like Siliguri and Gangtok, where these organic products are treated as equivalent to non-certified, conventional produce, thus not fetching the premium they deserve.

The prevailing market rate for organic produce typically exceeds that of conventional produce by 25 to 30 percent, a premium that Sikkim's organic ginger and buckwheat fail to achieve.

The distribution and sale of these organic products are further hampered by the absence of organized wholesale markets in Sikkim, leading to direct flows from the collection centres to nearby regulated markets, such as Siliguri in West Bengal. For example, the transport cost of ginger and buckwheat from Jorethang is about Rs 60 per bag (50 kg per bag) for transporting it to Siliguri which is at a distance of 70 kms. This high transportation cost acts as a significant barrier for producers seeking access to better markets that would allow them to secure higher prices for their products. It is only in the famous Lall Bazaar in Gangtok that a section of the market has been cordoned off for FPOs to sell only organic produce.



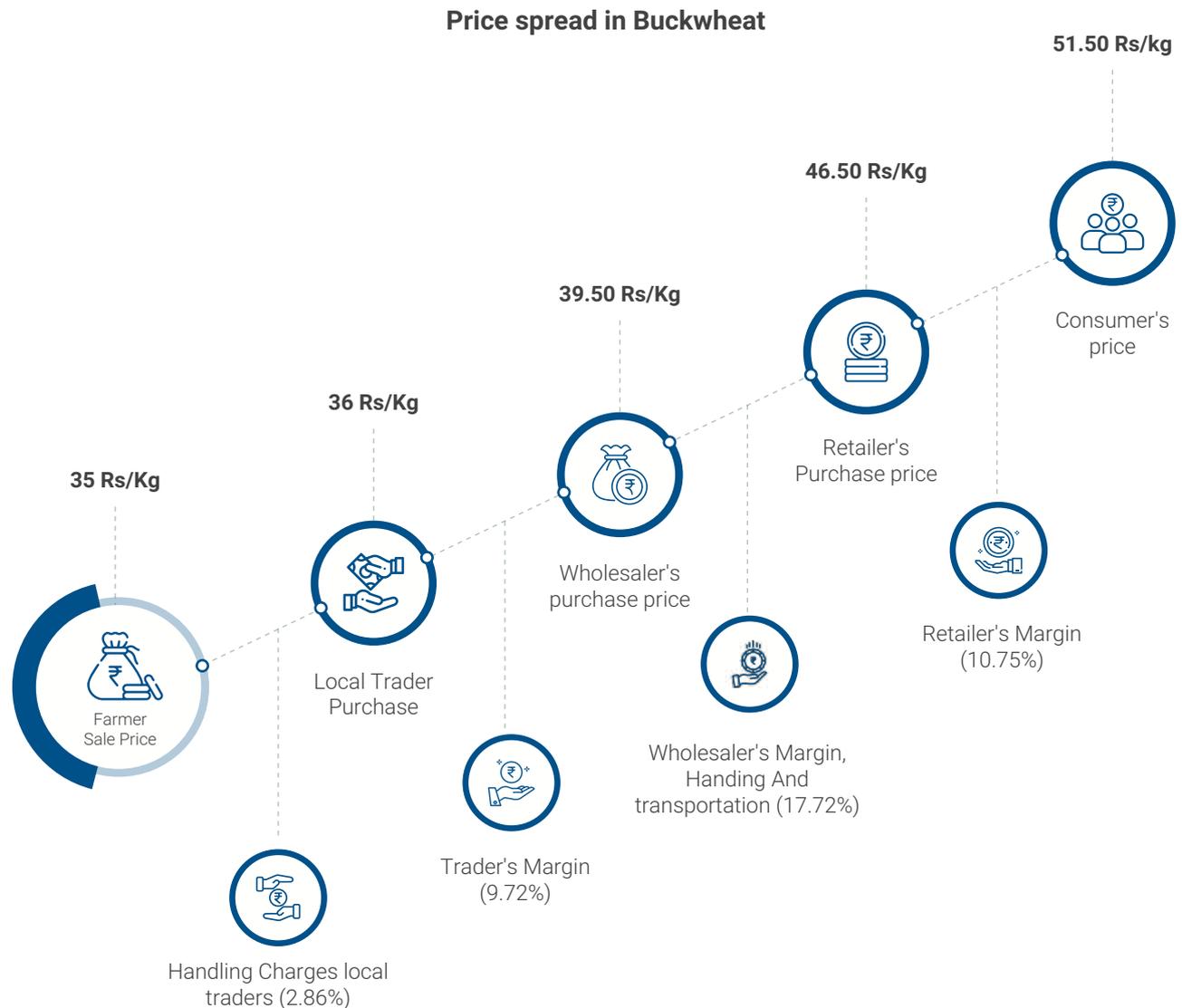
There is also a disparity between pricing for small and large-scale farmers. Small farmers often receive lower prices for their produce due to their reliance on middlemen for sales, while large-scale farmers or groups have the advantage of selling directly to traders or markets. The marketing channel for buckwheat in Sikkim exemplifies this issue, with local traders or aggregators dominating the scene.

These aggregators buy from farmers and sell to wholesalers at a higher price, with each step in the

distribution chain adding to the final cost. The absence of an exclusive online portal for organic products further hinders small farmers' ability to reach a broader market.

In essence, the dynamic price discovery of organic farm products like ginger and buckwheat from Sikkim face challenges due to the pricing strategies based on subsidized production costs, the lack of premium pricing in key markets, and the high costs associated with transportation.

Price spread of Buckwheat with margin have been described in figure below:



Source ▶ [43] Asian Development Bank

Gaps in Export Awareness

The Export Preparedness Index (EPI) 2022, as released by NITI Aayog, positions Sikkim at 28th rank, indicating critical areas that require attention for the state to enhance its export potential. Following indicates Sikkim's cumulative state score and individual scores in various parameters related to exports.



Policy 72.67

Export Promotion Policy 96.11

Districts Level export plan	66.67	●
Export promotion policy/ strategy	100.00	●
Facilitation measures around export promotion	100.00	●
Marketing Support for international market	100.00	●
ODOP - District Export Plan	100.00	●
Product Quality and standards: Information	100.00	●
Product Quality and standards: Workshops Conducted	100.00	●
Thrust sectors for exports	100.00	●
Valid sector-specific policy for exports	100.00	●

Institutional Framework 49.22

Appointed Export Commissioner	100.00	●
District Export Promotion Council (DEPC) in district	64.52	●
Grievance redressal portal: Functional	100.00	●
International Access: foster export	0.00	●
State-Centre coordination cell	0.00	●

Export Ecosystem 38.10

Export Infrastructure 62.98

Agri- Export Zones - Number	25.00	●
Area covered under Industrial Parks (EPIP, EPZS, SEZ)	0.04	●
Existence of Trade guide	0.00	●
Online portals for information for exporter	100.00	●
Regional disparity: District level	64.44	●

Trade Support 37.08

Application of TIES scheme	0.00	●
Capacity building or orientation workshops for exporters	2.49	●
Conducted Stakeholder Interactions with exporter	100.00	●
Initiative for maintaining Database for exporters	0.00	●
Maintains updated district wise/sector wise database of exporter	100.00	●
Projects approved under (TIES)	0.00	●
Trade fairs and exhibitions: Numbers	4.55	●

R&D Infrastructure 14.24

Innovative capacity: India Innovation Index scores	36.16	●
NABC: Number	0.00	●
NABL accredited labs: per exporter	0.00	●
Research institutes per lakh of population	0.00	●

Business Ecosystem 23.51

Business Environment 17.22

Ease of doing business index	0.00	●
Export credit to exporters: % of GSDP	0.00	●
Increment - FDI inflow	57.12	●
Increment - Manufacturing GVA	90.72	●
Power cost - Power tariff (HT)	26.24	●
Single-window clearance	100.00	●

Infrastructure 53.30

Cluster Strength	15.29	●
Internet facilities	66.29	●
Number of Industrial Parks	8.19	●
Power Availability: Demand Met	80.89	●

Transport Connectivity 0.00

Cold storage facilities- Capacity	0.00	●
Cold storage facilities- Number	0.05	●
FTW. FTWZ & Integrated Logistics Parks	0.00	●
Inland container depots- Area coverage	0.00	●
LEADS index	0.00	●
Operational Air cargo terminals	0.00	●
Warehouse facilities- Capacity	0.02	●
Warehouse facilities- Number	0.00	●

Export Performance 19.03

Growth and Orientation 31.04

Availing origin certificate: Number of Exporters	37.41	●
Export growth in 3 years	57.50	●
GI Products	2.38	●
IEC [as a percentage of total business]	32.95	●
Increase in number of exporters	6.43	●
Merchandise exports to GDP ratio	1.02	●

Export Diversification 7.03

Export Concentration	0.00	●
Market Penetration Index	15.07	●

Overperforming ●

Performing within expected range ●

Underperforming ●

Strengths and Weaknesses are relative to 10 regions of similar GDP: Arunachal Pradesh, Manipur, Nagaland, Mizoram, Meghalaya, Puducherry, Chandigarh, Andaman and Nicobar Islands, Tripura, Dadra and Nagar Haveli & Daman and Diu

Source ▶ [44] NITI Aayog - Export Preparedness Index 2022



For many commercial entities (such as exporters, big traders, retailers, processors etc.) the prospect of working with a large number of small farmers in Sikkim raises concerns about communication, management, quality, reliability of supply and transaction cost and dispute resolution.

Farmers frequently sell their produce to informal traders who offer instant cash payments. These payments despite being lower and not reflective of the organic premium, present a more straightforward option for farmers needing immediate financial returns. This preference detracts from the engagement with formal market channels and export-oriented processes, which offer potentially higher returns but require more significant investment in time, effort, and adherence to stricter quality standards.

In case of spices, the difference between the 'organic-by default' and certified organic spice production is not recognized by most conventional middlemen and traders. The difficulty in differentiating certified organic produce from non-certified ones in conventional regulated markets further complicates this issue.

These markets, not specializing in organic products, lack the necessary facilities to effectively market and handle organic produce. Small scale traders frequently employ informal channels to source their goods, often prioritizing lower costs by purchasing items like unripe produce. Both the channels do not pay an organic premium due to which spices lose their formal organic status.

Another avenue for organic products involves their sale as raw materials—either dried, powdered, or in paste form—to processors and organic produce retailers. In Sikkim, traders supply raw materials to local processors who then convert them into flakes, chips, powder, etc., for retailers and exporters. This value addition process, including grading, drying, packaging, labelling, and branding, occurs at the processor level. The supply chain for Sikkim's organic produce is relatively short, ending at suppliers who might aggregate the produce to achieve economic quantities.

However, Sikkim's low production base and insufficient value addition and processing capabilities have restricted its ability to capitalize on the export demand for spices. For instance, large cardamom from Sikkim, reaches market outlets through agents in Kolkata, who then connect it to exporters.

Lack of Geographical Indication Tagging

Introduced by the Government of India in 1999, Geographical Indication (GI) Tagging aims to protect traditional knowledge and spur local economic growth. It grants legal protection to products, deters unauthorized use, ensures quality and authenticity for consumers, and boosts producers' economic prosperity by increasing demand both domestically and internationally.

GI Tagging Status in India and Sikkim's Contribution

As of May 2025, India has registered 697 Geographical Indications (GI), reflecting its vast cultural, agricultural, and artisanal diversity. Of these, 203 GI tags fall under the agriculture and food product sectors, showcasing the country's rich biodiversity and traditional food heritage. The GI registration process remains highly selective, with a significant number of applications undergoing rigorous scrutiny before approval. Sikkim, India's first fully organic state, has made a notable contribution with two GI-tagged products: Large Cardamom, registered in 2015, and Dalle Khursani, a fiery red chili shared with West Bengal, registered in 2021.

North Eastern States like Assam has 11 GI Tags, along with Arunachal Pradesh and Manipur with 4 each, promoting products like Assam Karbi Anglong Ginger and Kaji Nemu Lemon, which significantly contributes to their branding and international recognition.

In contrast, Sikkim, despite its vast production potential, has limited its GI tag filings to Large Cardamom, and Dalle Khursani. The application for a GI tag for Sikkim's Temi Tea is still being processed.

Source ▶ [46] APEDA - Food & Agri Products Registered as GI

Sikkim's engagement with GI tags does not match the level of activity seen in other states, which have actively pursued GI tagging to boost their presence in the international market.

