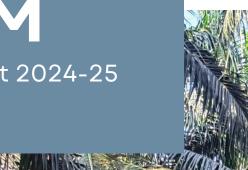
Impact Assessment Report 2024-25





Impact Assessment Agency:



Implementing Agency:

Implementation Year: 2022-23



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LIST OF ABBREVIATIONS

| CSR | Corporate Social Responsibility | | |
|----------|--|--|--|
| FGD | Focused Group Discussion | | |
| FMCG | Fast Moving Consumer Goods | | |
| FY | Financial Year | | |
| GAPs | Good Agricultural Practices | | |
| NAM | National AYUSH Mission | | |
| NGO | Non-Governmental Organization | | |
| OECD-DAC | Organization for Economic Co-operation- Development Assistance Committee | | |
| SHG | Self Help Group | | |

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Executive Summary



Dabur India Limited has funded "Herbal Kingdom" as part of its CSR initiative across 8 states in India to encourage sustainable cultivation of rare medicinal plants and herbs. The expected outcome of the program includes: an increase in herbs plantation, and forestry while contributing towards increased farmers' income through improved agricultural practices and market linkages.

The present study is an impact evaluation of the "Herbal Kingdom" project activities undertaken during FY 2022-2023. The geographical coverage of the assessment is limited to four out of eight states (Gujarat, Madhya Pradesh, Andhra Pradesh, and Uttarakhand) with a mix of qualitative and quantitative data collection techniques. A total of 289 primary beneficiaries were covered through a household survey, along with semi-structured interviews of five key informants and focused group discussion (65 participants) with relevant target groups and project implementation partners.

As part of project activities, seven different medicinal plant varieties were promoted across four districts in the project states. The species were selected based on suitability of local environment and the plantation was conducted in both common lands as well as private farmlands of the participating farmers.

The implementation of the project included training of participating farmers on:

- cultivation procedures such as: seed selection, effective crop and pest management, and
- post-harvest handling: harvesting and market linkages.

In addition, relevance of promoted medicinal plants, as well as the benefits of growing them was part of the training sessions.

The participants of the primary data collection show a good mix of different age and gender and included both participating farmers as well as labourers/nursery workers who engaged in the project activities.



Key findings from the study are as follows:

- Overall, 55% of the participating farmers reported to be farming non-medicinal crops, or had fallow/barren land prior to participation in the
 project. After participation, majority of the farmer respondents from Andhra Pradesh, Uttarakhand have obtained certification of the
 plantation from the relevant authority and have received an offer to buy back their produce from Dabur.
- Total 477.1 acres in Andhra Pradesh, Madhya Pradesh, Gujarat, along with 435 nalis (local unit of land measurement) has been reportedly planted with 21,42,080 saplings of medicinal plants by the respondents. It includes an average of 8.3 acres in Andhra Pradesh, 0.9 acres in Madhya Pradesh, 12.1 acres in Gujarat and 10.1 nalis in Uttarakhand. Majority of the saplings were planted in Gujarat (20,56400) followed by Madhya Pradesh (51,710), Andhra Pradesh (24,200), and Uttarakhand (9,770), as per the survey results.
- Majority respondents (55%) faced a mortality rate of planted saplings between 10-30%; 24% of respondents experienced a mortality rate
 of less than 10%, suggesting strong survival in those cases; while 21% reported a higher mortality rate between 30-50%. The damaged or
 perished saplings, were replaced by the implementing agency across the participating states.
- Majority (70%) of respondents shared their intention to harvest the crop only once it fully matures, as recommended during the training sessions. This indicates a high level of adherence to best practices. However, 29% of respondents indicated that they would likely begin harvesting as soon as the crop begins to mature (before the suggested time).
- In terms of experience working alongside implementation partners, a majority (69%) reported being "satisfied to some extent", indicating that while support was provided, there may be areas for improvement. Meanwhile, 31% of respondents were "very satisfied", reflecting a positive experience with NGO follow-ups.
- The respondents/participating farmers in the project have reported a high level of endorsement for medicinal tree cultivation, with 95% of respondents at least partially recommending it.

Dabur's Herbal Kingdom project has laid a strong foundation for integrating environmental conservation with livelihood development in the project areas. The findings suggest the need for further strengthening of market linkages, introduction of financial support mechanisms and enhancing resilience through crop insurance. These recommended strategies are meant for supporting self-reliance among participating farmers leading to sustainable long-term impact of the project.



Chapter 1: Introduction

The introductory chapter provides an overview of Dabur India Ltd., its commitment to Corporate Social Responsibility (CSR), and the strategic rationale behind the "Herbal Kingdom" project. It outlines the company's broader CSR approach and details the objectives of the evaluation study.

Further sections discuss the methodology and research design employed for the assessment, including sample size selection, geographical scope, and mixed methods approach of evaluation.

1.1 ABOUT DABUR

Dabur India Ltd. is one of India's leading FMCG Companies in India with Revenues of over ₹12,400 Crores & Market Capitalization of over ₹100,000 Crore. Building on a legacy of quality and experience of over 140 years, Dabur is today India's most trusted name and the world's largest Ayurvedic and Natural Health Care Company.

Dabur is also a world leader in Ayurveda with a portfolio of over 250 Herbal/Ayurvedic products. Dabur's FMCG portfolio today includes eight distinct Power Brands in India: Dabur Chyawanprash, Dabur Honey, Dabur Honitus, Dabur Pudin Hara and Dabur Lal Tail in the Healthcare space; Dabur Amla and Dabur Red Paste in the Personal Care category; and Real in the Food & Beverages category. Vatika is an international Power Brand of Dabur.

