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Opportunities and Challenges in the Cultivation Commercialisation of Spiritual and Herbal Plants in Mandi, Himachal Pradesh

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Abstract

The present study examines the opportunities and challenges associated with cultivating and commercialising spiritual and herbal plants in the Mandi district of Himachal Pradesh. Recognising the growing demand for herbal products in both domestic and international markets, the research aimed to identify key opportunities for farmers, as well as the major barriers that hinder their active participation in this sector. A multi-stage sampling technique was adopted, and data were collected from a sample of 300 respondents. To analyse the data, simple percentage methods and the Problem Confrontation Index (PCI) were employed, allowing for both descriptive and systematic ranking of issues faced by cultivators. The survey's findings indicate that farmers and communities perceive significant opportunities in this sector. These include the promotion of organic farming, value addition, product diversification, rural development, religious conservation, health benefits, livelihood generation, and entrepreneurial ventures. Respondents emphasised that with proper institutional support, these opportunities could translate into sustainable income generation and enhanced social well-being. At the same time, the study highlights critical barriers that constrain the expansion of this sector. The most pressing challenges identified were a lack of irrigation facilities, insufficient government incentives, the absence of special financial assistance, limited technical knowledge, and marketing difficulties. Addressing these constraints requires policy interventions such as improved irrigation infrastructure, provision of subsidies and targeted financial schemes, training programs for capacity building, and the development of robust marketing and storage facilities. Overall, the study concludes that while the sector offers immense socio-economic and cultural potential, its sustainable growth depends on a balanced approach that integrates government support, institutional frameworks, and farmer participation. The findings contribute valuable insights for policymakers, researchers, and development agencies aiming to strengthen the herbal and spiritual plant sector in the Himalayan region.

Keywords: Spiritual and Herbal Plants, Opportunities, Challenges, Problem Confrontation Index (PCI), Himachal Pradesh

1. INTRODUCTION

The commercialisation of spiritual and herbal plants has emerged as a hopeful livelihood strategy, especially in ecologically sensitive and resource-rich regions, such as the Indian Himalayas. With growing demand for natural remedies, organic food, wellness products, and plant-based cosmetics, medicinal and spiritual plants such as Amla (Phyllanthus emblica), Taur (Zanthoxylum armatum), Bamboo (Bambusoideae), Walnuts (Juglans regia), Lingad (Diplazium esculentum), and other wild edibles have gained increasing attention in both national and international markets (Ved & Goraya, 2008; NMPB, 2020; Khanduri et al., 2025). This commercialisation offers multiple opportunities to a diverse range of stakeholders, including local farmers, forest-dependent communities, Self-Help Groups (SHGs), traders, herbal industries, and policymakers. These opportunities include employment generation, income diversification, preservation of traditional knowledge, export potential, and sustainable rural development (Kala, 2005; Tiwari et al., 2013; Angmo et al., 2025). Women's participation, in particular, has significantly increased through Self-Help Groups (SHGs) and cooperative marketing, contributing to both social empowerment and economic gains. In the study area, women are actively involved in Self-Help Groups (SHGs), where they prepare a range of products, including Burans (juice and chutney), bamboo pickle, amla (amla Kandy pickle), and Lingad Pickle. These products are sold in the local market and also supplied on demand to the surrounding communities. These plants serve as a major source of income and employment for them. Women also market their products during local festivals through exhibitions. They generally collect raw materials from the forest, process them into value-added products, and then sell them to generate income.

Rising global interest in medicinal plants has also created a sustained and largely 'underground' trade in plant materials, many of which are being collected in LDCs in an unregulated manner, resulting in indiscriminate harvest of wild varieties and serious damage to biodiversity (Karki,2017). Herbal and spiritual plants in the hilly or mountainous areas of Mandi district, Himachal Pradesh, offer significant economic potential, environmental benefits, and livelihood support to poor and marginalized communities. However, despite the immense potential, stakeholders face numerous challenges. These include lack of access to formal markets, inadequate value addition and processing facilities, uncertainty in prices, overdependence on middlemen, and absence of quality certification and branding mechanisms. Furthermore, issues such as overharvesting, weak institutional support, limited research on cultivation practices, and poor infrastructural connectivity continue to restrict the growth of this sector (Uniyal et al., 2000; Subrat, 2002). Regulatory hurdles, particularly related to the Forest Rights Act, biodiversity laws, and export regulations, also pose barriers to efficient and ethical trade.

