

Medicinal and Aromatic Plants Cultivation: A High-Value Sector for Agricultural Growth

Amit Thakur, Kiran Kumara TM, Aditya KS, Shiv Kumar, and Lakshmi Kant

The *Viksit Bharat 2047* roadmap envisions self-reliance in agriculture sector with a transformation into a modern, climate resilient, technology driven sector while enhancing farmers prosperity. To achieve this, a strategic shift from volume-based production towards diversification into high-value agriculture and market-oriented commodities is crucial. In this context, production of Medicinal and Aromatic Plants (MAPs) offers a promising niche within agriculture where India can leverage a natural advantage. With higher returns, rising demand from pharmaceutical and wellness industries, and potential for agro-processing and exports, MAPs can significantly contribute in income growth, rural employment, and overall economic development.

MAPs are a valuable source of plant based bioactive compounds widely utilized in pharmaceuticals, health supplements, cosmetics, perfumery, flavouring, and other industrial products. A growing industrial demand for herbal products in both domestic and global markets creates an opportunity for commercial cultivation. Around 60% of commercially available pharmaceuticals contain molecules extracted from natural resources, largely sourced from medicinal plants¹. Notably, the global herbal market is worth approximately US\$ 251 billion in 2025 and projected to grow at 8.23 % by 2032¹. Asia accounts for 42% of the global production, with leading international players like China and India, underscoring India's strategic advantage in this industry. In the context of India's AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy) market, herbal plants have the largest share (43.35%), followed by nutraceuticals (24.65%), pharmaceuticals (14.11%), cosmeceuticals (8.37%) and plant extracts and derivatives (9.53%)² which collectively

contribute 1.1 % of the domestic gross value added (GVA)³. Recognizing the importance of MAPs, the recent Union Budget 2026–27 announced the establishment of five regional medical tourism hubs to promote India as a global medical and wellness destination by integrating traditional systems of medicine with modern healthcare infrastructure.

By linking AYUSH hospitals, wellness resorts, pharmaceutical industries, export agencies with farmer-producer organizations (FPOs), these hubs have the potential to create robust forward and backward linkages within the MAP value chain. Hence, this brief assesses the current status, growth prospects, key challenges, export competitiveness and policy priorities for strengthening the MAP sector in India.

Status and prospects of MAPs cultivation in India

In the last two decades, the annual area and production under MAPs in India have increased by 9.89% and 7.59%, respectively. The cultivated area has expanded from 1,31,000 hectares in 2004-05 to 7,86,000 hectares in 2023-24. The expansion in area has resulted in a significant increase in production, nearly fourfold from 1,59,000 tons in 2004-05 to 6,38,000 tons during 2023-24 (Figure 1). However, yield growth for MAPs remains stagnant during this phase, highlighting the need for research innovations in quality planting material and availability of standardized package of practices for improvement. Despite the spatial expansion, the area under MAPs is concentrated in a few States, namely, Rajasthan (69 %), Gujarat (17%), and Madhya Pradesh (6%).

In India, geographical advantages in the form of biodiversity hot spots in several regions, mainly in the Indian Himalayan

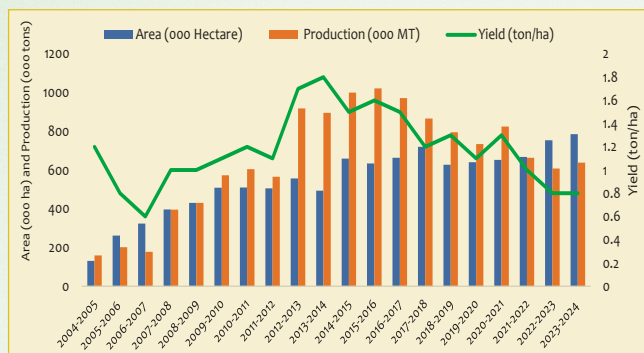
Amit Thakur (Scientist), and Lakshmi Kant (Director), are affiliated with ICAR- Vivekananda Parvatiya Krishi Anusandhan Sansthan (VPKAS), Almora. Kiran Kumara TM (Scientist), Aditya KS (Scientist), and Shiv Kumar (Director) is affiliated with ICAR-National Institute for Agricultural Economics and Policy Research (NIAP), New Delhi. The authors acknowledge with gratitude the financial support and institutional facilitation provided by ICAR-NIAP, which enabled the successful completion of this research.