Complex Registration Process

The process to obtain a GI tag is lengthy and involves several steps including application, scrutiny, acceptance, advertisement in the GI Journal, opposition (if any), and finally, registration. The duration and complexity of this process can be daunting for producers. For instance, the application for the GI tag for Dalle Khursani chilli took three years to complete, which could discourage potential applicants from pursuing GI tags for their products.



Maintaining Quality Standards

One of the primary challenges post-GI tagging is maintaining the consistent quality and characteristics that the product is recognized for. For example, climate change has introduced several challenges, including erratic rainfall, temperature fluctuations, and water scarcity, all of which significantly affect the quality and viability of GI-tagged products in Sikkim. Farmers in the Rani Khola watershed, for instance, primarily practice subsistence farming on small fragmented lands, making it difficult to maintain productivity amidst changing climatic conditions.

Distance from GI office

India has only one GI Registry office located in Chennai, making it challenging for producers from

distant states like Sikkim to access it. The government introduced an online portal for IP services, allowing for GI applications to be filed online. However, the necessity for in-person hearings at examination or opposition stages poses difficulties for those far from Chennai.

Lack of Awareness

Despite the GI Act 1999 coming into force in 2003, many people in India, especially those in rural areas, remain unaware of it. Questions about how to file an application, where to file it, and how to monitor for infringement activities confound producers. This lack of awareness results in low individual ownership of GI registrations, with the Government of India holding the majority of proprietorship.



Source ► [47] APEDA - Food & Agri Products Registered as GI

Institutional Challenges

Institutional challenges in Sikkim, especially for the production and export of food products, involve a complex web of agencies categorized by their functions in regulation, enforcement, conformity assessment and certification. This complexity significantly affects marginal farmers in Sikkim, who face the daunting task of navigating through these processes to meet both domestic and international standards.



Regulation

At the core of food product regulation is the Food Safety and Standards Authority of India (FSSAI), which serves as the central point for setting food standards applicable across the domestic market. Furthermore, biosecurity concerning agricultural products falls under the jurisdiction of the Plant Quarantine and Animal Quarantine bodies. These regulatory frameworks ensure that food products meet safety and quality requirements, protecting consumer health and facilitating trade.

The enforcement of these food standards within India is primarily the responsibility of state-level food and drug authorities. They work to ensure compliance with FSSAI regulations among producers and sellers. Similarly, the enforcement of quarantine regulations to prevent the spread of pests and diseases through agricultural trade is managed by state-level agriculture departments. These enforcement mechanisms play a crucial role in maintaining the integrity and safety of the food supply chain.



Enforcement

The existence of multiple agencies with overlapping regulatory scopes presents a significant challenge for the simplification and rationalization of testing and certification processes. For marginal farmers in Sikkim, who already operate with limited resources,

complexity adds to the cost and effort required to comply with both national and international standards. The intricate web of regulatory and enforcement bodies necessitates a high level of understanding and navigation skills, often requiring specialized knowledge or assistance.



High Cost of **Export**

Exporting goods from Sikkim, involves a complex, detailed process showcasing the region's dedication to sustainable and organic farming. The export journey includes several key steps: cultivating crops with eco-friendly methods, harvesting, processing, and finally, shipping these goods beyond Sikkim's borders. Each phase incurs specific costs and faces unique challenges, influenced by transportation logistics, processing expenses, and international trade regulations.

Lack of adequate infrastructure causes higher transportation costs and longer transit times for goods and is one of the main reasons for high cost of exports in Sikkim.

Currently, cargo is transported through Siliguri or New Jalpaiguri railway stations in West Bengal, as construction of a railway line in Sikkim is still ongoing. Additionally, cargo transportation is not operational at Pakyong Airport, so goods are transported via Bagdogra Airport in West Bengal.

To export organic products, farmers and producers must obtain certification under the National Program for Organic Production (NPOP). This certification is essential for meeting international standards and gaining consumer confidence. However, the process of obtaining and maintaining the certification can be costly and time-consuming, which increases the overall cost of export. Additionally, the absence of export facilitation centers, accredited food testing laboratories, and export inspection agencies forces exporters to travel to larger cities to complete their formalities, further driving up export costs.





► Case Study

Exporting 10 MT Organic Turmeric from Sikkim

Background

Sikkim, renowned for its organic farming practices, seeks to export 10 metric tons (MT) of organic turmeric sourced from various regions within the state. The procurement of raw turmeric is undertaken from Dzongu, Pakyong, Rongili, Namchi, and Khamdong, with a conversion ratio of 7:1, meaning 70-80 MT of raw turmeric is required to produce 10 MT of processed turmeric powder.

Phase 1

Procurement

Turmeric is sourced from different regions, contributing to the diverse organic farming landscape of Sikkim. Turmeric is procured at Rs. 20 per kilogram, amounting to Rs. 16,00,000 for 80 MT. The procurement phase spans 7-10 days to gather the necessary quantity from various locations.

Phase 2

Transportation and Aggregation

The turmeric obtained is transported to the Birdang processing facility for consolidation. The transportation expense for covering the 70 km distance to the processing centre is 2 Rs per kg which totals Rs. 1,60,000. The cost of transportation is on the higher side due to hilly terrain and utility vehicle carrying only part loads of 1-2

Phase 3

Processing

The Birdang processing factory is where the turmeric undergoes its transformation. The processing period spans between 30 to 40 days, accompanied by a cost of Rs. 3 per kg which makes it Rs. 2,40,000 for processing 80 MT. Following processing, the turmeric powder is carefully packaged, with each kilogram incurring a cost of Rs. 2 per kg. This totals Rs. 20,000 for packaging the entire 10 metric tons of turmeric powder obtained from processing 80 MT of raw turmeric.

Phase 4

Export Transportation and Documentation

Once the turmeric is processed, it is then transported to either the airport or port, with the journey spanning 130 kilometres to reach Siliguri. The transportation expense for this leg of the journey totals Rs. 20,000 for the entire 10 MT as it is Rs. 2 per kg. Following this, the export documentation process takes approximately two days to complete. The final step in the export process involves shipping the turmeric to its destination, with the cost amounting to Rs. 10 per kilogram. This totals Rs. 1,00,000 for the entire 10 metric tons of organic turmeric. When considering all expenses incurred throughout the export journey, the total cost for exporting 10 metric tons of organic turmeric from Sikkim sums up to Rs. 21,40,000.



Below is the phase-wise end-to-end cost summary for exporting 10 MT of turmeric

SI No	Activity	Cost Calculation	Total Cost
1	Procuring Turmeric	Rs 20 per/kg x 80 MT	16,00,000
2	Transportation and Aggregation	Rs 2 per/kg x 80 MT	1,60,000
3	Processing	Rs 3 per/kg x 80 MT	2,40,000
	Packaging	Rs 2 per/kg x 10 MT	20,000
4	Transportation Expense to Nearest Port/Airport	Rs 2 per/kg x 10 MT	20,000
	Shipping The Turmeric to Its Destination**	Rs 10 per/kg x 10 MT	1,00,000
Total			Rs 21,40,000

**Shipping Cost will vary depending upon the destination

In conclusion, the journey of exporting 10 metric tons of organic turmeric from Sikkim underscores the challenges and costs associated with the process. Despite Sikkim's renowned organic farming practices and the dedication of farmers across various regions, the cost of export remains

significantly high. Total cost amounting to Rs. 21,40,000 the high expenses highlight the need for efficiency improvements and cost-saving measures in Sikkim's organic turmeric export industry.



Stakeholder Feedback



Farmers



Our produce is sold alongside cheaper Siliguri produce and is not packaged or marketed as organic.



FPOs



We are currently facing challenges in obtaining trader's certificate due to lack of awareness of process, which restricts our ability to sell produce directly in the market.



Exporters



The export market is for processed and value added organic products. The state should focus on enhancing processing capabilities and adding value to organic products.



Certifications



Some farmers in Soreng, Namchi were not aware of the grower group certification requirements.

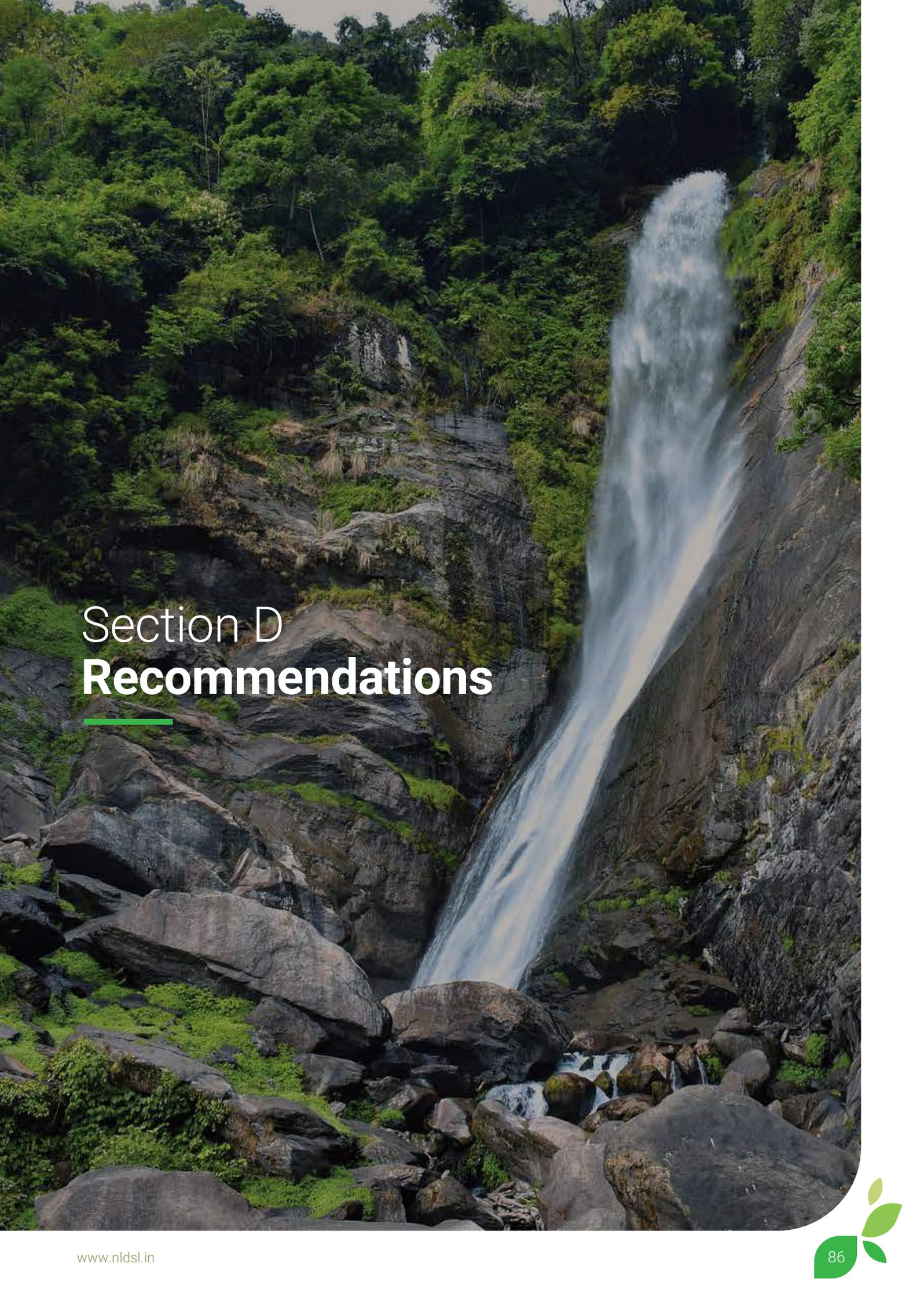


Government



In 2021-22, 4,658 farmers received Rs 17.46 crore as incentive, while in 2022-23, 5,998 farmers received Rs 14.27 crore. We are committed to empower them.





Section D Recommendations

Recommendations Summary

Infrastructure

Enhancing Agricultural Infrastructure for Exports

Integrate the functionality of seed banks with Krishi Vigyan Kendras and combine soil testing facilities with food testing facilities to broaden reach. Establish trade routes with Bhutan and Nepal to facilitate better market access.