The 138-year-old Ayurvedic company, promoted by the Burman family, started operations in 1884 as an Ayurvedic medicines company. From its humble beginnings in the bylanes of Calcutta, Dabur India Ltd has come a long way today to become a transnational consumer goods company with the largest herbal and natural product portfolio in the world.

Dabur has successfully transformed itself from being a family-run business to become a professionally managed enterprise. What sets Dabur apart is its ability to marry traditional knowledge of Ayurveda with modern-day Science to roll out efficacious products that are tailored to suit the specific needs of consumers across the globe.

As a promoter- owned but Professionally managed Company, Dabur has always set new standards in corporate governance & innovation.

The Dabur CSR policy[1] outlines the objective to empower and strengthen the local community who are natural defender of endangered species of herbs and plants and are dependent on the cultivation of herbs, even if they are in outer region of mainland of the country.

The implementation of CSR initiatives is carried out directly wherever feasible. However, the key executing entities are: Sustainable Development Society (SUNDESH) and Jivanti Welfare and Charitable Trust. Additionally, recognizing the importance of collaborative efforts, partnerships with other stakeholders are also be fostered to enhance the reach and impact of these initiatives.

[1] https://www.dabur.com/sites/default/files/2021-05/1136-Dabur-India-Ltd-CSR-Policy -2020_0.pdf



1.2 OVERVIEW OF THE PROJECT

Medicinal plants have been an integral part of human civilization for centuries and continue to be widely recognized for their benefits today. Over time, their applications have expanded significantly, with medicinal and aromatic plants now playing a key role in pharmaceuticals, dietary supplements, natural health products, cosmetics, personal care items, and even culinary products.

To promote the cultivation and commercialization of medicinal plants, the Ministry of AYUSH has implemented National AYUSH Mission (NAM), a centrally sponsored scheme. The scheme aims to encourage market-driven cultivation of selected medicinal plants in designated clusters across various districts. The scheme covers promotion of priority medicinal plants, establishment of nurseries, post-harvest support and establishing processing infrastructure.[2]

However, existing literature[3] on the topic notes multiple challenges faced by farmers in adopting cultivation of medicinal plants. A key challenge is the long gestation period - many medicinal plants take years to mature, which means farmers must invest time and resources without immediate returns.

This, combined with high risks from unpredictable weather, pests, and fluctuating market demand, makes profitability a risk, especially for small landholders.

Another major obstacle is the lack of institutional support. Farmers often struggle to access technical guidance on best practices or find reliable markets for their produce. Without proper channels for selling their crops, they face high transaction costs, dealing with middlemen, certification requirements, and unpredictable pricing.

These challenges highlight the need for better support systems, market access, and farmer networks to make medicinal plant cultivation a more viable and rewarding livelihood.

As part of Dabur's Environmental Sustainability initiative, the "Herbal Kingdom" project promotes sustainable cultivation of rare medicinal plants and herbs by working closely with farmers and tribal communities. Through targeted support and guidance, the initiative helps farmers across eight project states, focusing on long-term conservation of medicinal plant species while offering improved livelihood opportunities.

The expected outcome of the program includes an increase in cultivation of medicinal herbs, plantation, and forestry. It also aims to contribute to an increase in farmers' income through improved agricultural practices and market linkages. Additionally, the program focuses on the conservation of likely endangered herbs, ensuring their sustainable management.

Table 1: Outreach of the project across states

| S. NO. | State | No. of Beneficiaries |
|--------|----------------|----------------------|
| 1 | Uttarakhand | 2,272 |
| 2 | Odisha | 1,671 |
| 3 | Chhattisgarh | 142 |
| 4 | Tamil Nadu | 2,355 |
| 5 | Andhra Pradesh | 374 |
| 6 | Maharashtra | 57 |
| 7 | Madhya Pradesh | 978 |
| 8 | Gujarat | 900 |
| | Total | 8,749 |



^[2] https://pib.gov.in/PressReleasePage.aspx?PRID=1704851
[3] Developing a Sustainable Medicinal-Plant Chain in India – Linking People, Markets and Values (Case Study by Petra van De Kop, Ghayur Alam, Bart De Steenhuijsen Piters) https://www.fao.org/sustainable-food-value-chains/library/details/en/c/263545/

The project follows a structured, end-to-end approach that focuses on livelihood improvement, local employment generation, and environmental conservation. The activities implemented under the project address key aspects of medicinal plant cultivation, ensuring both economic and ecological sustainability.

The awareness program introduced farmers to medicinal plant cultivation, focusing on its economic potential and environmental benefits. This was complemented by training sessions to offer practical guidance on plantation techniques, efficiency improvement, and quality management. To support adoption, the project facilitated provision of inputs, including seeds, saplings, and other necessary materials, reducing initial barriers for participating farmers.

Additionally, efforts have been made to establish market linkages, linking participating farmers with buyer networks to improve access to markets.

This integrated approach aligns with broader goals to ensure that medicinal plant cultivation contributes to both economic resilience for farming communities and biodiversity conservation in the project regions.

Figure 1: Integrated approach of Dabur's Herbal Kingdom Project

| Awareness & | Hands On Training | Provision of High | Establish Market |
|--|---|---|---|
| Knowledge Building | | Quality Inputs | Connections |
| Conducting sessions to inform farmers about specific topics, such as cultivation techniques of medicinal plants, the benefits of growing particular medicinal plants, and related practices. | Offering practical training on methods and practices related to plantation, including techniques to enhance efficiency and quality. | Distributing essential items such as seeds, saplings, or other necessary materials to facilitate the adoption of medicinal plant cultivation. | Helping participants establish links with buyers, markets, or networks to ensure better access and opportunities for selling their produce. |



1.3 OBJECTIVES OF THE ASSESSMENT

The study aims to evaluate the project's effectiveness in achieving the intended outcomes. The evaluation project includes the following steps:



Development of an Assessment Framework:

Identify key performance indicators, and design a representative sampling framework.