Understanding these opportunities and challenges is crucial for developing sustainable value chains and enabling fair returns for all stakeholders involved. This study aims to explore the roles, benefits, and constraints faced by various stakeholders engaged in the commercialisation of spiritual and herbal plants, to inform inclusive policies and capacity-building programs that ensure environmental conservation along with rural economic development. In **Mandi**, plants like **Taur, Amla**, and **Lingad** are either cultivated or collected from nearby forests. SHGs and local farmers engage in seasonal harvesting, but the lack of cold chains and organized buyers means much of the produce is sold at low prices. A focused intervention through **local processing centres**, capacity-building programs by **NMPB,** and **direct market access via cooperatives** has shown potential to improve returns. Initiatives like **the Van Dhan Yojana under TRIFED could further strengthen the supply chain if implemented on a larger** scale.

1.1 Opportunities in the Commercialisation of Spiritual and Herbal Plants: A Global to Local Perspective

Globally, the increasing demand for natural remedies, herbal medicines, and wellness products has driven a boom in the medicinal and herbal plant market, making these resources important contributors to employment generation, income diversification, and environmental conservation (Hoareau & DaSilva, 1999). In India, traditional herbal medicine and the cultivation of medicinal plants have been recognized as sustainable livelihood strategies, as they provide opportunities for rural households and women while also contributing to the preservation of indigenous knowledge and the growing export market (Basantaray et al., 2024; Kumar et al., 2023). In Himachal Pradesh, the government has actively promoted the conservation and cultivation of medicinal plants under schemes such as the National AYUSH Mission, providing financial incentives, establishing nurseries, and encouraging farmers to adopt herbal and aromatic plant cultivation as part of crop diversification strategies (The News Himachal, 2021).

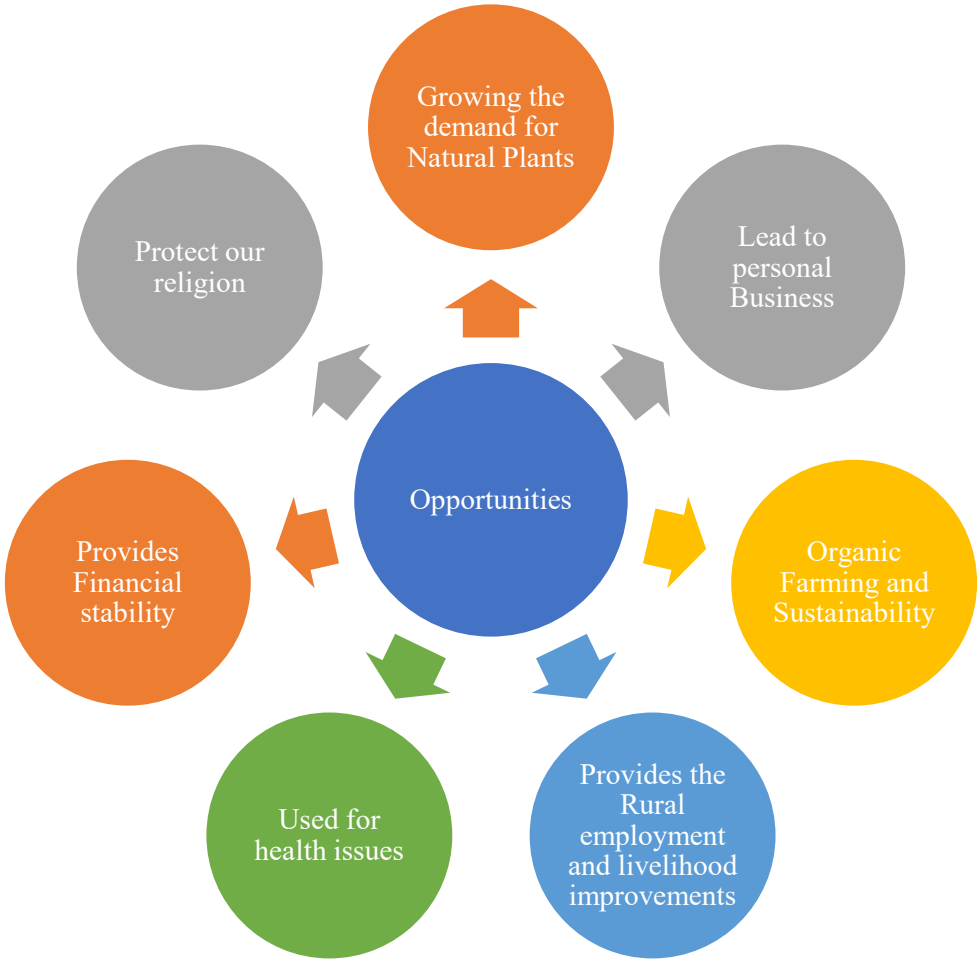

Figure1.Opportunities in the Commercialisation of Spiritual and Herbal Plants: A Global to Local Perspective

Within this context, District Mandi stands out as a region well-suited for both agriculture and horticulture. Its favourable climate and diverse natural resources support crop diversification, multi-cropping, and the sustainable use of spiritual and herbal plants. The commercialisation and harvesting of these plants create significant livelihood opportunities, particularly for women who utilise their time in plant collection and processing, thereby generating household income. Such activities also preserve cultural traditions, safeguard the environment, and provide organic, natural products that are beneficial for human health.