Establishment of Sahayta Kendras (Facilitation Centres) for Export Support in Sikkim

Open Sahayta Kendras in each district of Sikkim, with headquarters in Gangtok, to provide guidance and support to exporters.

Process

Seamless Aggregation of Organic Produce for Exports

Develop a multi-level aggregation ecosystem to ensure an uninterrupted supply chain, streamlined distribution process, and improved access to commodities for exporters.

Process for Price Discovery for Sikkim's Organic Agricultural Products

Implement a transparent and competitive auction system to set base prices for various organic products once or twice a year.

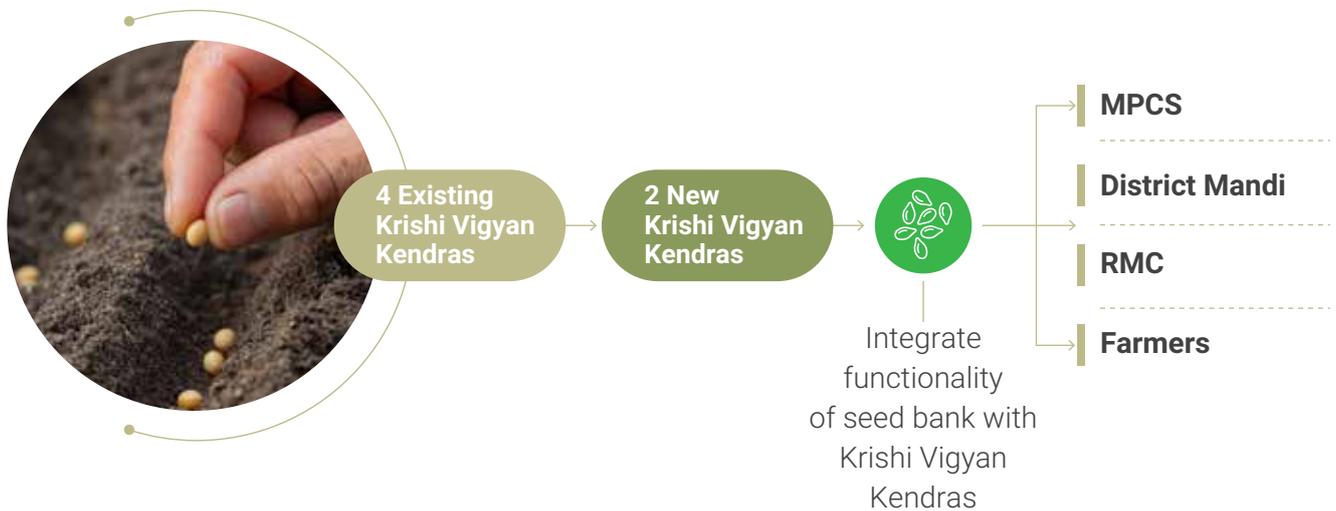
Marketing

Improving Marketing and Promotion of Sikkim's Organic Products for Export

Market Sikkim's organic produce as premium offerings in the global market, rather than as mass-produced items, to attract higher value and recognition.

Enhancing Agricultural Infrastructure for Export

It is recommended that Sikkim shall focus on enhancing agricultural infrastructure to support its objective of boosting organic exports. This improvement is crucial for increasing agricultural productivity, preserving biodiversity, and stimulating economic growth. Central to this strategy is the expansion of seed banks, testing laboratories, cold storage facilities and the establishment of border infrastructure. These developments shall provide farmers with a diverse range of high-quality seeds and ensure their produce meets stringent global safety and quality standards, thereby enhancing the state's capacity to compete in international markets.



MPCS - Multi-Purpose Cooperative Society

RMC - Rural Market Centre

Seed Banks

It is recommended that Sikkim enhances its seed bank infrastructure to conserve local plant varieties and support agricultural productivity. Seed banks are crucial for conserving local plants, yet there is currently only one in the state, located at the Agriculture Department's Horticulture Research Farm in Lingee, South Sikkim. These seed banks serve as vital repositories of genetic diversity and ensure that farmers have access to a wide range of seeds suited to their local environment and farming needs. By providing seeds that are both reliable

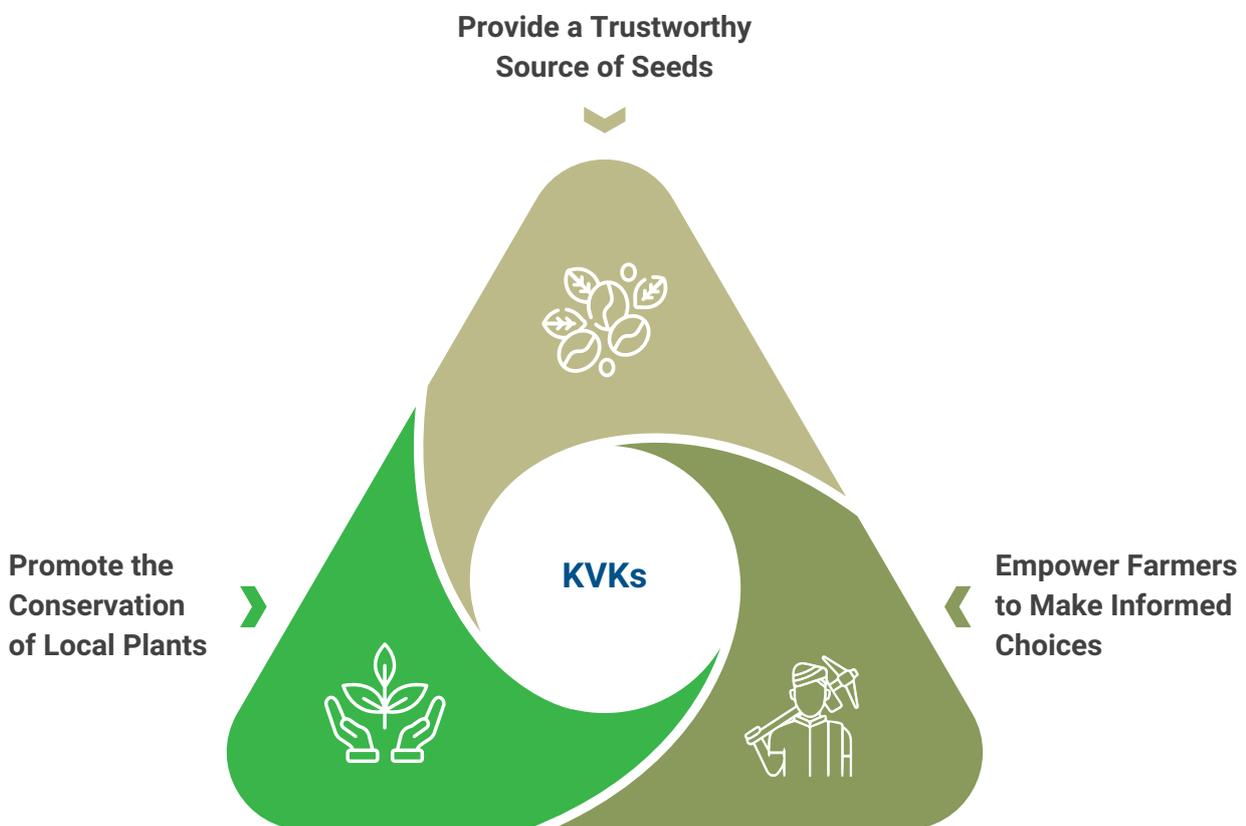
and diverse, seed banks empower farmers to make informed choices and improve their agricultural productivity.

Currently, Sikkim has four Krishi Vigyan Kendras (KVKs). These centres aim to communicate the latest agricultural knowledge to farmers through the principles of "Teaching by Learning and Learning by Doing." They bridge the gap between agricultural research institutions and farming communities, ensuring that farmers have access to cutting-edge agricultural science and technology.

To ensure that every district benefits equally, it is recommended to establish two new KVKs, one for each of the new districts, so that all six districts in Sikkim will have access. These KVKs shall also function as seed banks to support farmers effectively and be connected to supply seeds to Multi-Purpose Cooperative Societies (MPCS), district mandis, and Rural Market Centres (RMC).

By providing reliable seeds to farmers through local seed banks, the government can build trust with the farming community. Instead of imposing government-selected seeds on farmers, KVKs shall empower farmers to choose seeds that best meet their needs. This way, farmers can rely on seeds from the government while making their own informed choices.

Each Krishi Vigyan Kendra (KVK) shall act as a seed bank to:



By enabling all KVKs to act as seed banks, Sikkim can enhance agricultural productivity, preserve its rich biodiversity, and foster stronger partnerships with its farmers. Furthermore, these improvements shall increase the availability of high-quality organic produce, supporting the state's objective of establishing itself as a significant player in the global organic market.

Soil Testing Facilities

To enhance the quality and safety of agricultural products in Sikkim and support its organic farming and export ambitions, it is recommended to ramp up soil testing infrastructure. **Currently, Sikkim has 20 soil testing labs and 3 upcoming food testing labs.** Given the importance of soil health in organic agriculture, it is recommended that these upcoming food testing laboratories also include soil testing capabilities.

Expanding soil testing capabilities within these new laboratories shall have several benefits:

- ▶ **Comprehensive Agricultural Analysis:** Integrating soil testing with food safety testing allows for a more comprehensive analysis of the agricultural ecosystem, ensuring that both the inputs (soil) and outputs (food products) meet high safety and quality standards.

- ▶ **Improved Resource Management:** Soil testing provides essential data that can help farmers optimize the use of natural resources, reducing waste and enhancing productivity through better soil management practices.
- ▶ **Enhanced Farmer Support:** By providing soil and food testing in the same facilities, farmers can receive more holistic support, simplifying the process and reducing the time and cost associated with testing.

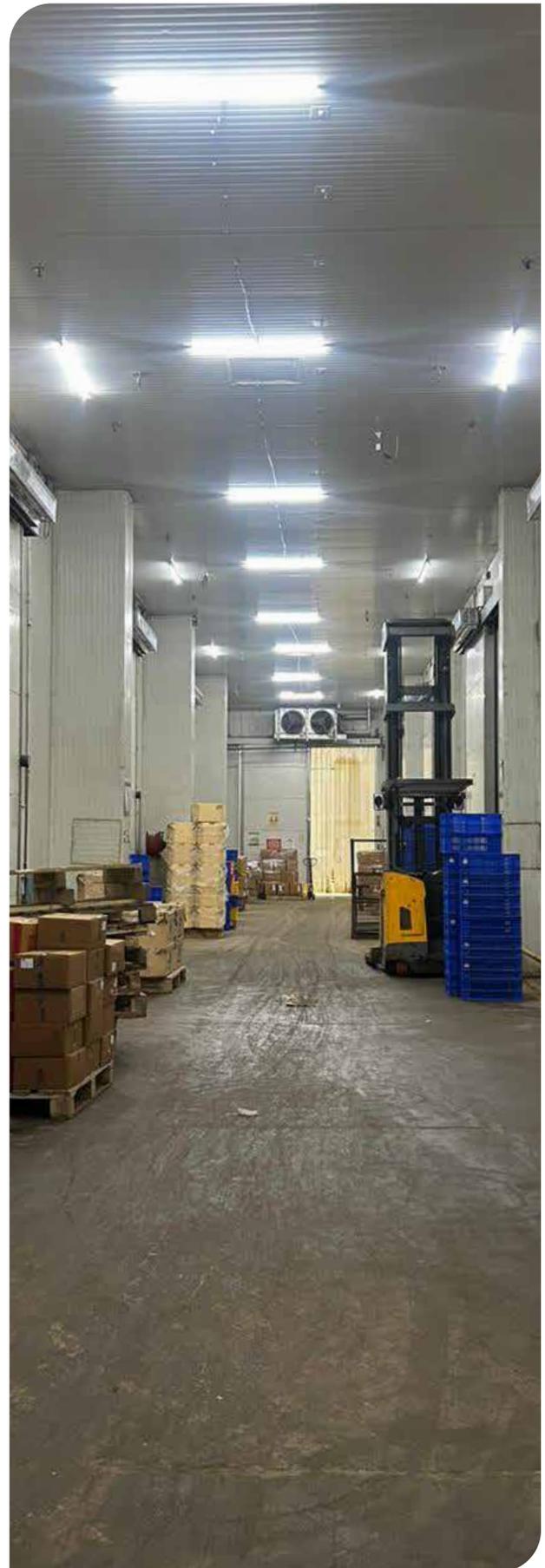
This approach ensures that Sikkim's agricultural products shall meet the high standards required for both local consumption and international export.