Conduct Primary Data Collection and Analysis:

Collect data from beneficiaries and stakeholders using surveys, interviews, and field observations.



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Evaluate Impact Using OECD DAC reporting framework:

A systematic approach combining qualitative and quantitative analyses to measure project outcomes against OECD evaluation criteria Kotapadu, Andhra Pradesh, India 32qg+4r9, Adb Rd, Kotapadu, Andhra Pradesh 533 Lat 17.088197° Long 82.0269° 14/02/2025 02:38 PM GMT +05:30

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Synthesize Findings and Document Results:

Compile the findings into a structured report along with a review of the implementation approach and recommendations for further improvement.

This report serves as the output of the final objective, presenting a comprehensive evaluation of the project's impact and insights for future planning.

1.4 METHODOLOGY & TOOLS FOR IMPACT ASSESSMENT

Unlike traditional CSR projects that focus solely on environmental conservation or income generation, this initiative integrates both. It seeks to protect endangered medicinal plant species while simultaneously improving farmers' livelihoods, making it a dual-impact intervention. The impact assessment methodology adequately covers both aspects of the program and focuses on key sustainability indicators such as: sapling survival rates, post-project financial sustainability, and farmers' willingness to continue medicinal plant cultivation beyond Dabur's direct support.

SEMI-STRUCTURED INTERVIEWS

Interviews were conducted with key stakeholders to gather operations-related information on the project, challenges faced during implementation, and suggestions for improvement.

OECD-DAC

The findings derived from research tools served as input for OECD-DAC-based analysis wherein six evaluation criterion - Relevance, Coherence, Effectiveness, Efficiency, Impact, and Sustainability - were systematically assessed. Relevant performance indicators are presented against this to determine the project's success. Further, it also helps in developing targeted recommendations towards improving implementation, addressing identified challenges, and enhancing the sustainability of the intervention.

2

FOCUS GROUP DISCUSSIONS (FGDs)

FGDs were held with first-hand beneficiaries to understand the benefits received, and their perceptive satisfaction from participating in the project activities.

4

CASE STUDIES

Case studies have been documented to capture success stories across project states.

The respondents were informed about the objectives of the study and assured that their data would be used solely for the intended research purposes while maintaining confidentiality and data security. Verbal consent was sought before their participation, ensuring that they were aware of the study's scope and their rights as respondents.

Automated Zoho Analytics and MS Excel were used to analyse quantitative data, while semantic analysis was applied to interpret qualitative responses.

1.5 SAMPLE SIZE

The geographical coverage of the assessment is limited to four out of eight states where the project is implemented with the following sampling framework:

Table 2: Sample Framework for the Impact Assessment

| State | District | Blocks | No. of Beneficiaries [4] | Sample Size Achieved |
|-------------------|------------------|---------------------------|-----------------------------|-------------------------|
| Gujarat | Kutch | Bhuj | 900 | 96 |
| Andhra Pradesh | East Godawari | Rajanagaram Rangampeta | 374 | 99 |
| Uttarakhand | Nainital | Ramgarh | 91 | 43 |
| Madhya Pradesh | Umarai | | 250 | 51 |

A key challenge in meeting the sample target was the difficulty in reaching respondents, especially in Madhya Pradesh, where a Panchayat project kept many people occupied. As a result, participation was low, making it hard to collect data as planned. To address this shortcoming, with due consultation with the Dabur CSR team, Umaria district in Madhya Pradesh was selected as a replacement for field visits. This adjustment ensured data collection could continue without major delays while maintaining the study's objectives.

[4] As obtained from project documents



Chapter 2: Findings of Impact Assessment

This chapter presents a comprehensive analysis of the findings derived from the implementation of research tools within the study. It begins by discussing the execution approach of the "Herbal Kingdom" project across the target states, highlighting key project outcomes.

The subsequent sections provide an in-depth examination of both quantitative and qualitative findings gathered from participating farmers, labourers, and nursery workers. The chapter concludes by revisiting the project's key performance indicators, evaluating them within the framework of the OECD-DAC evaluation criteria.

2.1 IMPLEMENTATION APPROACH & LEARNINGS

The qualitative assessment of the project includes semi-structured interviews of five senior employees from the respective implementing agencies. The objective of these interviews was to evaluate the operational aspects of the project, providing insights into its planning and execution, with a particular focus on identifying challenges and areas for improvement. The key findings from these interviews are presented in this section.

Key Project Outcomes: The reported project outcomes include:

- Promotion of select medicinal plants for conservation
- Provide additional means of income for the participating farmers, and

Improve plantation/forestry coverage.

Beneficiary Selection: Across the project states, significant emphasis was placed on the inclusion of women, particularly as nursery workers and plantation labourers. To encourage greater participation, flexible training schedules were introduced. In Uttarakhand, this approach was further extended to involve members of Self-Help Groups (SHGs), enhancing women's engagement in the project.