¹ Fortune Business Insights. (2025) <https://www.fortunebusinessinsights.com/herbal-medicine-market-106320>

² RIS. (2021). *Ayush sector in India: Prospects and challenges*. (https://ris.org.in/sites/default/files/Publication/Ayush%20Study-Public%20Policy%20and%20Economic-FINAL%20REPORT%2028%20OCT_o.pdf)

³ GoI. (2017). *Contribution of ayurvedic products to GDP*. <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1484181®=48&lang=2>

Figure 1. Area, production and yield of MAPs in India



Source: Agricultural Statistics at a Glance, several reports, Gol. <https://desagri.gov.in/Agricultural-Statistics-at-a-Glance-2024.pdf>.

Region (IHR), Eastern and Western Ghats, is a rich source of herbal raw materials, as these regions host more than 8000 medicinal plant species. Currently, more than 1178 species are in demand as raw materials in the herbal drug industry. Nearly 72 % of this demand is met through wild collection from forests and nearby landscapes, and only 22-25 % is supplied through cultivation⁴.

MAPs cultivation offers several key advantages to the farmers. MAPs generally have high value per unit volume compared to cereals and horticultural crops. They can be used as mixed, intercrops or companion crops for additional income. Many of the species can be grown with lower investment in inputs by utilizing fallow, degraded lands. These crops also withstand harsh conditions and safeguard farmers' income against climatic risks. Crops like *Picrorhiza kurroa* (Kutki), *Saussurea costus* (Kuth), *Rosa damascene* (Rose), *Artemisia* (Titepati), etc., have high economic value and global demand. Despite the advantage, the large-scale adoption of MAPs is constrained by limited access to certified planting material, fragmented supply chains, lack of assured markets, insufficient processing infrastructure, and limited institutional support.

At present, the MAP sector is predominantly having unorganised value chains. A typical value chain consists of primary producers or wild collectors, local traders, aggregators, herbal drug processing companies and consumers⁵. The dominance of middlemen in these value chains hinders the producers from realizing the benefits of competitive and fair price discovery. Moreover, the overexploitation of wild species along with adulteration and contamination in different stages of the chain adversely affect the quality of the produce⁶.

Export performance and competitiveness of MAPs

India's AYUSH exports amounted to US\$ 543.77 million in 2024, accounting for 11.7% of global AYUSH product exports.

⁴ RIS. (2019). *Medicinal plant cultivation for poverty reduction: Prospects and challenges*. FITM, PB 3.

Table 1. Export and import trends of MAPs

Year	Export value (US\$ Million)	Export quantity (000 ton)	Value of per unit export (US\$/ton)	Trade surplus (US\$ Million)	Export share (%)	Import share (%)
2005	76.76	50.18	1506	57.78	5.8	1.5
2010	132.51	29.73	2190	97.94	6.3	1.8
2015	237.80	87.56	2716	168.54	7.6	2.7
2020	347.39	110.49	3144	245.20	9.7	3.2
2021	414.63	116.39	3561	308.01	10.6	3
2022	438.73	105.46	4160	323.75	10.8	2.9
2023	450.91	100.13	4503	336.52	10.6	2.8
2024	543.77	121.85	4462	412.59	11.7	3
CAGR (%)	10.2	4.8	5.2	10.2		

Source: UN Comtrade. <https://www.trademap.org> HS Code: 1211

Indian herbal export portfolio (under HS code 121190*) is largely dominated by crude forms of herbal products, in which *Psyllium* husk and seeds trade contribute to 85% of export earnings. From 2005-24, exports of herbal products maintained an annual growth rate of 10.2% (Table 1). Further, lower herbal imports helped in creation of a US\$ 412.59 million trade surplus in 2024.

India and China are major contributors to the world trade of herbal products, accounting for one-third of the total export value. Between 2005-2024 period, both countries followed a distinct growth trajectory. A promising growth in export quantity (50,180 to 121,850 tons) and export values (US\$ 76.76 to 543.77 million) from India has strengthened its position in the global herbal market. However, despite the rising overall export value, India still trails behind China in price realization from exports⁷. A comparison of export unit values for common MAP product groups further shows that China generally realized higher export prices compared to India for 2022-24 period (Figure 2).