Since many of these plants grow naturally in forested areas with minimal or no input costs, they present unique opportunities for village-level entrepreneurship and small-scale businesses, which can later be expanded to larger commercial ventures. These ground-level opportunities highlight the potential of spiritual and herbal plants in creating rural employment and can inform future government policies aimed at sustainable development in the region.

1.2. Challenges in the Cultivation/Commercialisation of Herbal and Spiritual Plants

Globally, the commercialisation of medicinal and herbal plants faces significant hurdles, including over-exploitation of wild habitats, climate change impacts on plant distribution, and market fluctuations linked with inadequate quality control standards (Bhatt & Joshi Associates, 2024). In India, small-scale cultivators continue to encounter challenges such as a lack of awareness about sustainable harvesting techniques, weak market linkages, and insufficient post-harvest infrastructure, all of which prevent them from accessing fair prices and wider markets (National Medicinal Plants Board, 2023). In Himachal Pradesh, studies have documented that medicinal plants are under stress due to habitat degradation, unscientific and destructive harvesting practices, lack of certification mechanisms, and weak enforcement of regulatory policies. Reports also highlight that while the demand for medicinal plants in the state has increased by about 50%, their availability from wild habitats has simultaneously declined by nearly 26%, pushing many species into threatened categories (Times of India, 2019; Tribune, 2025; Down to Earth, 2020).

Figure 2. Challenges in the Cultivation/Commercialization of Herbal and Spiritual Plants

At the level of District Mandi, these broader challenges are reflected in practical difficulties such as low market demand for certain spiritual and herbal plants due to high prices, lack of financial incentives or subsidies from government agencies, limited awareness among cultivators regarding sustainable practices, and weak access to formal market channels. These constraints significantly hinder the full utilization of locally available natural resources and reduce the livelihood potential of herbal and spiritual plant commercialization in the area. In Himachal Pradesh, District Mandi, they faced problems related to agriculture because of the Hilly area. The Himalayan region of Himachal Pradesh has more natural resources, but still, they can't utilise them properly because of so many problems are there to the utilisation of these resources, like spiritual and herbal plants in this area. These plants naturally grow in the forest area, like Lingal, Daadu, Amla, Kashmale (Daaruhaldi), Tej pata, Taur plant, and Bamboo, Jangli tulsi, Ashawgandha, Harad, etc. These plants give employment and generate an income source for this area. Problems faced by cultivators and harvesters of these plants are low demand due to the high price, and less incentive from the government, Lack of special financial assistance, lack of awareness about spiritual and herbal plants, etc. The government should make a policy related to awareness about herbal and spiritual plants.

2. Review of Literature

Khoshnodifar et al. (2025) analysed the challenges of drone application in Iran's agriculture using the TOWS method to develop strategies for the drone industry. The study found that drones significantly reduce human workload and enable precise, rapid application of liquid fertilisers and pesticides, while their use in Iran falls within competitive strategies. Obsi Gemeda et al. (2023) collected cross-sectional data from 442 farmers in study area through multi-stage sampling. Applying a multivariate probit model, weighted average index (WAI), and problem confrontation index (PCI), they identified lack of irrigation, high input costs, and infertile soils as major barriers to climate change adaptation, highlighting the need for stronger institutional support. Jahan et al. (2022) investigated investment analysis, determinants, and SWOT analysis of agroforestry adoption in Bangladesh using multistage random sampling of 240 respondents. Constraints identified through PCI included a lack of technical support, skills, training, motivation, and information, indicating that while awareness was relatively high, adoption remained limited. Antwi-Agyei et al. (2021) examined climate-smart agricultural practices in Ghana's transitional and savannah agroecological zones. Using WAI and PCI, the study found that farmers widely adopted practices such as timely harvesting, pest control, seed banking, and early planting, while barriers included weak policy arrangements and inadequate extension support. Masud et al. (2017) studied farmers' perceptions of climate change vulnerability in Malaysia through multiple regression and a severity index (SI). Findings revealed that socioeconomic factors such as age, education, income, experience, farm size, and access to credit and extension services significantly influenced adaptation practices, while SI indicated positive attitudes towards climate change adaptation.

3. Materials and Methods

3.1. Analytical Framework

In this objective, we used a Problem Confrontation Index (PCI) method for data analysis.