 $\label{thm:condition} \mbox{Table 3 outlines key operational information from across the project states.}$

Table 3: Operational Information across project states

| Project Location | Kutch, Gujarat | Nainital, Uttarakhand | East Godawari, Andhra Pradesh | Umaria, Madhya Pradesh |
|-----------------------------------|---|--|----------------------------------|--|
| Implementing Partner | Shree Umiya Majur Kamdar Sahjkari Mandali | TERI TRISHA | Jan Kalyan Welfare Samiti | Manav Jivan Vikas Samiti |
| Year since in Operation | 2017 | 2005 | 2022 | 2022 |
| Medicinal Plants covered | Guggulu | Karkatshringi; Tomar*; Sugandhbala | Pippali | Ashwagandha; Amla |
| Harvesting Period | 15-20 years | Karkatshringi: 10 yrs; Tomar: 6-7 yrs; Sugandhbala: 3 yrs | 1st year onward | Ashwagandha: within 1 year Amla: 3-4 years |
| Intermediatory Products | - | Galls; Seeds; Roots | - | Ashwagandha: Seeds & Roots Amla: Fruits |
| Land Ownership of Plantation | Leased land from Panchayat | Panchayat land as well as private land | Intercropping with Palm Trees | Private land |
| Managed by | Participating farmers | Participating farmers | Participating farmers | Participating farmers |
| Local Partnerships Fostered | Panchayat | SHG members; Local Forest Department officials; Panchayats | - | Panchayat |



Farmers who were already familiar with medicinal plant cultivation or demonstrated a strong aptitude for learning were selected as participants in the project. Additionally, for TERI TRISHA, the selection criteria were broadened to include individuals with a high dependence on forest resources for their livelihoods. TERI's existing database and extensive experience in ecological restoration further facilitated this targeted inclusion.

Ensuring Survival of Saplings: The survival of saplings was ensured through regular monitoring by the field team, along with continuous support and consultation on pest management. Additionally, the TERI TRISHA team procured high-quality planting materials from Dabur-certified nurseries, carefully considering the ecological conditions in the site selection process.

Training Topics Covered: Implementation of the project included training of participating farmers on:

- Cultivation procedures such as: seed selection, effective crop and pest management, and
- Post-harvest handling: harvesting and market linkages.

In addition, relevance of promoted medicinal plants, as well as the benefits of growing them was part of the training sessions.

In Uttarakhand, the training included sessions on medicinal plant identification, sustainable harvesting practices, Good Agricultural Practices (GAPs). Supplementary knowledge on relevant market linkages was also included.

Key Challenges Foreseen: The discussions with NGO partners revealed that the success of the plantation is subject to multiple threats, including cyclones — as observed in Gujarat, where a 2023 cyclone destroyed 80,000 Guggulu plants — and the excessive use of weedicides, which could harm the saplings.

Other challenges include grazing by animals such as goats and delayed or erratic monsoon rains, which can lead to unfavorable changes in soil moisture, reducing the saplings' survival rate. In Andhra Pradesh, irregular availability of labour for plantation activities was identified as a significant challenge, while in Madhya Pradesh, inadequate irrigation facilities were reported as a key issue.

To promote sustainable uptake of medicinal plant cultivation, the team in Uttarakhand established local seed banks and nurseries to ensure consistent availability of high-quality planting materials. These initiatives are managed with the support of women-led Self-Help Groups (SHGs), ensuring long-term sustainability and community participation.

Expansion of Cultivation Area: The team members from the participating implementation partners recommended an incremental increase in the number of saplings planted each year. To facilitate regular monitoring, the partner from Andhra Pradesh suggested planting in clusters of 1,000 acres, which could then be effectively managed with support from grassroots workers. Meanwhile, the partner from Gujarat proposed the revival of government subsidies to encourage the adoption of medicinal plant cultivation within the project

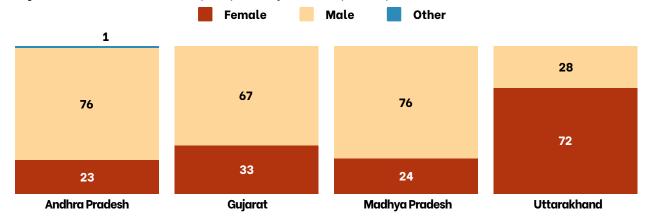


2.2 RESPONDENT PROFILE ACROSS STATES

Household surveys were conducted across the project states to collect primary data and stakeholder feedback for the impact assessment. The overall gender distribution of respondents reflects a reasonably balanced mix, with 33% female and 66% male respondents across all four states.

However, a closer look at the state-wise gender distribution reveals notable variations. Male respondents formed the majority in Andhra Pradesh (76%), Madhya Pradesh (76%), and Gujarat (67%), indicating a male-dominated participation in these regions. In contrast, Uttarakhand recorded the highest female participation at 72%, suggesting a significant engagement of women in project-related activities.

Figure 2: Gender Distribution (in %) of Respondents (n=289)





Across the project states, the sampled respondents are well-distributed across age groups, with the 25-35 years (31%) and 35-45 years (35%) categories being the most represented. Gujarat has the highest proportion of respondents in the 25-35 years category (48%), while Andhra Pradesh records the highest share in the 35-45 years category (47%). The 55 years and above group remains the smallest across all states. Uttarakhand exhibits a relatively balanced age distribution, whereas Madhya Pradesh shows a significant concentration in the 35-45 years category.

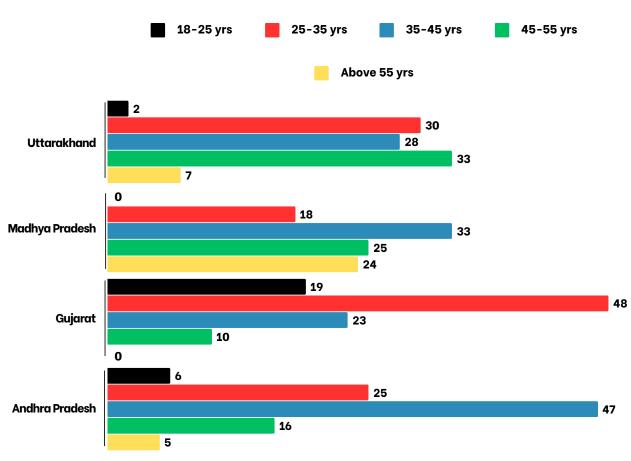
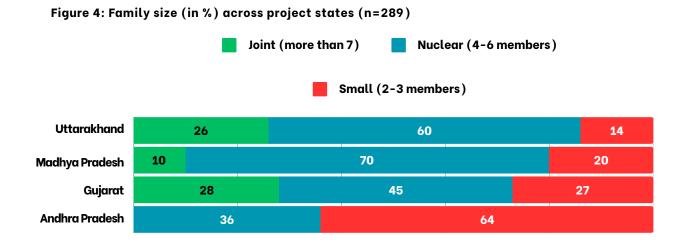