Cold Storage

Cold storage facilities are crucial for extending the shelf life of perishable commodities and maintaining their quality. These facilities help prevent overcapacity, reduce transport bottlenecks during peak production periods, and minimize wastage, thereby providing better prices in the market. **Thus, it is recommended to establish state-of-the-art cold storage facilities in Sikkim.** This initiative will support the agricultural sector by preserving the quality of perishable goods, reducing wastage, and enhancing marketability, thus promoting exports.

- ▶ **Temperature-Controlled Storage:** Develop cold storage units equipped with advanced temperature control systems to store perishable commodities such as fruits, vegetables, dairy, and meat products.
- ▶ **Refrigerated Transport:** Provide reefer vans to ensure the safe and efficient transportation of perishable goods from farms to cold storage units and markets.
- ▶ **Farmer Training Programs:** Conduct training programs for farmers and supply chain operators on best practices for handling, storing, and transporting perishable goods.
- ▶ **Expand cold storage facilities:** At present, cold storage is available only in Majhitar and Rangpo. It is advisable to establish additional cold storage locations in Singtam, Geyzing, and Jorethang. These locations are suggested considering proximity to collection centres and markets across Sikkim.





► Case Study

Ginger

The high-quality ginger grown in Sikkim deteriorates quickly due to excessive moisture and inadequate storage facilities, leading to mold formation and significant post-harvest losses. This forces farmers to sell their produce immediately, often at lower prices. Establishing cold storage facilities with advanced temperature and humidity control can address these issues. By maintaining optimal storage conditions, these facilities will preserve the quality of ginger, prevent

spoilage, and ensure it meets international standards, thus enhancing its exportability.

Establishing cold storage facilities in Sikkim offers significant benefits. It extends the shelf life of perishable commodities, maintains consistent quality, and reduces wastage. These facilities enable sellers to receive better prices by preserving produce quality and streamline logistics for timely market delivery.



Land Customs Stations (LCS)

It is recommended that Sikkim enhances its land customs infrastructure to support its growing economic opportunities and effectively manage the increasing cross-border trade traffic. Currently, Sikkim has just one operational **Land Customs Station (LCS)** located at Nathula (Sherathang), Renginggang, along the China border.

Establish Trade Routes:

Bhutan

It is advisable to explore potential trade routes between Sikkim and Bhutan through the Jelep La pass, historically known as the Old Silk Route. Establishing this route would provide a formal trade channel and significantly boost trade between the two regions. Sikkim's production of high-quality organic large cardamom, which is in high demand in Bhutan, could particularly benefit from this improved connectivity.

Nepal

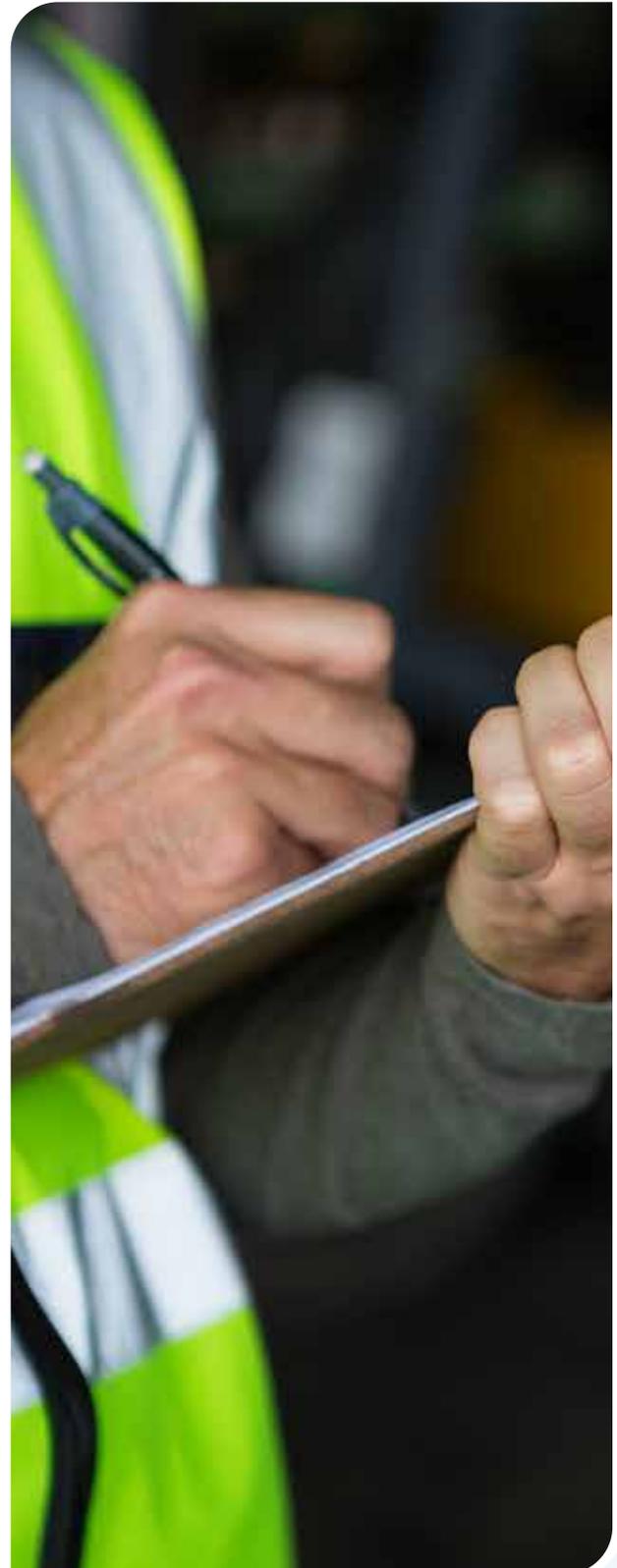
Similarly, it is proposed to identify and establish a formal trade route with Nepal to facilitate and increase trade activities between the two regions. Sikkim's organic turmeric, known for its high curcumin content and extensive use in cooking and health benefits, is highly sought after in Nepal. A dedicated trade route would enhance the export potential of this valuable commodity.

Proposed Locations for New LCS:

Based on Sikkim's geography, economic potential and security vulnerabilities the following locations can be explored for setting up additional Land Customs Stations:

West Sikkim | Chewa Bhanjyang
(India-Nepal Border)

East/North Sikkim | Jelep La pass
(India-Bhutan Border)



Developing a robust network of LCS at strategic locations shall enable Sikkim to:

Increase Export Efficiency:

Streamline the export process by reducing transit times and simplifying customs procedures, thereby making Sikkim's goods more competitive in international markets.

Enhance Trade Volume:

Facilitate a higher volume of cross-border trade by providing additional points of entry and exit, encouraging more exports from Sikkim.

Improve Product Quality:

Implement better monitoring and quality control measures at multiple LCS locations, ensuring that export goods meet international standards.

Diversify Export Markets:

Open new trade routes with Bhutan and Nepal, expanding Sikkim's reach into new markets and reducing dependence on existing trade pathways.

Boost Economic Growth:

Drive economic growth by increasing trade activities, which in turn generates more revenue and creates job opportunities in the export sector.

By prioritizing strategic expansion of its LCS infrastructure, Sikkim can comprehensively address its security, economic and connectivity imperatives arising from its unique geo-strategic position as a landlocked border state. This shall enhance economic integration while safeguarding national interests in this sensitive region.



Establishment of **Sahayta Kendras (Facilitation Centres)** for Export Support in Sikkim

It is recommended that the State Government of Sikkim establish multiple facilitation centres across the state to provide end-to-end support to current and prospective exporters of organic produce. These Kendras should be opened in each district of Sikkim with the headquarters in the capital city, Gangtok.

Objective

The primary objective of these facilities shall be to provide exporters with comprehensive information on end-to-end export procedures, various state government export schemes, required documents, and customs procedure etc. With the assistance of these Sahayta Kendras exporters shall no longer need to visit multiple

offices to understand the processes and obtain the latest prices of organic products. Instead, they can visit the nearest centre to access all necessary export information and get the latest updates on prices and stock. This shall save time and money, bring transparency to the system, and ultimately boost exports in the state.



Role

Information Dissemination

It is recommended that facilitation centres serve as hubs for detailed guidance on export procedures, offering crucial information about state government export schemes, updated price lists of all commodities, and data on organic produce availability across different aggregation centres. By accessing this information, exporters shall make informed decisions quickly and efficiently, enhancing their ability to navigate the export landscape without unnecessary delays.

Application Assistance

These Kendras should provide support in the application process for necessary export documents, including assistance with certification procedures and guidance on registration and licensing for new exporters. This hands-on help shall simplify the often-complicated paperwork, ensuring that all exporters, especially new ones, can meet regulatory requirements seamlessly.

Networking and Collaboration

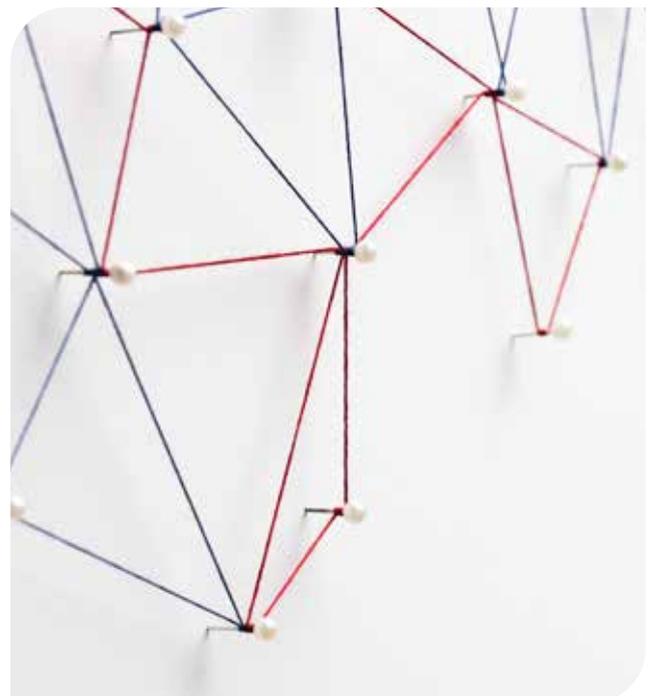
It is recommended that the Kendras act as networking platforms where exporters can connect with other exporters to gain knowledge and experience. Regular updates on market trends and export opportunities should be shared with the exporters. Information about trade promotional activities like national and international trade exhibitions and seminars should also be notified to the exporters through these centres.

Helpline

To further facilitate ease of access, Sahayta Kendras shall also have digital presence, providing a dedicated helpline for exporters to call directly and resolve their queries. This dedicated helpline shall reduce the need for physical visits, thereby saving time and resources. It shall offer a direct line of support, ensuring exporters have immediate access to the information and assistance they need.

Guidance on Logistics

It is recommended that these facilitation centres guide exporters on the best possible routes to ship their products, provide contact information for various shipping line companies, and suggest the most feasible modes of transportation to the destination. By providing this comprehensive support, the centres shall ensure that exporters can make informed decisions, streamline their logistics, and reduce costs, thereby enhancing their competitiveness in the global market.





► Case Study

Export Facilitation Centre (EFC), West Bengal

The Export Facilitation Centre (EFC) developed by the Department of MSME&T, Government of West Bengal, in collaboration with the Indian Institute of Foreign Trade (IIFT), serves as a comprehensive support system for exporters.