This trend could be attributed to a strategic reorientation of China's export portfolio towards value-added processed products targeting pharmacy and perfumery industries, leveraging huge profit margins compared to crude herbs' trade⁷. This transition has been supported by the expansion of its domestic pharmaceutical sector, the global integration of traditional Chinese medicine, and a stronger emphasis on quality assurance through good

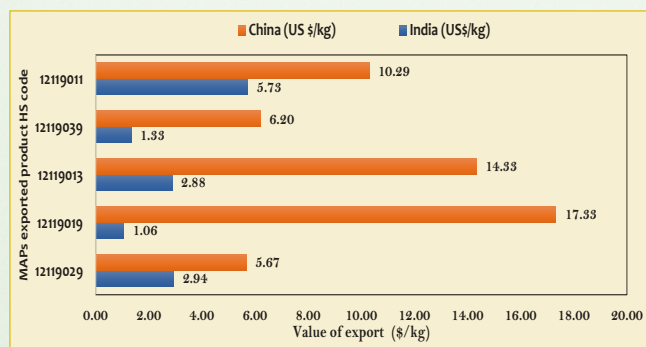
⁵ Goraya, G. S. and Ved, D. K. (2017). *Medicinal plants in India: An assessment of their demand and supply*. NMPB, Min. of AYUSH, GOI and ICFRE, Dehradun.

⁶ NAAS. (2017). *Integration of medicinal and aromatic crop cultivation and value chain management for small farmers*. Policy Paper 79. National Academy of Agricultural Sciences, New Delhi

* HS code 121190: HS Codes of Plants and parts of plants (including seeds and fruits), of a kind used primarily in perfumery, in pharmacy or for insecticidal, fungicidal or similar purpose, fresh or dried, whether or not cut, crushed or powdered.

⁷ Zamani, S., Fathi, M., Ebadi, M. T., & Máthé, Á. (2025). Global trade of medicinal and aromatic plants: A review. *Journal of Agriculture and Food Research*, 21, 101910.

Figure 2. Export price realization of MAP products for India and China



Source: UN Comtrade. (<https://www.trademap.org> HS Code: 121190)

agricultural practices (GAP) and improved traceability across value chains, collectively enhancing export earnings⁸.

Policy initiatives in India's MAP subsector and their impacts

Considering the potential of herbal industry, Government of India has taken several development initiatives in this sector. In 2000, National Medicinal Plants Board (NMPB) was set up with a focus on conservation and cultivation of medicinal plants. Decentralization of governance was carried out via establishing State Medicinal Plant Boards (SMPB) at the state level in the year 2003.

In the year 2014, the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy) was established, with a focus on governance in traditional medicine sector. Under this ministry, the National Ayush Mission (NAM) supports farmers through inputs mainly planting material, certification, insurance, mobilization of growers into self-help groups/cooperatives/AYUSH societies and technical support through training. Financial support under NAM has been as high as 75 % for 13 prioritized plants, 50 % for 27 plants and 30 % for 55 Plants. The support is also extended to resource augmentation, *in-situ* and *ex-situ* conservation, establishment of nurseries and herbal gardens in about 72,000 hectares of land⁶.

Structural break analysis of export performance indicates a jump in the level of exports after 2014, though the overall export growth during 2015-2024 has slowed down. However, during 2014-2020, slowdown in quantity growth and a switch towards high-value products highlight quality enhancement in the Indian MAP value chain. Introduction of products like Basil and Ashwagandha in the export basket and policy initiative of setting up AYUSH export council further strengthened India's global reach.

India's expanding network of Free Trade Agreement

⁸ RIS. (2020). China's Policy Initiatives for National and Global Promotion of TCM (Traditional Chinese Medicine). https://arp.ayush.gov.in/admin/assets/pdf/China's_Policy_Initiatives_fo_National_and_Global_Promotion_of_TCM.pdf

(FTA), particularly India-European Union (EU) FTA, offers additional opportunity to enhance market access for MAPs. Moreover, growing recognition of traditional medicine services under the India-EU FTA framework can strengthen forward linkages with India's medical and wellness tourism hubs. However, it is important to note that tariff barriers have historically been less significant in EU trade; rather, stringent non-tariff measures such as Sanitary and Phytosanitary requirements, sustainability standards, and deforestation-related regulations remain the principal constraints. As a result, the anticipated benefits of the FTA will be contingent upon India's ability to comply with these evolving regulatory frameworks or secure appropriate concessions within the agreement.