Figure 3: Age Distribution (in%) of Respondents (n=289)

The respondents across states predominantly reported small or nuclear family structures, comprising 85% of households. Madhya Pradesh has the highest proportion of nuclear families (71%), while Andhra Pradesh records the largest share of small families (64%). In contrast, joint families (more than 7 members) are more prevalent in Gujarat (28%) and Uttarakhand (26%).



Majority of the respondents reported wages from labour as their key source of household income (60%), followed by farming (36%), and the remaining 4% respondents reported private/government job as their primary source of income.

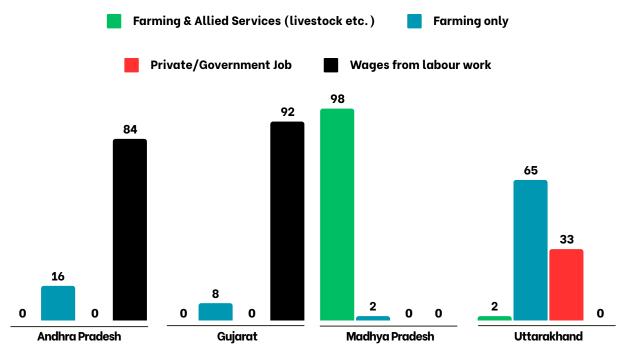


Figure 5: Primary Occupation (in %) of respondents (n=289)

Majority of households in Madhya Pradesh (96%) and Andhra Pradesh (83%) have an income of less than ₹10,000. Gujarat and Uttarakhand show more variation, with 89% of Gujarat's households earning ₹11,000-20,000, while Uttarakhand reporting 35% in this category. 56% of respondents from Uttarakhand reportedly earn less than ₹10,000. Higher income brackets (above ₹70,000) are reported to be minimal, appearing only in Gujarat (6%) and Andhra Pradesh (3%).

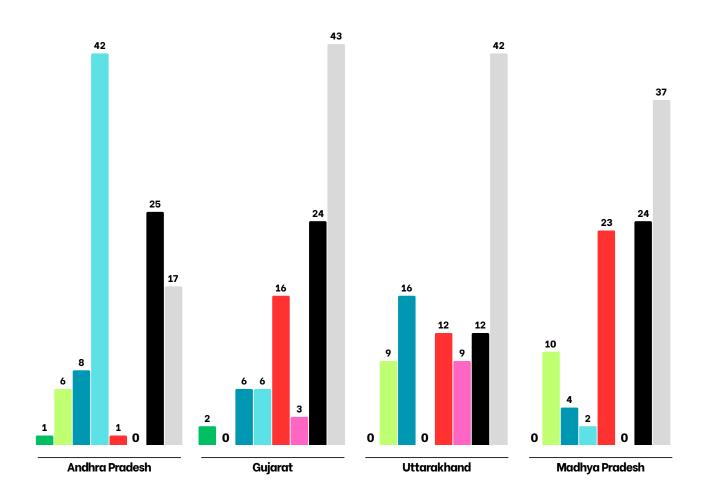


Figure 6: Household Income distribution (in %) (n=289)

Across the project states, majority of respondents (32%) reported having completed secondary education (6th-10th grade), followed by 23% who had completed primary education. Illiteracy was observed among 17% of respondents, with the highest rate in Andhra Pradesh (42%), followed by Gujarat (6%) and Madhya Pradesh (2%). Majority of respondents in Gujarat (43%), Uttarakhand (42%), and Madhya Pradesh (37%) had completed secondary education.

Figure 7: Educational profile of respondents (in%) (n=289)





2.3 QUANTITATIVE SURVEY FINDINGS PARTICIPATING FARMERS

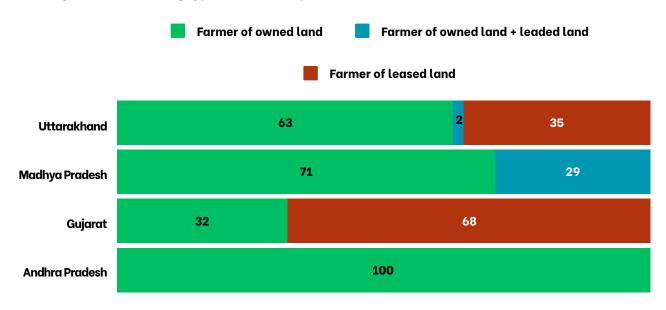
A total of 134 respondents in the household survey identified as farmers. In Andhra Pradesh, all respondents (100%) farmed on owned land and practiced inter-cropping as their primary cultivation method.

In Uttarakhand, the majority (63%) cultivated on owned land, while 35% farmed on leased land. The dominant method of cultivation in the state is plantation across the entire field.

A similar trend was observed in Madhya Pradesh, where 71% of respondents farmed on owned land, while 29% used a combination of owned and leased land. The most commonly reported plantation method in the state was peripheral plantation around farm boundaries.

In Gujarat, however, leased land was the predominant landholding type (68%), with 32% of respondents farming on owned land. Similar to Uttarakhand, the whole-field plantation method was the most commonly used, though seven respondents also reported practicing intercropping.