Its key services are:

- Helps exporters identify suitable markets for their products
- Assists in creating detailed export plans
- Provides guidance on securing financing for exports
- Advises on efficient methods for handling orders and shipments
- Facilitates participation in trade fairs
- Aids in finding input materials for manufacturing exportable products
- Helps locate reliable freight forwarders
- Offers guidance on letter of credit procedures
- Provides information on navigating customs processes
- Clarifies tariff obligations while exporting
- Offers advice on overcoming non-tariff barriers
- Guides exporters on meeting certification and standards requirements



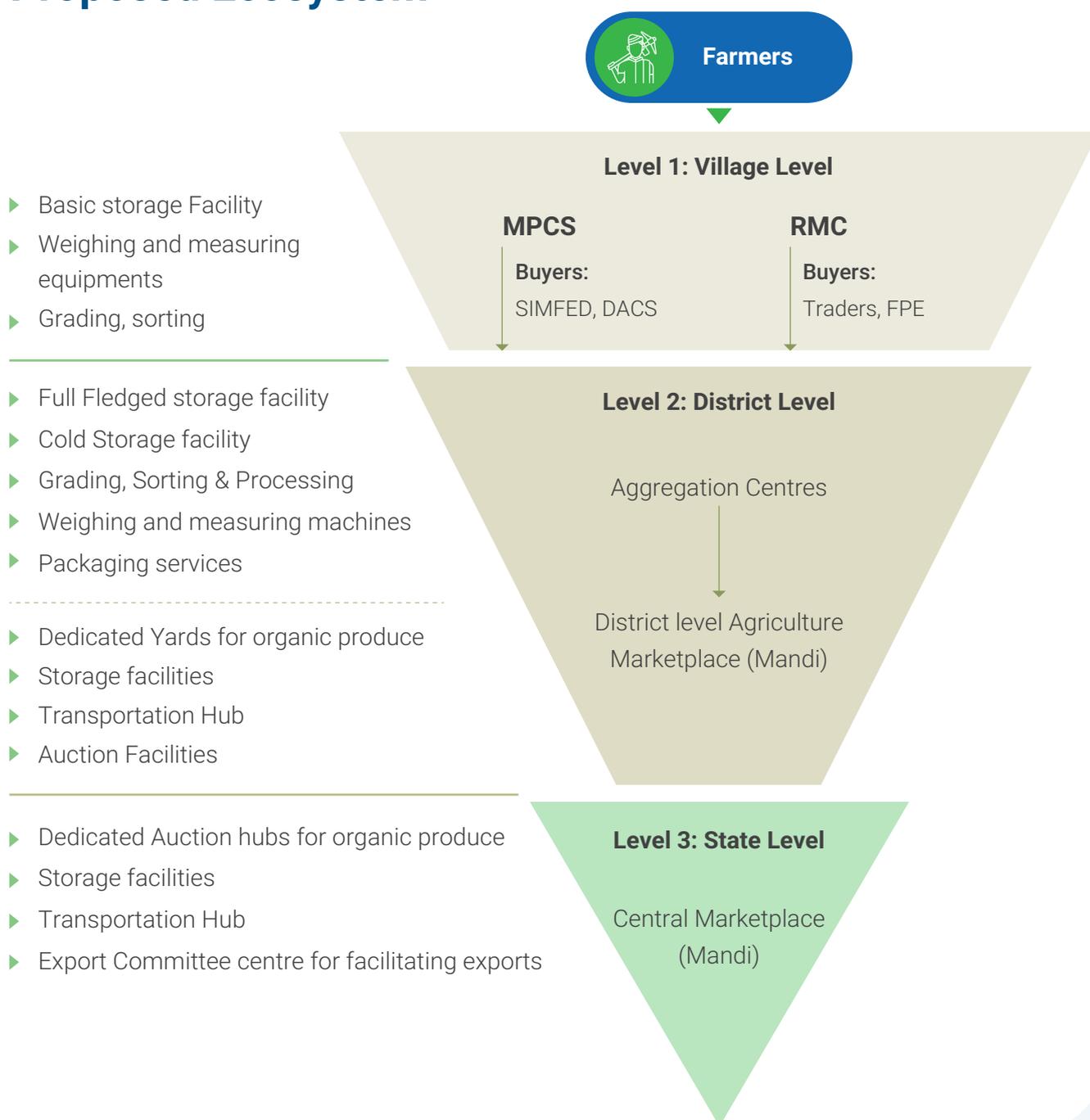
Source ► [48] Export Facilitation for West Bengal



Seamless Aggregation of Organic Produce for Export

To facilitate seamless aggregation and distribution of organic produce from Sikkim, it is recommended to establish an ecosystem consisting of multiple levels of aggregation centres. This ecosystem shall ensure an uninterrupted supply chain and streamline the distribution process, enabling better access to commodities for exporters and enhancing the state's organic exports.

Proposed Ecosystem



Level 1

Village Level Aggregation

At the grassroots level, it is recommended to utilize existing Multi-Purpose Cooperative Societies (MPCS) and Rural Market Centres (RMCs) as small aggregation points to procure high-quality produce from farmers.

MPCS:

MPCS, member-based organizations offering economic and social services, should be converted into dedicated cooperative societies for organic produce. With more than 175 MPCS, Sikkim can leverage their existing infrastructure to aggregate organic produce, minimizing post-harvest challenges for small farmers. These centres can ensure the right quality of produce is procured at fair prices, providing post-harvest services like processing, storage, and marketing. The aggregated produce can then be sold at district-level marketplaces or purchased by cooperative societies like SIMFED and Denzong Agricultural Cooperative Society Ltd (DACS).

RMC:

RMCs, owned by Gram Panchayats and often managed by individuals or Self-Help Groups (SHGs), can serve as assembly points and small collection centres. With 46 existing RMCs, it is recommended to establish more at the village level, each covering a cluster of 5-10 villages and equipped with storage, grading, sorting, and weighing facilities. Monitoring and restoring underperforming RMCs, such as the abandoned Namli RMC, is essential. Strategically located RMCs shall enable small farmers to sell their produce directly without needing to transport it to local markets.



Namli, Gangtok, Sikkim

Level 2

District Level Aggregation

It is proposed to have aggregation centres and mandis (marketplace) at district level for aggregating organic produce in large quantity and further making the right quality of produce available for exporters or big traders.

District Aggregation Centres:

These centres shall offer product-specific storage, grading-based segregation, packaging, price advisory, and processing services. Serving as information hubs, they shall facilitate better marketing and planning throughout the value chain, providing real-time visibility of commodity-wise available stock. Establishing these centres shall reduce transportation costs and streamline distribution to exporters, making sourcing large quantities from a single location more efficient.

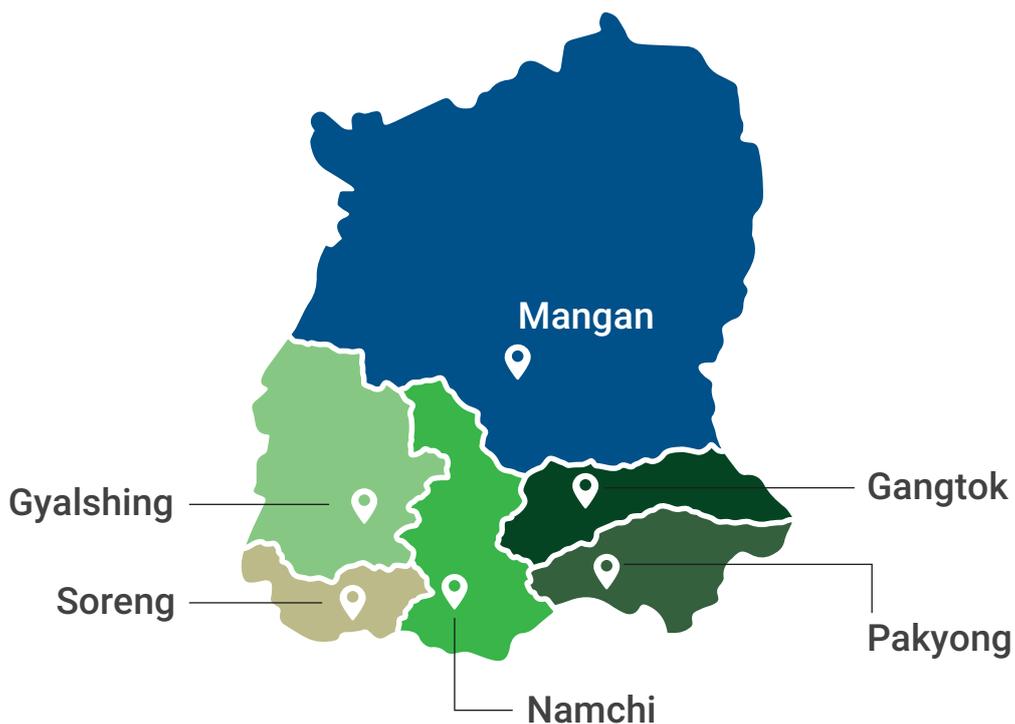
District level Mandis

(Agricultural marketplace):

District-level marketplaces should be established in each of Sikkim's six districts, with dedicated yards for organic produce. These marketplaces shall offer a centralized platform where large farmers and traders can sell their stock through auctions, fetching better prices. Connecting these marketplaces with district aggregation centres will streamline transportation logistics and reduce transit time. For instance, Mangan, known as the Cardamom Capital, is ideal for the northern region due to its connectivity and proximity to Gangtok.

Other recommended cities for district marketplaces including Mangan are:

Suitable City for District Marketplace



Level 3

State Level Aggregation

To further streamline the export process and enhance the market presence of Sikkim's organic produce, it is essential to establish a central level mandi in Gangtok. This centralized marketplace shall serve as a critical hub, connecting exporters nationwide with local traders, large farmers, and Farmer Producer Organizations (FPOs).

Central Marketplace:

This central marketplace needs to be developed as an aggregation hub for domestic markets, where produce is aggregated, branded as 'Sikkim Organic', and further promoted outside the state. It shall have dedicated yards and adequate facilities specific to every commodity, catering to the needs of sellers across the state.

Exporters and traders from other states requiring large volumes of organic produce can directly connect with buyers at this marketplace to meet their requirements. The central marketplace shall act as a focal point for regulating base prices of all organic produce commodities, enabling standardized pricing across the entire state, safeguarding farmers from the risk of lower prices due to lack of knowledge. Buyers at this marketplace can evaluate the quality of organic produce and bid in auctions accordingly. Additionally, an export committee shall be set up within this marketplace to safeguard the interests of exporters and offer necessary assistance to them, including facilitating services such as transportation, packaging, and cold storage through registered service providers.



The characteristics and operations of the recommended market centres are outlined below:

	Market Centre	Characteristic	Operation	Location and Estimated time to reach
1	Village level aggregation	<ul style="list-style-type: none"> ▶ Location ▶ Convenience ▶ Ease of access for farmers 	<ul style="list-style-type: none"> ▶ Pick up of produce by mini vans 	<ul style="list-style-type: none"> ▶ Ideal distance between any village and nearest MPCs/RMC should be at a distance of 3-5 kms from villages ▶ 15-20 mins to reach MPCs/RMC
2	District level aggregation centres	<ul style="list-style-type: none"> ▶ Aggregation of Produce ▶ Processing facilities ▶ Post harvest infrastructure is required ▶ Grading, sorting, cleaning facilities 	<ul style="list-style-type: none"> ▶ Storage ▶ Transportation ▶ Processing ▶ Value added services 	<ul style="list-style-type: none"> ▶ District aggregation centres should be at distance of avg. 20-30 kms from different MPCs/ RMCs ▶ 30-40 mins to reach district aggregation centres
3	District level Marketplace	<ul style="list-style-type: none"> ▶ Dedicated yards for organic produce ▶ Marketplace on district level ▶ Bulk quantity available for large buyers 	<ul style="list-style-type: none"> ▶ Pick up of produce by mini vans 	<ul style="list-style-type: none"> ▶ Ideal distance between any village and nearest MPCs/RMC should be at a distance of 3-5 kms from villages ▶ 15-20 mins to reach MPCs/RMC
4	State level Marketplace	<ul style="list-style-type: none"> ▶ Produce is standardized, labelled and branded as organic ▶ Traceability and export documentation ▶ Financial through warehouse receipt system (WRS) 	<ul style="list-style-type: none"> ▶ Caters to national and international market 	<ul style="list-style-type: none"> ▶ State level marketplace should be in Gangtok ▶ Convenient from each district marketplace ▶ Mangan to Gangtok: 53 Kms (90-120 mins) ▶ Geyzing to Gangtok: 114 Kms (150-180 mins) ▶ Namchi to Gangtok: 75 Kms (120-150 mins) ▶ Pakyong to Gangtok: 24 Kms (40-60 mins) ▶ Soreng to Gangtok: 100 Kms (150-180 mins) ▶ On an avg. it shall take 120 mins to reach central level Mandi (Marketplace)

Process for Price Discovery for Sikkim's Organic Agricultural Products

To ensure fair pricing, transparency, and market efficiency for organic agricultural products in Sikkim, it is recommended to adopt the following method for price discovery:

Establish Dedicated Organic Market Yards

Organic Market Sections: It is recommended to set up separate market yards or dedicated sections within existing mandis specifically for organic produce. This shall help maintain the integrity of organic products and prevent commingling with non-organic produce. Currently, only the Lall Bazaar in Gangtok has a section for farmers and FPOs to sell organic produce exclusively.