3.1.1. Description of Problem Confrontation Index

The Problem Confrontation Index (PCI) is a mathematical problem ranking index that is defined as a set of objects whose state must satisfy several problems or limitations. The respondents in the study area were

asked to express their opinions on selected problems identified through a literature review. A five-point rating scale/ Likert scale was used for computing the problem score of a respondent. Each harvester was asked to indicate the extent of difficulty by each of the problems by checking any of the five responses, such as 'Strongly Disagree', 'Disagree', 'Neutral', 'Agree', 'Strongly Agree', and weights were assigned to these responses as 1, 2, 3, 4, 5, respectively. Thus, the problem confrontation score was obtained by adding the weights of responses to the problems. After computing the PCI scores, the Opportunities & Challenges / Barriers were ranked according to their PCI scores to make a rank order. PCI was computed as used by (Saha et al., 2021; Jahan et al., 2022).

Mathematically, the PCI was evaluated as

$$PCI = Psda \times 1 + Pda \times 2 + Pn \times 3 + Pa \times 4 + Psa \times 5$$

Where PCI = Problem Confrontation Index

Psda = the number of respondents who ranked the faced problem and gave a response as strongly disagree (we can say no problem faced)

Pda = the number of respondents who ranked the faced challenges and gave a response as Disagree

Pn = the number of respondents who ranked the faced challenges gave a response as neutral

Pa = the number of respondents who ranked the faced challenges gave a response as agree

Psa = the number of respondents who ranked the faced challenges give a response as strongly agree

Table 1.1 Description of Opportunities variables

Name of the variables	Symbols	Unit
Opportunity for the production of clean foods	OPCF	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Growing demand for Natural Plants	GDNP	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Value addition and product diversification	VA&PD	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Organic Farming and Sustainability	OFS	Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5
Income opportunities with its cultivation	IOC	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5/ INR
Potential for cooperative rural and regional development	PCRRD	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Protect our religion	RP	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Rural employment and livelihood improvements	RELI	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5/ Persons

Plants used for health issues	PUHI	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5/ %
Financial stability	FS	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5/ INR
Personal Business	PB	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5/ Yes/No

Source: Author's Compilation from Field survey 2024-2025

Opportunities for the Cultivation/Commercialisation of Spiritual and Herbal Plants in Himachal Pradesh in the District Mandi

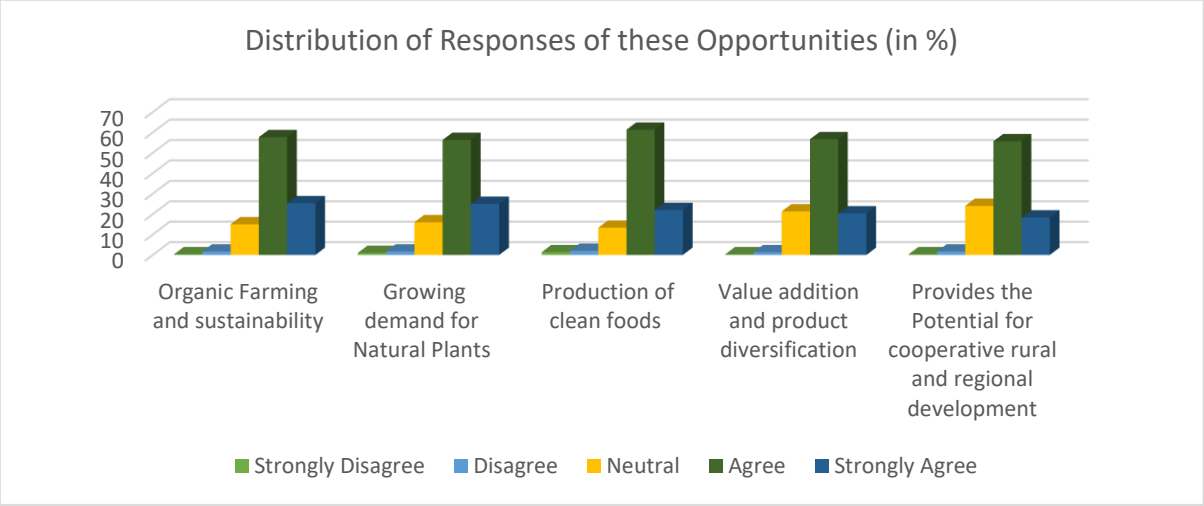

Figure 3. Opportunities for the Households in the Study Area

Source: Author's compilation from field survey 2024-2025

The analysis of opportunities perceived by the households in the study area revealed a predominantly positive outlook toward the cultivation and commercialization of herbal and natural plants. As illustrated in Figure 3, a majority of respondents acknowledged multiple benefits associated with these activities. Approximately 83% of respondents (57.7% agree and 25.3% strongly agree) believed that herbal and natural plant cultivation promotes organic farming and sustainability, indicating a strong awareness of its environmental significance. Similarly, nearly 81% (56.3% agree and 25% strongly agree) agreed that such cultivation helps in growing the demand for natural plants, which reflects increasing consumer interest in natural and herbal-based products. The highest level of agreement (83%) was recorded for the statement that herbal cultivation provides an opportunity for the production of clean and healthy foods, demonstrating that respondents associate herbal plant farming with food quality and safety. In the case of value addition and product diversification, around 77% (56.7% agree and 20.3% strongly agree) of households recognized the potential to enhance income through product processing and diversification. However, about 21% remained neutral, suggesting that practical exposure to value addition activities may still be limited in the study area. Furthermore, 74% of respondents (55.7% agree and 18.3% strongly agree) perceived that herbal and natural plant cultivation provides potential for cooperative rural and regional development, implying that such activities may encourage community-based enterprises and collective

economic initiatives.