Table 2. Key policy initiatives shaping the MAPs and AYUSH Sector in India

Year	Policy Initiative	Core Focus	Significance
2000	National Medicinal Plants Board (NMPB)	Conservation, cultivation of MAP crops	Governance and development of sector
2003-04	State Medicinal Plant Boards (SMPB)	Implementation of MAP schemes at grassroot level	Commercial cultivation, rise in production
2014	Ministry of AYUSH	Dedicated ministry for governance of Traditional MAP and medicine	Increased value addition, enhanced export earnings
2015	National AYUSH Mission	Cultivation in clusters, processing infrastructure, value chain development	Farmers' participation and supply chain development
2018	Quality & Standardisation Push (GACP, Pharmacopoeia)	Quality control, certification labs	Export compliance and higher price realisations
2021	AYUSH Export Promotion & Global Outreach	Branding, MoUs, international markets	Shift from bulk exports to value-based exports

Source: Ministry of AYUSH, several reports (<https://ayush.gov.in/annualreport>)

Figure 3. Structural shifts in India's MAPs exports



Source: UN Comtrade. <https://www.trademap.org> HS Code: 1211

Policy Implications

Mainstreaming of MAPs as high-value agricultural ventures are viable and ecologically sustainable. However, cultivation of MAPs as a mainstream agricultural activity still requires several key strategic interventions with a focus on improving productivity, farmers' participation and income augmentation.

- ❖ Expansion in area under MAPs is needed to harness the potential of diverse agro-climatic zones and production sites in the country. However, delay in disbursement of subsidies under NAM for cultivation at farm level impeding the growth. In line with ODOP (One district one product) programmes, there is a need to focus on one state or one district with one medicinal crop, can be implemented for creating a robust production and value addition hubs.
- ❖ In case of medicinal plants, wild collection in Himalayan and tribal regions still remains a dominant source of supply, especially in temperate zones endangering several valuable species. Developing suitable varieties, establishing certified nurseries at village levels, and ensuring the availability of quality planting material are essential for sustainable cultivation. A location-specific package of practices for MAPs cultivation, coupled with capacity building on Good Agricultural Practices (GAPs), biological pest management, and post-harvest handling, should be promoted to improve productivity and quality. The further expansion of MAPs cultivation through dedicated cluster-based production approach will facilitate the economies of scale and maintain the supply of high-quality raw material for the herbal industry.
- ❖ Competitive markets offer remunerative prices to the producers, however in case of medicinal plants, markets are of monopsonist nature. Establishment of alternative marketing channels, market information systems and contract farming arrangements with Ayurvedic and pharmaceutical companies can reshape information asymmetry and enable better price discovery. Further, utilization of FPO/NGO/cooperatives for village-level aggregation and primary processing operations can enhance the bargaining power of farmers and reduce dependency on aggregators. Promotion of e-commerce and digital market platforms, backed by emerging technologies such as the Internet of Things (IoT) and blockchain-

enabled traceability at the backend of the value chain, can further widen market access, enhance transparency and build consumer confidence in MAP products.

- ❖ Harnessing the export potential of medicinal plants requires compliance with global production standards and certification systems, to avoid rejections. Aligning domestic standards with those of key international regulators such as the U.S. Food and Drug Administration and the European Union can further simplify regulatory procedures, enhance market access, and ensure smoother acceptance of products in global markets. Such reforms ask for dedicated investment in capacity building of stakeholders on targeted training on good agricultural and collection practices, tailored to specific crops and products, along with strengthening quality testing, grading, and certification systems at grassroot level. In addition, designating a dedicated commodity directorate or nodal authority to oversee regulatory compliance can help streamline adherence to importing-country requirements.
- ❖ India's export basket of MAP products needs strategic diversification. Despite policy initiatives expanding export volumes, continued dominance of *Psyllium* exposes the sector to risks from crop failure and market volatility. Although per-unit export values have increased, they remain lower than those of leading global exporters. This highlights the need to shift from exporting raw and crude herbs to high-value, refined products. Policies should therefore strengthen export-oriented value chains through processing, certification, traceability, branding and compliance with international standards. Initiatives such as Digital Public Infrastructure and Bharat-VISTAAR could aid in developing better traceability systems and export facilitation by enabling real-time tracking of product origin, quality certification, and supply chain compliance. Building a strong processing base and a broad product-diversification portfolio is therefore essential, in which the AYUSH export council can play a pivotal role by generating market intelligence on the products, attributes and special characteristics demanded by importing countries and by providing backstopping support, while strengthened aggregation and primary processing at source can help the sector respond to evolving global demand.

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ICAR – NATIONAL INSTITUTE OF AGRICULTURAL ECONOMICS AND POLICY RESEARCH
(Indian Council of Agricultural Research)

P.B. No. 11305, Dev Prakash Shastri Marg, Pusa, New Delhi-110 012, INDIA

Phone : 91-11-25847628, 25848731, Fax : 91-11-25842684 E-mail : director-niap@icar.org.in

<https://www.niap.res.in>