Determination of Base Price by Researchers

Researcher Committee: It is suggested to form a committee of researchers/sanchalaks specialized in organic food produce and authorized by the government. This committee should be assigned at the Central Mandi in Gangtok.

Base Price Estimation: These researchers shall be responsible for estimating the base price of various organic products once or twice a year based on the sowing and harvest times of crops.

Dissemination: After determining the base price, it shall be circulated through various channels including newspapers, radio, social media, and digital media to marketplaces at district and village levels in Sikkim.





► Case Study

Minimum Selling Price for Conventional Crops

The Minimum Support Price (MSP) serves as a floor price, guaranteeing farmers won't have to sell their produce below a certain level. MSP is determined by The Commission for Agricultural Costs & Prices (CACP) which is attached to office of the Ministry of Agriculture and Farmers Welfare. The Cabinet Committee on Economic Affairs (CCEA) of the Union government takes a final decision on the level of MSPs and other recommendations made by CACP.

Parameters considered by CACP for determining MSP include:



Researchers in Sikkim can follow a similar process for base price estimation of various organic crops.

Adopt a Transparent and Competitive Auction System at Marketplaces

Auction System: It is recommended to use the base price determined by the researchers' committee as the floor price for auctions at marketplaces. Licensed commission agents representing farmers, and buyers (traders, wholesalers, retailers) shall bid for graded lots of organic produce. Mechanisms such as forward auction, price-quantity bidding, and reverse auction can be used.

Auction Centres: North Eastern Regional Agricultural Marketing Corporation (NERMAC) along with the Spices Board has set up an auction centre for large cardamom and a storage facility at Rangpo. Similar auction mechanisms can be established for other organic produce.

Integrate with E-Auction Platforms

E-marketplace: It is recommended to integrate with e-auction platforms like e-NAM (National Agriculture Market), which connects Agricultural Produce Market Committees (APMC) across India electronically, creating a unified national market for agricultural commodities. This integration shall facilitate higher market integration, more transparency in market prices, and reduce malpractices by traders.





► Case Study

Sahaja Aharam Producer Company Limited

Sahaja Aharam Producer Company Limited (Sahaja) was established in 2014 with support from the Hyderabad-based Centre for Sustainable Agriculture (CSA). It is a federation of 19 Farmer Producer Organizations (FPOs) in Telangana and Andhra Pradesh. Sahaja has helped 9,000 farmers from 11 districts grow organic crops successfully. These farmers sell over 200 products under the Sahaja Aharam brand to about 4,000 consumers.

The company distributes its products through its own Organic Stores across the two states and extends its reach by supplying to 110 bulk buyers nationwide.

In addition to staples, Sahaja offers processed ready-to-eat foods, beauty, personal care, and healthcare products, as well as fresh fruits and vegetables—items that are typically challenging to procure and sell. Importantly, farmers receive a substantial portion of the selling price.

This is possible because of Sahaja's cost-sharing model. It pays farmers whichever is highest among the following:



By adopting a federation approach, Sahaja has achieved operational efficiency and demonstrated how market-based crop planning can secure better returns for farmers and reduce their risks through crop diversification.



Source ► [49] Centre for Science & Environment

Improving Marketing and Promotion of Sikkim's Organic Products for Export

Sikkim's organic market, though at a nascent stage, holds immense potential for global reach. By focusing on premium branding, strategic marketing, and establishing efficient market channels, Sikkim can significantly elevate its organic products on the world stage.

Branding

It is recommended that Sikkim's organic produce be branded as a premium offering in the global market rather than as mass produce. Key attributes to highlight during marketing include:

Organic Certified:

Guaranteeing authenticity and adherence to organic farming standards.

High Quality:

Emphasizing superior quality and freshness.

Pesticide-Free:

Ensuring safety and health benefits.

Environment-Friendly:

Promoting sustainability and ecological benefits.

Economic Benefits for Farmers:

Enhancing the livelihoods of local farmers.



It is also recommended to establish and mandatorily use a “Sikkim Organic” brand and logo on all organic products from the region. Additionally, packaging should be attractive and align with the organic identity of the products. Utilizing recyclable materials such as paper and bamboo crates can further convey the commitment to environmental sustainability.

Market Channels:

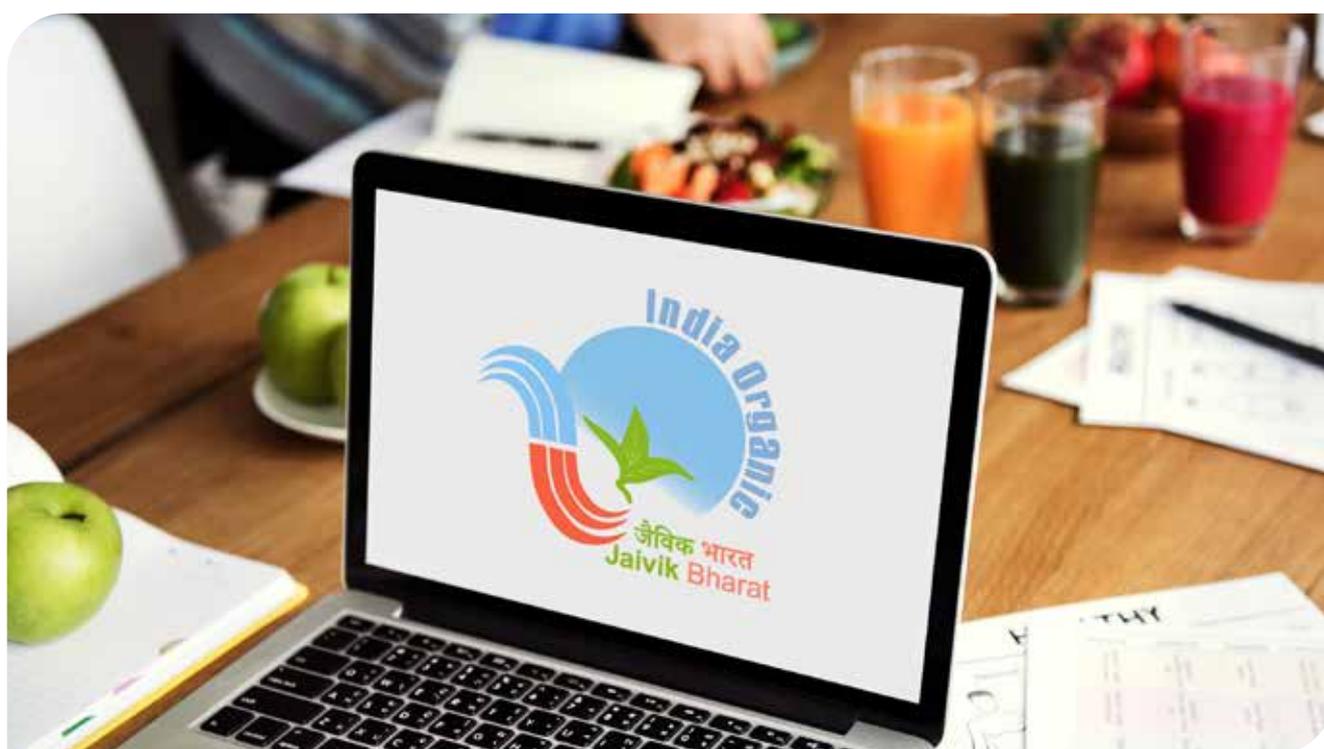
Direct Marketing Channel: It is recommended that Sikkim’s organic produce be sold directly to major consumption hubs such as Kolkata, Delhi, Pune, Mumbai, and Bangalore, bypassing intermediaries like Siliguri’s regulated market. This approach will:

- ▶ Reduce the supply chain length
- ▶ Enhance Sikkim’s market presence
- ▶ Ensure that Sikkim’s produce is prominently recognized in key markets

Online Marketplace: It is recommended that Sikkim leverage the new APLM Act, which allows states to have their own electronic platforms for trading, by:

- ▶ Establishing a framework and an institution to create an electronic platform for organic produce
- ▶ Showcasing unique selling propositions directly to health-conscious consumers
- ▶ Reducing logistic costs and widening the consumer base

Examples from Thailand, Malaysia, and the Philippines such as Green Net, Thai Organic Company and Organic Malaysia, demonstrate that a significant portion of organic products can be marketed online. Additionally, it is recommended to utilize existing e-commerce platforms for agricultural commodities like Jaivik Kheti and the Electronic National Agriculture Market (ENAM) to expand market access and visibility.





► Case Study

Uttarakhand Organic Board

The Uttarakhand Organic Board (UOB) plays a pivotal role in promoting and managing organic farming in the state of Uttarakhand. Their marketing strategy is a comprehensive approach aimed at boosting the visibility and marketability of organic products grown in this region.



Strategic Partnerships and Collaborations

UOB plays a crucial role in connecting farmers with broader market opportunities by facilitating market linkages that enable their produce to reach international buyers. For example, UOB has established strategic marketing partnerships with well-known companies such as Kohinoor Foods and KRBL Rice, focusing on basmati rice. These collaborations are designed to integrate Uttarakhand's organic basmati rice into global supply chains, providing farmers with access to international markets that might otherwise be out of reach. Farmers also benefit from fixed purchase prices agreed upon in these partnerships, which provides financial stability and predictability. This arrangement helps to mitigate the risks associated with market fluctuations and ensures that farmers receive fair compensation for their products.

Digital Marketing

The Uttarakhand Organic Board also invests heavily in digital marketing and e-commerce platforms. Recognizing the growing importance of online shopping, the board has developed an online presence through social media and a dedicated portal for organic products at uocb.org. This digital approach allows UOB to reach a broader audience, including international markets, and provides consumers with convenient access to organic products from Uttarakhand. Additionally, online marketing efforts are complemented by informative content that educates consumers about the benefits of organic farming and the unique attributes of Uttarakhand's produce.



Production Plan Based on Market Demand

Additionally, UOB's marketing strategy includes developing production plans based on market demand, which are then delegated to various production agencies, such as organic villages managed by the agriculture department or partner NGOs. The board actively uses digital platforms to gauge market demand.

Trade Fairs and Exhibitions

Trade fairs and exhibitions are another significant aspect of UOB's marketing strategy. The board actively participates in and organizes events both within India and abroad, providing organic producers from Uttarakhand with platforms to showcase their products, connect with international buyers, and explore new market opportunities. For example, during 2020-21, Uttarakhand organic farmers took part in 11 fairs and exhibitions. Such events are vital for increasing the visibility of Uttarakhand's organic products and creating demand. These activities not only enhance market reach but also contribute to the growth and sustainability of the region's organic farming sector.

Certification

A key part of UOB's marketing strategy is boosting brand recognition through certifications and quality assurance. To tackle the high costs of certification, UOB has set up an Internal Control System (ICS), which lets farmers get certified as a group.

This makes it easier and more affordable for smaller landholders to get certified. The system also simplifies the certification process for certifying bodies as it allows delegation of annual inspections to an identified body. By achieving and promoting these certifications, UOB ensures that its products meet high standards, building trust with consumers both locally and globally. This certification helps Uttarakhand's organic products stand out from conventional ones and highlights their authenticity and quality.

Training and Capacity Building

To strengthen the export capabilities of local producers, UOB organizes training programs and workshops focused on export procedures, quality control, and effective marketing strategies. These capacity-building initiatives equip producers with the skills and knowledge needed to navigate international markets successfully.

Overall, UOB's efforts play a pivotal role in strengthening the economic position of Uttarakhand's organic farmers while expanding their market opportunities internationally.





► Case Study

Assam Karbi Anglong Ginger

Assam's Karbi Anglong Ginger, which obtained a Geographical Indication (GI) tag in 2015, serves as a compelling example of how GIs can boost the export potential of agricultural products. This GI status has significantly enhanced the marketability and demand for Karbi Anglong Ginger on the global stage.

Since obtaining the GI tag, the export volume of Karbi Anglong Ginger has increased by approximately 30%. This increase is attributed to the enhanced market recognition and consumer trust associated with the GI certification.