Overall, across all five opportunity dimensions, between 74% and 83% of respondents expressed positive perceptions, while only 2–3% disagreed. These findings suggest that households in the study area largely view the cultivation of herbal and spiritual plants as a promising avenue for sustainable livelihoods, market growth, and regional socio-economic development

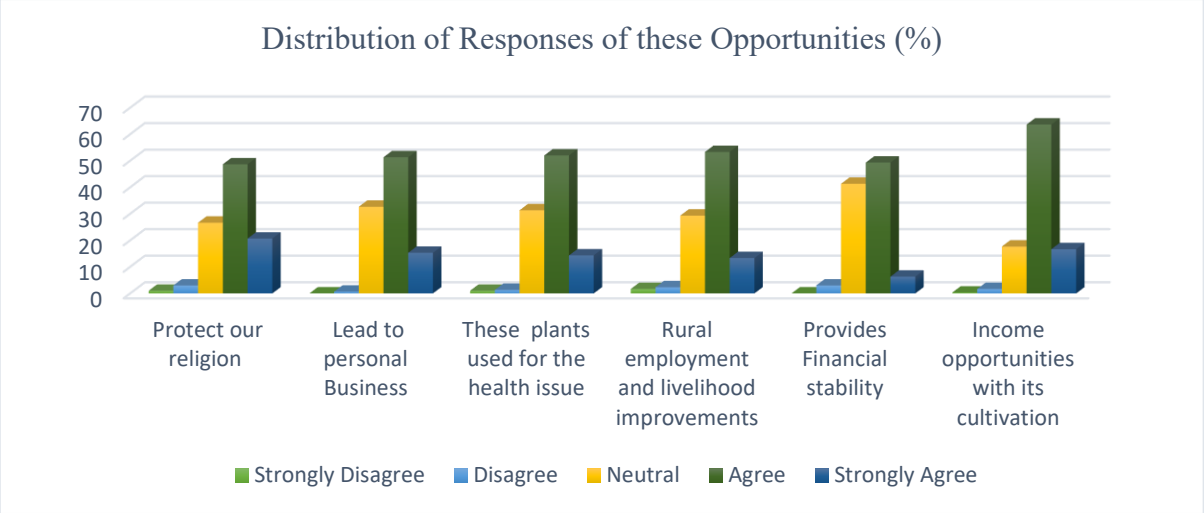

Figure 4. Opportunities for the Households in the Study Area

Source: Author's compilation from field survey 2024-2025

The analysis of the opportunities for households in the study area reveals that the majority of respondents hold a positive perception across all categories. About **70%** of participants agreed that the initiatives help **protect their religion**, while **66%** believed they **lead to personal business opportunities** and **utilize plants for health issues.** Similarly, **66%** felt that these initiatives **provide rural employment and livelihood improvements**, reflecting their role in supporting local economic development. However, only **55%** agreed that they **provide financial stability,** with a relatively high **41%** remaining neutral, suggesting that financial benefits may not yet be fully realized by all households. The strongest positive response was recorded for **income opportunities through cultivation,** where **81%** (64% agree and 17% strongly agree) recognized clear economic benefits. Overall, the results indicate that households perceive the initiatives as beneficial, particularly in terms of **income generation, employment, and cultural preservation,** with limited disagreement and moderate uncertainty regarding financial stability outcomes.

Table 1.2 Description of Challenges/ Barrier Variables

Name of the Variable	Symbol	Unit
Fewer incentives by the Government	LI	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Lack of special financial assistance	LSFA	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Lack of encouragement and cooperation from the agriculture department	E &CAD	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Lack of Technical Knowledge	LTK	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5

lack of awareness about spiritual and herbal plants	LA	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
lack of transportation	LT	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
lack of storage facility	LSF	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
lack of irrigation	LI	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Facing the problem of ease of Marketing	PEM	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
lack of Nursery	LN	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Only Seasonal demand	SD	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5
Transportation costs are too high	TC	Strongly Disagree=1, Disagree=2 Neutral=3, Agree=4, Strongly Agree=5