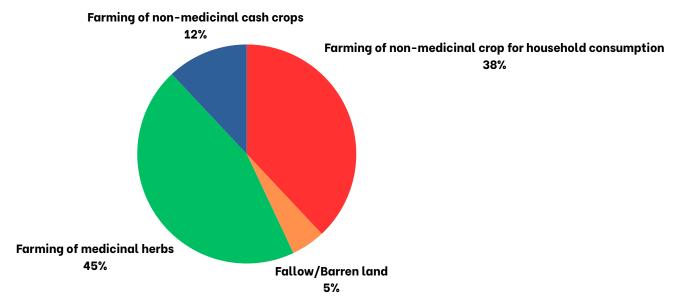




Majority of farmers in Andhra Pradesh (14 out of 15) and Madhya Pradesh (51 out of 51) were engaged in non-medicinal cash crop farming before joining the project. In contrast, most respondent farmers in Gujarat (22 out of 25) and Uttarakhand (38 out of 43) had already been cultivating medicinal crops on their farms, prior to participation in the Dabur project.

Overall, 55% of respondents reported either cultivating non-medicinal crops or having fallow/barren land before enrolling in the project Herbal Kingdom.

Figure 9: Land use pattern prior to participation (in%) in Dabur Project (n=134)



After participation in the project, majority of the farmer respondents from Andhra Pradesh, Uttarakhand have obtained certification for the plantation from the relevant authority and have an offer to buy back their produce from Dabur. None of the farmers from Gujarat and Madhya Pradesh have obtained a certification.

A total of 477.1 acres across Andhra Pradesh, Madhya Pradesh, and Gujarat, along with 435 nalis in Uttarakhand, have been planted with 21,42,080 medicinal plant saplings by the respondents. The average land area planted per state is 8.3 acres in Andhra Pradesh, 0.9 acres in Madhya Pradesh, 12.1 acres in Gujarat, and 10.1 nalis in Uttarakhand. The majority of saplings were planted in Gujarat (20,56,400), followed by Madhya Pradesh (51,710), Andhra Pradesh (24,200), and Uttarakhand (9,770), as reported in the survey.

Survival of the planted saplings is a key performance indicator of the project. The survival rate (opposite to mortality rate) refers to estimated percentage of saplings which grow and survive to become shrubs/trees. It is dependent on a both environmental factors (such as soil type, weather fluctuations, location of the plantation etc.) as well as the adherence to maintenance procedures. Each of the medicinal species have a different natural survival rate which cannot be 100%.

The majority of respondents (55%) reported a sapling mortality rate between 10-30%, while 24% experienced a mortality rate of less than 10%, indicating strong sapling survival in those cases. Meanwhile, 21% of respondents faced a higher mortality rate of 30-50%. Across all participating states, the implementing agency replaced the damaged or perished saplings, ensuring continuity in plantation efforts.

A survey question was administered to assess the key challenges in achieving the project outcomes, receiving 95 responses. The most frequently reported challenge was limited market access and lack of buyers (34 mentions), followed by climate-related risks, including cyclones (25 mentions). Additionally, difficulty in meeting quality standards for sale and low market prices for medicinal plants were each cited 17 times, underscoring concerns about both product quality and financial viability.

These findings highlight the need for improved market linkages, climate resilience strategies, and capacity-building initiatives to enhance the sustainability and profitability of medicinal plant cultivation.



Majority (70%) of respondents shared their intention to harvest the crop only once it fully matures, as recommended in the training sessions. This indicates a high level of adherence to best practices. However, 29% of respondents indicated that they would likely begin harvesting as soon as the crop begins to mature (before the suggested time). Such a preference for early harvesting could possibly be reported due to foreseeable financial pressures or lack of awareness of the benefits of full maturation. A very small fraction (1%) mentioned that they might cut the tree before scheduled harvesting time.

Figure 10: Reported mortality rate of saplings (in %) (n=134)

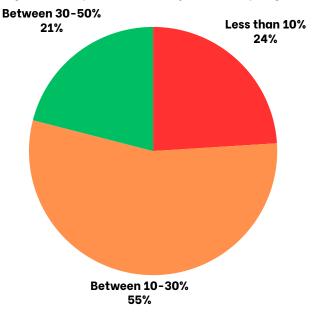
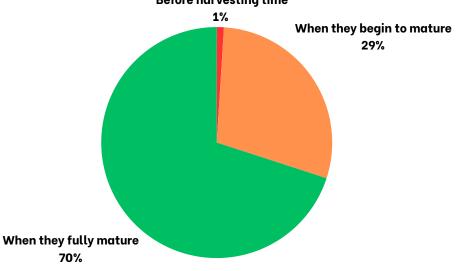


Figure 11: % response to 'When do you plan to harvest the crop?' (n=134)

Before harvesting time





Perceptive Responses on Key Project Market Linkages: **Indicators**

The beneficiary assessed survey respondents' confidence levels understanding the uses and benefits of medicinal trees, sapling maintenance, and market linkages.

Understanding the Uses and Benefits of **Medicinal Plants:**

- · Gujarat reported a high proportion of respondents who were fully confident in their understanding of medicinal plant uses.
- In Madhya Pradesh, most respondents were moderately confident, indicating a good level of familiarity.

Uttarakhand exhibited a diverse mix, with a considerable number respondents of reporting slight confidence, suggesting varying levels of awareness.

Sapling Maintenance:

- · Andhra Pradesh stood out with the highest confidence levels, reflecting strong familiarity with irrigation requirements, pest control, and upkeep procedures.
- Madhya Pradesh had a large share of moderately confident respondents, while in Uttarakhand, many reported being slightly confident, indicating varying levels of comfort with technical aspects of sapling care.