The status has also facilitated the expansion into new markets and command higher prices. Exporters have noted a price increase of up to 20% compared to non-GI ginger, reflecting the added value and quality assurance provided by the GI tag.

Sikkim can replicate this success by securing GIs for its diverse agricultural products.



Product Market Identification for Sikkim's Organic Produce

To truly capitalize on Sikkim's unique production strengths, it is crucial to identify the right product-market mix. Exporters should focus on researching foreign markets and tailoring products to regional tastes. For instance, in the case of ginger, varieties like Nadia and Rio de Janeiro are preferred due to their high oleoresin content.

It is recommended to develop a web-based application for product market information,

similar to the initiative by Maharashtra's Maharashtra Chamber of Commerce Industries and Agriculture (MCCIA). This application would assist exporters in identifying countries with the largest and fastest-growing markets for their products, determining which foreign markets are the most penetrable and profitable. Additionally, it would provide an in-depth analysis of Export Promotional Policies and schemes, further supporting exporters.





► Case Study

MCCIA's Web Application for Export Facilitation

The Maharashtra Chamber of Commerce Industries and Agriculture (MCCIA) operates a premier chamber in the Western Maharashtra region, focusing on facilitating agro-export promotion. To improve exports, MCCIA established an Agriculture Export Facilitation Centre (AEFC), which acts as a 'one-stop-shop' for exporter guidance. The AEFC developed a comprehensive website to support exporters with:

- Identifying the right product-market mix

- Understanding the documentation process
- Navigating government schemes
- Learning export terminologies and certifications
- Accessing special export treatments

By implementing a similar web-based application, Sikkim can provide its exporters with valuable market intelligence and resources, enhancing their ability to successfully penetrate and profit from foreign markets.

Value-Added Products for Export

Sikkim should focus on producing and exporting value-added products such as dehydrated turmeric powder, nutraceuticals, ginger candy, and ginger oil. Developing these products can significantly enhance Sikkim's market penetration and competitiveness in international markets.

Here are key reasons to export value-added organic products and develop the food processing industry:

Differentiation

Value-added products allow Sikkim to stand out from competitors who mainly export raw materials. By offering unique, processed goods, Sikkim can target niche markets and consumers willing to pay a premium for high-quality, organic, and specialized products. This differentiation helps Sikkim move beyond competing solely on price and adds a distinct value proposition to its offerings.

Premium Prices

Value-added products command higher prices compared to raw agricultural products. This price premium can significantly boost Sikkim's export earnings, enhancing the economic viability of its agricultural sector. Products like dehydrated turmeric powder and ginger oil are in high demand in the health and wellness markets, allowing Sikkim to capitalize on these lucrative segments.

Combat Competition

Exporting value-added products is an effective strategy to combat stiff competition from other countries. For instance, Guatemala and Singapore are major competitors in the cardamom market. By focusing on value-added products such as nutraceuticals, Sikkim can diversify its product range and tap into the growing health and wellness sector. This strategy not only mitigates competition but also opens new avenues for revenue generation.



Conclusion

The assessment of the supply chain and export readiness for organic farm products in Sikkim reveals significant opportunities and challenges in the state's organic agriculture sector. As the world's first fully organic state, Sikkim holds a unique position in global agriculture. However, several obstacles currently hinder its ability to compete effectively in international markets. These challenges include inadequate infrastructure, high transportation costs, limited market access, and a lack of awareness among farmers about export procedures and financial support schemes. Addressing these issues and unlocking Sikkim's full potential requires a strategic, phased approach focusing on short-term, mid-term, and long-term actions.

Short-term Actions

In the short term, increasing awareness and education among farmers and exporters about export procedures, international standards, and available financial schemes is crucial. Many farmers and exporters in Sikkim currently lack the knowledge and resources needed to access global markets. Conducting extensive training programs and workshops can bridge this knowledge gap and empower farmers to participate more actively in the export market.

Establishing export facilitation centres across key locations in Sikkim will provide critical support with documentation, certification, market information, and logistics, which are essential for navigating the complexities of international trade. Additionally, creating temporary aggregation points for organic products will improve market access and reduce transportation costs.

These aggregation points can serve as collection hubs where farmers can consolidate their produce, making it easier to transport goods in bulk to markets or export centres.

Mid-term Actions

Over the mid-term, developing and enhancing the physical infrastructure required to support

Sikkim's organic farming sector is essential. Investments in cold storage facilities, processing units, and testing laboratories at strategic locations across the state will help maintain the quality and freshness of organic produce. Cold storage facilities will minimize post-harvest losses and extend the shelf life of perishable goods, while processing units will enable value addition to raw products, making them more marketable both domestically and internationally. Testing laboratories will ensure that Sikkim's organic products meet the stringent quality standards required by international markets, thereby enhancing their competitiveness.

Enhancing market linkages through the development of more organized aggregation centers and dedicated organic market yards at village, district, and state levels will further streamline the supply chain and improve market access for farmers. These market yards will function as centralized trading hubs where farmers can sell their produce directly to buyers, reducing the need for intermediaries and ensuring fair prices for their goods. Improving infrastructure will boost the efficiency of the supply chain and create new opportunities for employment and entrepreneurship, contributing to the region's overall economic development.

Long-term Actions

Long-term strategies aim to establish Sikkim as a global leader in organic farming by capitalizing on its unique status as a fully organic state. Promoting Sikkim's organic produce under a unified brand, such as "Sikkim Organic," will enhance its visibility and appeal in global markets. A strong, recognizable brand will help differentiate Sikkim's products from those of other regions and create a sense of trust and reliability among international consumers. Marketing Sikkim's organic products as premium offerings, emphasizing their environmental sustainability, health benefits, and high quality, will further boost their appeal.

Securing Geographical Indications (GIs) for unique products will protect their identity and value. GIs recognize the geographical origin of a product and its associated qualities or reputation, adding value to the products and enhancing their marketability and export potential. Obtaining GIs for Sikkim's distinctive organic products, such as large cardamom and ginger, will prevent misuse of the product name by producers in other regions and ensure that only genuine Sikkim produce is sold under these names.

Continued investment in research and development is essential for the long-term sustainability of Sikkim's organic farming sector. Focusing research initiatives on innovating and improving organic farming practices and products, developing new varieties better suited to the region's climate and soil conditions, and finding solutions to challenges such as pest management and soil fertility will ensure continued growth and resilience. Collaborating with research institutions, both within India and internationally, can bring in new knowledge and technologies that can be adapted to Sikkim's specific needs.

By implementing these phased actions, Sikkim can effectively overcome current challenges, leverage its strengths in organic farming, expand its presence in global markets, and improve the livelihoods of its farmers. This comprehensive approach will drive sustainable economic growth for the state, position Sikkim as a model for organic agriculture worldwide, and contribute significantly to broader goals of environmental sustainability and rural development.



Section E Annexures

Sikkim Meeting Details

Sl No	Meeting (held with)	Stakeholder Type	Stakeholder	Contact Details
1	Saroj Rai	Farmer	Farmer, Pakyong	9733090793
2	Ramesh Sharma	Farmer	ICS Inspector, Pakyong	8348470117
3	Prabhakar Sapkota	Farmer	Farmer, Pakyong	
4	Biju Pokhare	Farmer	Farmer, Pakyong	
5	Khemraj Sharma	Farmer	Farmer, Thekabong	
6	Dhruva Pradhan	FPO	FPO, Ex CEO Ranipool	9647776147, Dhruvaradhan@gmail.com
7	Kashinath Nepal	FPO	Rakdong Tintek FPO	9382058383
8	Deepak Gautam	FPO	Lingee Paiyoung Organic FPO	9733384223
9	Bishal Tikhatri	FPE	Yummy Fingers	9832032423
10	Sangay Bhutia	FPE	Taste of Sikkim	6295862402; sangaydomabhutia2019@gmail.com
11	Kumud Bhutia	FPE	Bayul Demojong	9875603327, kyibayul.demazong@gmail.com
12	Prabha Chetri	FPE	Sikkim Seasoning	9734159383, pravachetri 143@gmail.com
13	Vivek Cintury	Exporter/Trader	Vivek Cintury	8967560714; vcintury@gmail.com
14	Shailesh & COO	Exporter/Trader	Mevedir	9002333165, mevedir_gntk@yahoo.co.in
15	Hoshiar Singh Sharma	Exporter/Trader	Arohi Nutrifoods, Siliguri	9434448275
16	Jagat Gurung	Exporter/Trader	Sanchi Enterprises, Siliguri	8597444629
17	Vikas Makhija	Exporter/Trader	MD, Tapovan Impex, Exporter Delhi	9818405500; vikas@tapovanimpex.com
18	Kunal Gupta	Transporter	Sanjay Roadways, Siliguri	9832423394
19	Manish Bansal (Virtual)	Transporter	Maruti Transport	9434043525; manishinslg@gmail.com
20	Mayank Parihar	Officials of SIOL	COO, Sikkim IFFCO Organics Delhi	9810442764

SI No	Meeting (held with)	Stakeholder Type	Stakeholder	Contact Details
21	Ms Payal	Government Official	Assistant Director, Eastern Regional Office: FSSA	9797530545 (PS to Director, Debaesh Chakraborty)
22	Sudhir Sinha	Officials of SIOL	Plant In Charge -Sikkim IFFCO Organics	7309747269; sudhir.sinha@sikkimiffco.com
23	M. Ravi Kumar IFS	Government Official	Director, Commerce & Industries Department &	6296185935, ravikumarifs@gmail.com
24	Jeevan Sharma	Government Official	SIMFED, GM	9832032423
25	Dr. S. Anbalagan	Government Official	CEO, SOFDA	9733060033. sikkimorganicmission@gmail.com
26	Mr. T.T. Bhutia	Government Official	Deputy Director, SOFDA	9564930630
27	Mr. Phurba Tshering Lepcha	Government Official	Deputy Director, Spices Board	9475712966, phurba.lepcha@nic.in; ro.gtk-sb@gov.in
28	Vinita Sudhanshu	Government Official	GM, APEDA, Delhi	9167887633; vinitas@apeda.gov.in
29	Gurung	Exporter/Trader	Gurung, Siliguri	8597222629
30	Hemlal Sharma	Farmer	Hemlal, Thekabong	
31	Sachin Mishra	FPE	Sachin, Organic Tattva Company	8826750207
32	Aditya Dhakal	GFPP*	Production Manager, Sikkim Supreme	7584-994044
33	Shashi Pradhan	GFPP	Head Administrative, Sikkim Supreme	94763 63444
34	Narendra Gurung	GFPP	GM, Sikkim Supreme	
35	Kiran Sharma	GFPP	Marketing Manager, Sikkim Supreme	9083259276
36	Sudhir Giri	Government Official	CEO, SSOCA	94343 38494
37	Indramani Sharma	Government Official	Joint Registrar Cooperative Department , Sikkim	89275 17309
38	Subba	Government Official	Assistant Director, Spices Board	
39	Badri Gautam	Government Official	Luing MPCs	70015 93259

* GFPP- Government Fruit Preservation Factory

Questionnaire

Questionnaire - Farmers

	Question/ Discussion Points- "Current Situation of Organic Export in Sikkim"
Section 1: General Information	Question 1 ▶ Area of landholding by farmer.
	Question 2 ▶ Since how many years you have been engaged in organic farming?
	Question 3 ▶ Did you get any training for organic farming?
	Question 4 ▶ Type of Organic Products Cultivated. Which organic product do you produce in large quantity?
	Question 5 ▶ Is it more expensive to farm organically than to farm chemically?
	Question 6 ▶ Has Organic Farming's productivity reduced when compared to Chemical Farming's?
	Question 7 ▶ Where do you acquire the seeds for a specific crop?
Section 2: Challenges in Crop Production	Question 8 ▶ What role does middlemen play in consolidating the organic products from Sikkim?
	Question 9 ▶ How is the impact of different season on different crop?
	Question 10 ▶ How often does the crop get destroy by insects or get rotten. In case of this situation, how do you manage to get the desired production?
	Question 11 ▶ What methods do you use to maintain and improve soil health. Also, have you faced challenges related to soil degradation?
	Question 12 ▶ How do you manage nutrient requirements for your crops organically. Are there challenges in maintaining optimal nutrient levels in the soil?
	Question 13 ▶ How do you manage water resources for your organic crops?
Section 3: Marketing related impediments	Question 14 ▶ What challenges do you face in accessing markets for your organic produce? Are there specific issues related to pricing, demand, or distribution?
	Question 15 ▶ Have you encountered challenges in obtaining and maintaining organic certification?
	Question 16 ▶ How do you currently distribute your organic products to consumers. Are there challenges in establishing efficient and reliable distribution channels?
	Question 17 ▶ Have you experienced any product spoilage or quality deterioration during transportation? If yes, please provide details:
	Question 18 ▶ Identify the major challenges in transportation of products. Poor road infrastructure Lack of refrigerated transportation High transportation cost
Section 4: Government support	Question 19 ▶ Are there specific government support programs or services that have assisted you in overcoming challenges in organic crop production?
	Question 20 ▶ What additional support would you like to see from government initiatives?
	Question 21 ▶ Do you get subsidy on your produce by the Govt?
	Question 22 ▶ Have you participated in any government-sponsored training, workshops, or programs related to organic farming?
	Question 23 ▶ Have you noticed any government efforts in improving infrastructure for organic farmers?
	Question 24 ▶ Are there specific subsidies for organic inputs (seeds, fertilizers, etc.) that you have utilized? How do these subsidies impact the overall cost of organic farming?
Section 5: Others	Question 25 ▶ What additional interventions or support do you believe would enhance the export of organic products from Sikkim?
	Question 26 ▶ How would you rate the overall support and collaboration between the government and exporters in Sikkim?
	Question 27 ▶ If given an opportunity, would you be interested in exporting your products directly? If yes, what is your understanding of the export potential of your products and to which countries? Do you expect any challenges if you want to export directly?
	Question 28 ▶ What improvements do you think can be made to the current logistics system for organic product transportation in Sikkim?