Source: Author's compilation from field survey 2024-2025

4. Challenges/Barriers faced by Households in the study area: -

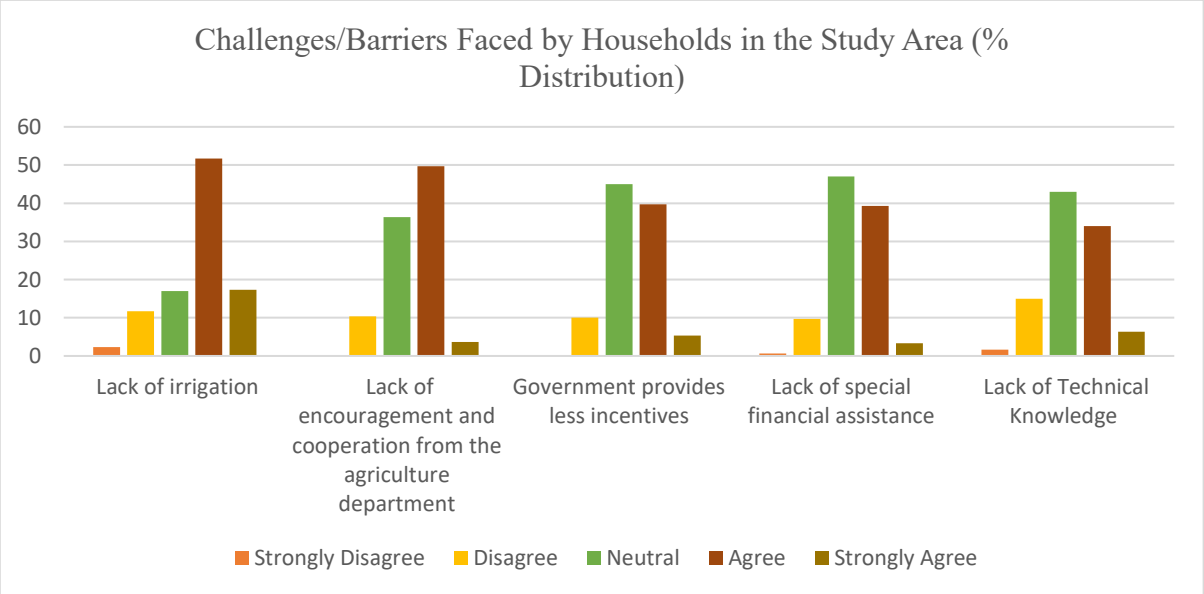

Figure 5. Challenges/Barriers Faced by Households in the Study Area

Source: Author's compilation from field survey 2024-2025

The analysis of challenges or barriers faced by households in the study area reveals that the majority of respondents identified several significant constraints affecting their livelihood activities. Around **52%** agreed and **17% strongly agreed** (total **69%**) that the **lack of irrigation facilities** is a major challenge. Similarly, **50% agreed** and **4% strongly agreed (54% total)** that there is a **lack of encouragement and cooperation from the agriculture department,** with **36% neutral,** indicating limited institutional support. About **45% agreed** and **40% were neutral** regarding the statement that the **government**

provides less incentives, showing moderate dissatisfaction. For **lack of special financial assistance, 47% agreed** and **4% strongly agreed,** amounting to **51%**, suggesting financial barriers are widely felt. Additionally, **34% agreed** and **6% strongly agreed (40% total)** that **lack of technical knowledge** is a constraint, while **43% remained neutral**, implying that awareness and training are inconsistent. The most frequently acknowledged barrier was **the problem of ease of marketing**, where **47% agreed** and **5% strongly agreed (52% total)**, reflecting concerns about market access and product sales. Overall, the results indicate that **inadequate irrigation, weak institutional and financial support, and marketing difficulties** are the most pressing issues confronting households, while technical knowledge gaps and government incentives remain moderate but notable challenges.