- Gujarat had a significant proportion of fully confident respondents, particularly regarding selling, harvesting, and pricing of medicinal products.
- Madhya Pradesh followed a consistent trend of moderate confidence, while Uttarakhand had a larger share of slightly confident respondents, indicating limited exposure to market processes.

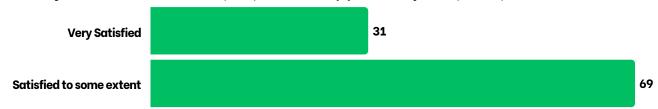
In Andhra Pradesh, respondents largely reported high confidence in market-related aspects, suggesting better familiarity with trade and commercial aspects of medicinal plant cultivation.

These findings highlight regional variations in confidence knowledge and emphasizing the need for targeted capacitybuilding efforts in areas where respondents show lower confidence, particularly in Uttarakhand and Madhya Pradesh.

Figure 12 shows respondents' satisfaction levels with the follow-up provided by the NGO, including aspects such as sapling replacement, training, and visit frequency. A majority (69%) reported being "satisfied to some extent", indicating that while support was provided, there may be areas for 31% improvement. Meanwhile, respondents were "very satisfied", reflecting a positive experience with NGO follow-ups.



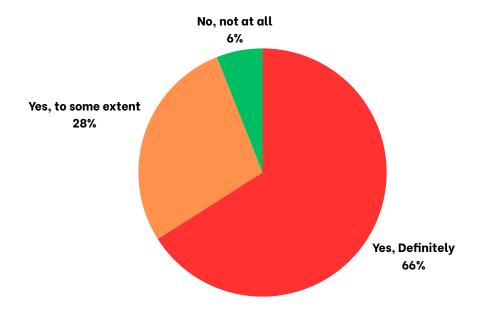
Figure 12: Satisfaction level (in %) on follow-up provided by NGO (n=134)





The participating farmers in the project demonstrated strong support for medicinal tree cultivation, with 95% of the respondents partially recommending its adoption to their friends and families. This high level of endorsement reflects positive perceptions of its benefits, including economic viability, sustainability, and potential market opportunities.

Figure 13: % of respondents who would recommend plantation of medicinal trees to others (n=134)



2.4 QUANTITATIVE SURVEY FINDINGS PARTICIPATING LABOURERS/ NURSERY WORKERS

A total of 149 respondents from Andhra Pradesh (84) and Gujarat (65) benefitted from employment opportunities created through various labour-intensive activities under the project. These activities encompassed land preparation, sapling plantation, weeding, irrigation support, and post-plantation care, contributing to both short-term and sustained employment for local workers in these regions.

Majority of the respondents across the two states reported to be employed by the respective implementing agencies, namely Jan Kalyan Welfare Samiti in Andhra Pradesh and Shree Umiya Majur Kamdar Sahakari Mandali Ltd in Gujarat.

The labour activities under the project primarily involved nursery preparation, plantation work, and sapling maintenance, with respondents often being engaged in multiple roles. Plantation activities, including digging and planting, had the highest participation, with 61 respondents involved in it, while nursery preparation was another key activity, often combined with sapling maintenance, engaging 49 respondents. A smaller group (6 respondents) was exclusively involved in nursery tasks. Some individuals contributed to both plantation and maintenance work (4 respondents).

Overall, Gujarat had a higher concentration of workers with shorter employment durations (up to 180 days), while Andhra Pradesh saw more sustained engagement, with a significant number employed for 180 days or more. These findings emphasize the employment-generation potential of medicinal plant cultivation, while also underscoring the need for regional strategies to ensure longer-term livelihood opportunities for participating labourers.

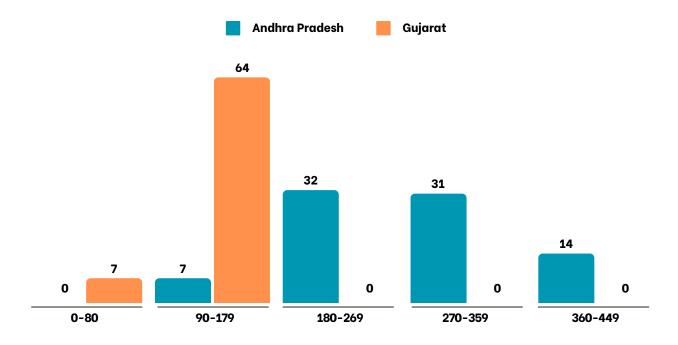


Figure 14: Reported frequency of employment days - Labour and nursery workers (n=155)

The average daily wage for workers varied between Andhra Pradesh and Gujarat, with Andhra Pradesh reporting a significantly higher average wage (₹535 per day) compared to Gujarat (₹360 per day). The average wage of males was reported to be ₹108 higher than females (₹378).

2.5 QUALITATIVE FINDINGS **BENEFICIARIES FEEDBACK** ON PROJECT

The qualitative assessment of the project was conducted through focus group discussions (FGDs) with a total of 65 participants across project states. The discussants included participating farmers as local committee members overseeing various aspects of implementation. The findings from these discussions are presented in this section.

Matching of Expectations: Discussions with beneficiaries indicate that their expectations aligned before the project's commencement because of community consultations conducted as part of the who were directly engaged in the mobilization phase. For project components interventions, along with key informants such involving the use of Panchayat or common lands, due consent and No Objection Certificates were secured before initiating plantation activities. No opposition from the Panchayat or community groups was reported in any of the project areas.