Questionnaire - Market Traders

	Question/ Discussion Points- "Current Stituation of Organic Export in Sikkim"
Section 1: General Information	Question 1 ▶ How long you have been involved in trading organic products in Sikkim.
	Question 2 ▶ What is the process you follow to trade in the market? Do you directly buy and sell or there are intermediaries in between?
	Question 3 ▶ Did you get any training for organic farming?
	Question 4 ▶ Which Sikkim organic products are most popular among your customers?
	Question 5 ▶ How do youn ensure the quality and freshness of organic products?
	Question 6 ▶ How does the seasonility affect the produce and trading of organic products.
	Question 7 ▶ How do Sikkim organic products compare to other organic products in terms of quality and pricing?
	Question 8 ▶ What are the major chaallenges faced by farmers according to you?
Section 2: Challenges in trading	Question 9 ▶ What role does middlemen play in consolidating the organic products from Sikkim?
	Question 10 ▶ The process of how you source organic products from farmers or suppliers.
	Question 11 ▶ What are the major challenges faced by farmers according to you?
	Question 12 ▶ How do you handle logistics including transportation, storage etc related activity of organic products
	Question 13 ▶ What marketing strategies do you employ to promote Sikkim organic products?
	Question 14 ▶ Have you faced any challenges in creating awareness and promoting these products?
	Question 15 ▶ What are the major challenges do you face in logistics process of organic products.
Section 3: Potetial growth of Sikkim Organic product market & expected challenges.	Question 16 ▶ Where do you see the market for Sikkim organic products heading in the next 1-2 years?
	Question 17 ▶ Are there specific types of organic products that you believe have higher market potential?
	Question 18 ▶ Have you ever tried exporting products? If you had export license and interested in exports, where would you be exporting your products? Which are the biggest potential areas for export of thr products you deal with? Do you see any challenges involved in exporting your products in terms of logistics, pricing, government support etc?
	Question 19 ▶ How do you currently distribute your organic products to consumers. Are there challenges in establishing efficient and reliable distribution channels?
	Question 20 ▶ Have you experienced any product spoilage or quality deterioration during transportation? If yes, please provide details:
	Question 21 ▶ Explain the procedures involved in receiving and handling organic products once they arrive at your market/business.
Section 4: Awareness of government support	Question 22 ▶ Are you aware of any government initiatives or policies supporting the trading of Sikkim organic products? -
	Question 23 ▶ Have these initiatives positively impacted your trading activities?
	Question 24 ▶ In your opinion, what additional support or initiatives from the government would enhance the trading of Sikkim organic products?
Section 5: Others	Question 25 ▶ Have you noticed an increase in demand for Sikkim organic products?
	Question 26 ▶ Are there specific products that are difficult to obtain consistently?



Questionnaire - Exporters

Question/ Discussion Points- "Current Situation of Organic Export in Sikkim"	
Section 1: General Information	Question 1 ▶ How long you have been involved in exporting/trading of organic products of sikkim.
	Question 2 ▶ Which Sikkim organic products are most popular in international market?
	Question 3 ▶ How do you ensure the quality and freshness of organic products?
	Question 4 ▶ How does the seasonality affect the produce and exporting/trading of organic products.
	Question 5 ▶ How do Sikkim organic products compare to other organic products in terms of quality and pricing?
	Question 6 ▶ Which are the major countries have you exported? How much quantity on an average do you export? Who are your major competitors?
	Question 7 ▶ What are the major challenges faced by farmers according to you?
Section 2: Product Awareness and Knowledge	Question 8 ▶ How familiar are you with the variety and quality of Sikkim organic products?
	Question 9 ▶ Have you observed any specific trends or preferences in the international market for Sikkim organic produce?
	Question 10 ▶ How do you ensure the quality of Sikkim organic products for export?
	Question 11 ▶ Have you faced any challenges related to maintaining consistent quality standards?
	Question 12 ▶ What marketing strategies do you employ to promote Sikkim organic products in international markets?
Section 3: Challenges in Export of Organic produce	Question 13 ▶ What challenges do you encounter in sourcing Sikkim organic products for export?
	Question 14 ▶ Are there specific products that are difficult to obtain consistently?
	Question 15 ▶ How crucial is organic certification for your exported products?
	Question 16 ▶ What challenges do you face in accessing international markets for Sikkim organic products?
	Question 17 ▶ How do you handle the distribution of Sikkim organic products to international buyers? Are there challenges in establishing efficient and reliable distribution channels?
	Question 18 ▶ Do you face any challenges in terms of logistics/infrastructure support? What are your suggestions to improve logistics facilities which will aid exports from Sikkim?
Section 4: Awareness regarding government support	Question 19 ▶ Are you aware of any government initiatives or policies supporting the exporting of Sikkim organic products? -
	Question 20 ▶ Have these initiatives positively impacted your trading activities?
	Question 21 ▶ In your opinion, what additional support or initiatives from the government would enhance the export of Sikkim organic products?
Section 5: Others	Question 22 ▶ Have you noticed an increase in demand for Sikkim organic products in the international markets?
	Question 23 ▶ Can you identify the primary reasons for the rejection of Sikkim organic produce in your export shipments? Are these rejections related to quality, certification, documentation, or other factors?
	Question 24 ▶ Have there been challenges in maintaining consistent quality standards?
	Question 25 ▶ Do you receive feedback from importers regarding the reasons for rejecting shipments?



Questionnaire - Government Officials

Question/ Discussion Points- "Current Stituation of Organic Export in Sikkim"	
Section 1: Trade Practices and Impediments	Question 1 ▶ What are the current trade practices for exporting organic products from Sikkim?
	Question 2 ▶ What is your take on the existing infrastructure supporting exports from Sikkim?
	Question 3 ▶ Can you identify any specific challenges or impediments that hinder the free-flowing exports of organic products from Sikkim?
	Question 4 ▶ What support is the Government giving to the Farmers/Exporters to export the products? Do you notice and regulatory or bureaucratic hurdles faced by Exporters in Sikkim?
	Question 5 ▶ If yes, kindly elaborate on the hurdles and how the same are currently been tackled?
Section 2: Middleman Reduction and Digital Intervention	Question 6 ▶ How would you describe the role of middlemen in the export of organic products from Sikkim?
	Question 7 ▶ What is the current status of exports in Sikkim? Do the FPOs have direct access to exports or do they have to depend on aggregators and middlemen?
	Question 8 ▶ Do you believe that reducing the involvement of middlemen would benefit the export process?
	Question 9 ▶ If Yes' kindly please explain what benefits will this have in export process
	Question 10 ▶ What digital interventions do you think could streamline the export process for organic products from Sikkim?
	Question 11 ▶ Are there any existing digital platforms or initiatives facilitating organic product exports from Sikkim?
	Question 12 ▶ Please could you let us know the names and a brief about these platforms
Section 3: Production Entity and Groups	Question 13 ▶ How are the 190 groups under the producing entity currently organized for exporting organic products?
	Question 14 ▶ Do you think there is a need for restructuring or organizing these groups differently for more efficient exports?
	Question 15 ▶ Can you identify any communication or coordination challenges within these producing groups?
	Question 16 ▶ Are there any existing initiatives to provide training or support to these producing groups for export- related activities?
	Question 17 ▶ If Yes' how successful are they please let us know in few words
Section 4: Utilization of Exit Points	Question 18 ▶ Which are the nearest exit points currently in use for exports? Are there any alternative exit points which are available or can be developed?
	Question 19 ▶ How satisfied are exporters with the current utilization of the nearest exit points?
	Question 20 ▶ Are there any specific challenges faced in utilizing the mentioned exit points for exports. Have there been any recent infrastructure developments or upgrades at these exit points to facilitate exports?
	Question 21 ▶ What would be your suggestions for development/upgrade which would facilitate faster and seamless movement of export products?
	Question 22 ▶ Kindly explain us some major upgrades to these exit points
Section 5: General Feedback and Suggestions	Question 23 ▶ What additional interventions or support do you believe would enhance the export of organic products from Sikkim?
	Question 24 ▶ How would you rate the overall support and collaboration between the government and exporters in Sikkim?
	Question 25 ▶ Are there any best practices from other regions or countries that you think could be applied to improve the export scenario in Sikkim?
	Question 26 ▶ Would you be interested in conducting/participating in workshops or collaborative sessions to discuss and implement solutions for promoting organic product exports from Sikkim?



Questionnaire - Transporters

Question/ Discussion Points- "Current Situation of Organic Export in Sikkim"	
Section 1: General feedback	Question 1 ▶ Could you please give us brief about your business and the load handled by your team?
	Question 2 ▶ What is the Nature of products handled?
	Question 3 ▶ Where do normal pickups are done for your operations?
	Question 4 ▶ What is the normal destination of the pickups?
	Question 5 ▶ Do you reach to a particular port directly or majorly to specific entity points in Siliguri/Kolkata etc?
	Question 6 ▶ To best of you knowlege what infrastructure support is going to reduce transportation time and en- route hassles?
Section 2: Trade Practices and Impediments	Question 7 ▶ Can you identify any specific impediments or challenges that hinder the smooth export of organic products from Sikkim?
	Question 8 ▶ Are there any regulatory or procedural issues that exporters face in Sikkim? Please provide details.
	Question 9 ▶ How extensively are middlemen involved in the export process of organic products in Sikkim?
	Question 10 ▶ What measures do you think can be taken to reduce the involvement of middlemen in the export of organic products?
	Question 11 ▶ In your opinion, how can digital interventions, such as online platforms or blockchain technology, be leveraged to streamline and enhance the export process?
	Question 12 ▶ To best of you knowlege what infrastructure support is going to reduce transportation time and en- route hassles?
Section 3: Evaluation of Producing Entities & Utilization of Exit Points	Question 13 ▶ Can you provide insights into the challenges faced by the 190 groups of producing entities in Sikkim concerning transportation and export?
	Question 14 ▶ How do these producing entities currently coordinate with each other and external stakeholders for export purposes?
	Question 15 ▶ What is the current utilization level of exit points like Chamurchi road/railway in West Bengal and LDC Question 15 Loksan in Assam for exporting organic products from Sikkim? Do you suggest any possible alternative exit points which would reduce the transit time and damages, if any?
	Question 16 ▶ Are there any logistical or infrastructural challenges faced when utilizing these exit points for exports?
Section 4: Recommendations and Future Planning	Question 17 ▶ In your opinion, what infrastructure improvements or interventions would you suggest to facilitate smoother transportation and export of organic products from Sikkim?
	Question 18 ▶ How can the government or relevant authorities support and incentivize exporters to adopt digital solutions in the export process?
	Question 19 ▶ Are there any specific areas where you believe targeted interventions can have a significant positive impact on promoting exports of organic products from Sikkim?



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