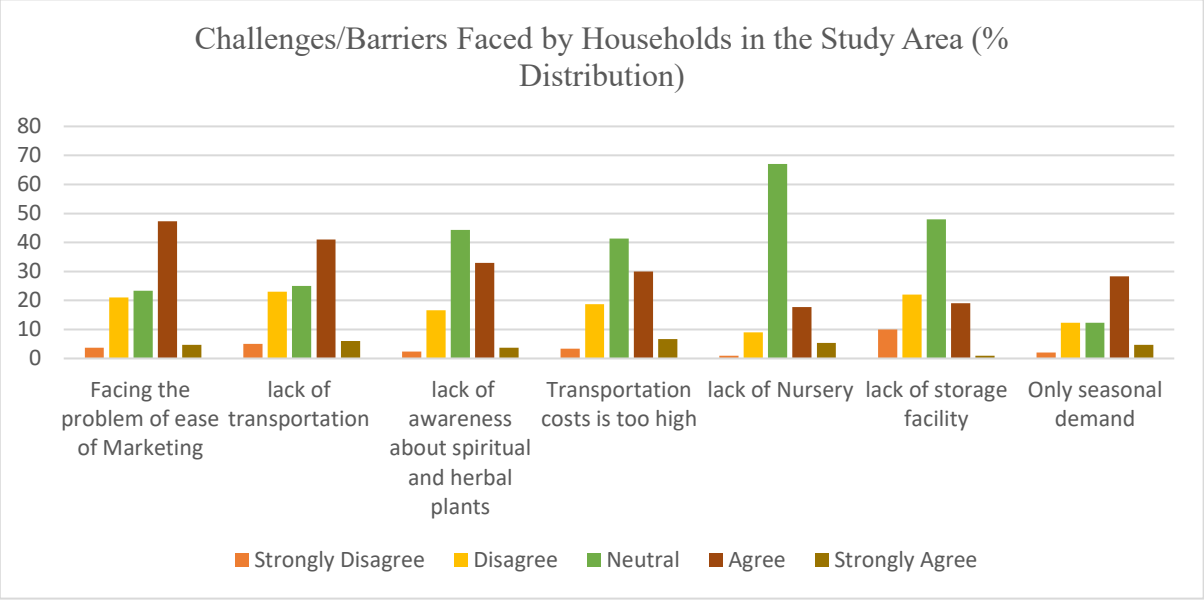

Figure 6. Challenges/Barriers Faced by Households in the Study Area (Frequency Distribution)

Source: Author's compilation from field survey 2024-2025

The analysis of the challenges or barriers faced by households in the study area, expressed in percentage terms, highlights several critical issues. Regarding the **lack of transportation, 41%** of respondents agreed and **6% strongly agreed** (a total of **47%**), while **25%** remained neutral, indicating that transportation difficulties moderately affect households. For the **lack of awareness about spiritual and herbal plants, 33% agreed** and **6% strongly agreed (39% total**), while **44%** were neutral, suggesting limited knowledge or exposure to these plants. Concerning **high transportation costs, 30% agreed** and **7% strongly agreed** (**37% total**) viewed it as a challenge, though **41%** remained neutral, showing mixed opinions. The **lack of nursery facilities** emerged as the most prominent barrier, with **67% neutral**, but only **24% agreed** and **5% strongly agreed,** revealing that although few directly experience this issue, many recognize it as an indirect challenge. Similarly**, lack of storage facilities** was reported by **22% agreed** and **1% strongly agreed (23% total)**, whereas **48%** were neutral, showing that storage constraints are less immediate but still relevant. Lastly, **only seasonal demand** was identified by **28% agreed** and **5% strongly agreed** (**33% total**), reflecting concerns over inconsistent market opportunities. Overall, the findings suggest that **transportation issues and lack of awareness** are relatively stronger barriers, while **nursery and storage constraints** are perceived as less direct but still impact the sustainable growth of herbal and spiritual plant cultivation.

Table 1.4. Challenges faced by the Cultivators/Harvesters in the study Area

Challenges/ Barriers	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	PCI	Rank
Lack of irrigation	7 (2.33)	35 (11.67)	51 (17)	155 (51.67)	52 (17.33)	1110	1
Lack of encouragement and cooperation from the agriculture department	0 (0)	31 (10.33)	109 (36.33)	149 (49.67)	11 (3.67)	1040	2
The government provides fewer incentives	0 (0)	30 (10)	135 (45)	119 (39.67)	16 (5.33)	1021	3
Lack of special financial assistance	2 (0.67)	29 (9.67)	141 (47)	118 (39.33)	10 (3.33)	1005	4
Lack of Technical Knowledge	5 (1.67)	45 (15)	129 (43)	102 (34)	19 (6.33)	985	5
Facing the problem of ease of Marketing	11 (3.67)	63 (21)	70 (23.33)	142 (47.33)	14 (4.67)	985	5
lack of transportation	15 (5)	69 (23)	75 (25)	123 (41)	18 (6)	960	6
lack of awareness about spiritual and herbal plants	7 (2.33)	50 (16.67)	133 (44.33)	99 (33)	11 (3.67)	957	7
Transportation costs is too high	10 (3.33)	56 (18.67)	124 (41.33)	90 (30)	20 (6.67)	954	8
lack of Nursery	3 (1)	27 (9)	201 (67)	53 (17.67)	16 (5.33)	952	9
lack of storage facility	30 (10)	66 (22)	144 (48)	57 (19)	3 (1)	837	10
Only seasonal demand	6 (2)	37 (12.33)	37 (12.33)	85 (28.33)	14 (4.67)	601	11

Note: Figures in parentheses are in percentage

Source: Author's compilation from field survey 2024-2025

Interpretation of Challenges/Barriers

The analysis highlights that stakeholders encounter multiple barriers, though their intensity and impact vary. Based on the Perceived Constraint Index (PCI) ranking:

Lack of irrigation (Rank 1, PCI = 1110) emerged as the most critical barrier. With over 69% of respondents agreeing/strongly agreeing, it indicates that inadequate irrigation facilities severely restrict productivity and expansion in herbal and spiritual plant cultivation. Lack of encouragement and cooperation from the agriculture department (Rank 2, PCI = 1040) and fewer government incentives (Rank 3, PCI = 1021) were also strongly emphasized. This shows that institutional and policy-level shortcomings hinder the growth of the sector despite its socio-economic potential. Financial constraints, including a lack of special financial assistance (Rank 4, PCI = 1005), limit farmers' ability to invest in inputs, modern practices, or

infrastructure. Knowledge gaps and marketing barriers were equally significant. Both lack of technical knowledge and marketing problems ranked 5th (PCI = 985 each). This indicates that while awareness of cultivation exists, farmers struggle with technical know-how (scientific methods, value addition) and face challenges in accessing profitable markets. Transportation-related issues (Rank 6: lack of transportation, PCI = 960; Rank 8: high transportation cost, PCI = 954) reflect the difficulties in moving perishable herbal produce from remote areas to markets, leading to reduced profitability. Lack of awareness (Rank 7, PCI = 957) about the economic and health potential of these plants further reduces participation and commercialization opportunities. Nursery unavailability (Rank 9, PCI = 952) and storage facility shortages (Rank 10, PCI = 837) restrict the sustainable supply chain and quality management of planting material and harvested produce. Finally, seasonal demand (Rank 11, PCI = 601) was rated the least critical constraint compared to others, but it still reflects that market fluctuations affect consistent income generation for cultivators. Overall, the findings reveal that the most pressing challenges are infrastructure-related (irrigation, transportation, storage), institutional and financial support gaps, and knowledge/awareness deficiencies. Addressing these through improved irrigation schemes, financial inclusion, extension services, and market linkages would significantly reduce barriers and enhance the commercialization potential of spiritual and herbal plants.

Conclusion & Policy Suggestions

The cultivation and commercialisation of spiritual and herbal plants present a unique blend of opportunities and challenges for the stakeholders involved. On the one hand, the rising global demand for natural remedies, wellness products, and eco-friendly alternatives presents immense potential for income generation, livelihood diversification, and the preservation of traditional knowledge systems. These plants not only contribute to rural economic empowerment but also strengthen cultural heritage and biodiversity conservation. On the other hand, stakeholders continue to face persistent constraints, including inadequate infrastructure, limited access to credit and markets, a lack of technical knowledge, seasonal demand fluctuations, and insufficient institutional support. Addressing these challenges requires coordinated efforts in policy intervention, capacity building, and supply chain integration to ensure fair returns to cultivators and traders. With sustainable cultivation practices, improved marketing linkages, and targeted government incentives, the sector can evolve into a vibrant driver of socio-economic growth, while simultaneously safeguarding traditional practices and promoting environmental sustainability. The cultivation and commercialization of spiritual and herbal plants in the study area present vast opportunities despite the challenges. The rising demand for clean foods, natural remedies, and organic products positions these plants as key drivers of sustainable agriculture. Opportunities for value addition, product diversification, and linkages with the wellness and pharmaceutical industries can substantially increase farmers' income. Beyond economic benefits, the sector contributes to rural employment, cooperative development, and the preservation of cultural and religious traditions. It also aligns with global trends of organic farming, sustainability, and plant-based health care, ensuring long-term growth potential. Seasonal demand further aggravates instability in returns, indicating that market opportunities are irregular and unsustainable. Collectively, these barriers restrict productivity, limit income potential, and discourage broader participation in the herbal and spiritual plant sector. The government should expand minor irrigation schemes, water harvesting, and drip irrigation facilities tailored to small and marginal farmers. The government introduces targeted incentives for herbal and spiritual plants, considering their ecological and cultural significance. Promote contract farming and linkages with pharmaceutical, ayurvedic, and

wellness industries. And encourage value addition through processing, packaging, and branding of local products. Develop rural roads and subsidized transport facilities to improve connectivity. Conduct awareness campaigns on the economic potential of herbal/spiritual plants. Set up community-level nurseries to ensure the timely availability of quality planting material. Support farmer cooperatives and SHGs to explore export markets and e-commerce channels. The government should support branding, packaging, and marketing of value-added products under "clean and natural foods." The government should provide low-interest credit, crop insurance, and special subsidies for herbal plant cultivators.

Scope of Further Study

The present study highlights important opportunities and challenges in the cultivation and commercialization of spiritual and herbal plants, but there is still a wide scope for future research. The use of the Problem Confrontation Index (PCI) can provide a more systematic way of quantifying and ranking the constraints faced by farmers, helping to identify the most pressing issues for policy action. Instead of relying only on descriptive analysis, advanced techniques such as the Garrett Ranking Method, Weighted Average Index, or Factor Analysis can be employed to prioritize the problems faced by farmers more precisely.

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