Cultivation Practices before the Project:

While medicinal plantations existed across all project areas, community members lacked the confidence to pursue cultivation due to limited technical knowledge of proper cultivation practices. Dependence on weather conditions for sapling growth and a lack of awareness regarding maintenance procedures were identified as key barriers to the widespread adoption of medicinal plants cultivation. Respondents from Gujarat observed that, prior to the project, only wealthy farmers could afford to experiment with medicinal plants as they had a greater risk appetite. With the project's introduction, small and medium farmers reported gaining confidence in planting medicinal saplings on their farms. Comprehensive training on planting techniques, maintenance, pest management, and input use played a crucial role in building farmers' trust. Additionally, the field teams of implementation partners provided consistent handholding support, further enhancing adoption.

Customized Support under the Project: The support provided under the project was tailored to the specific needs of farmers and the available farmland space. In Uttarakhand, saplings were planted along the periphery of farms. In contrast, in Andhra Pradesh and Gujarat, both intercropping of medicinal plants with existing crops and dedicated cultivation within a section or the entirety of the farm were promoted. These measures allowed for greater flexibility and integration based on local farming conditions.

Reported Impact of the Project: Despite the relatively long gestation period required for medicinal crops to reach harvesting stage, the plantation initiative has already begun to yield positive ecological and socio-economic impacts. In Gujarat, respondents reported a reduced need for fertilizers on their farmland and a revival of local bird population, with trees being used for nesting.

Across project states, due consideration was given to the inclusion of economically weaker sections in labor activities.

Respondents demonstrated high awareness of the multiple uses of medicinal plants. For instance, Guggulu is valued for its role in producing dhoop (incense) and medicines. Similarly, medicinal plants promoted in Uttarakhand serve diverse purposes, including dental treatment, spice production, and ayurvedic medicine production.

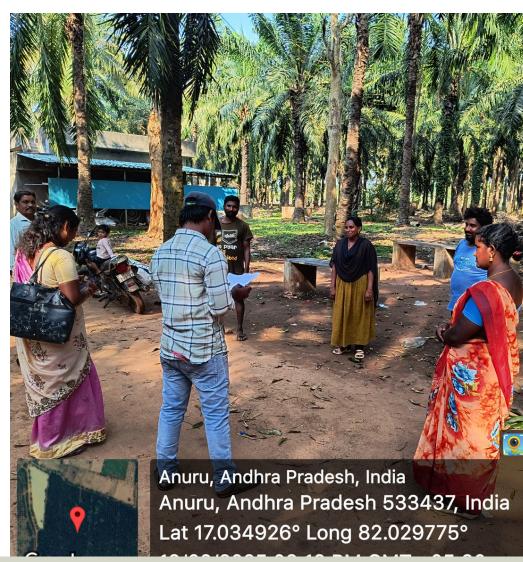
Awareness of market linkages, including potential buy-back arrangements with Dabur, was found to be adequate among respondents. In Gujarat, farmers expressed a preference for Guggulu plantations over other medicinal plants due to its suitability for local climatic conditions and the strong market demand for its produce.

Key Implementation Challenges Reported: While the project execution was largely successful, it was not without challenges.

In Uttarakhand, the unavailability of adequate water for sapling upkeep emerged as a significant concern (especially in areas where plantations were established on barren lands). To address this, water from nearby farms was utilized to meet the irrigation requirements.

At locations where common land was used for plantation, no disputes were reported among stakeholders regarding the use and sale of the produce. In such areas, both the Panchayat and participating farmers collectively took responsibility for the upkeep of the saplings, ensuring their sustainable growth.

In Andhra Pradesh, respondents highlighted the need for financial support and the continuation of project activities in the region. Additionally, there was a request for maintenance charges to support the upkeep of the saplings, with expectations for assistance from Dabur. Notably, respondents unanimously expressed a high level of satisfaction with the initiative, with many stating that they would recommend medicinal plant cultivation to their friends and family.



2.6 ASSESSMENT OF PROJECT ACTIVITIES USING OECD-DAC FRAMEWORK

SR Asia adopted the OECD-DAC model for impact assessment in this evaluation. The OECD-DAC Network on Development Evaluation (EvalNet) has established six key evaluation criteria: Relevance, Coherence, Effectiveness, Efficiency, Impact, and Sustainability. These criteria offer a structured and comprehensive framework for assessing the merit, value, and overall effectiveness of the intervention, ensuring a systematic and objective evaluation of its outcomes.



- The project approach is well-aligned with the needs of rural farmers, addressing persistent challenges such as wild animal attacks, declining crop productivity, and underutilized barren land. By introducing medicinal plant cultivation, the project offers an alternative, high-value crop, contributing to livelihood stability while promoting environmental conservation.
- The initiative is particularly relevant for small and marginal farmers, who often lack access to resources for high-input agriculture. This is evident in project states such as Madhya Pradesh, where the average landholding is just 0.9 acres; and Uttarakhand, where farmers cultivate on an average of 10.1 nalis. These figures underscore the project's commitment to supporting small-scale farmers, ensuring economic viability and sustainable agricultural practices for those with limited land resources.

Coherence HIGH

- The project aligns well with national agricultural and environmental sustainability goals [5], particularly in
 the conservation of endangered medicinal plant species. The project is also well-integrated into Dabur's
 CSR strategy, promoting synergy between private-sector initiatives and local development institutions.
 The involvement of NGOs, Panchayats, and Self-Help Groups (SHGs) is testimonial to this approach.
- Additionally, the project is designed to see through the complete lifecycle of medicinal plant cultivation through strengthening market linkages. Upon participation in the project, the respondents across the project states have reported high confidence in their ability to tackle market related aspects such as selling, harvesting, and adequate pricing of their produce.



• The project has been effective in achieving its intended objectives. Farmers have successfully transitioned to medicinal plant cultivation as confirmed through survey results. A total of 477.1 acres across Andhra Pradesh, Madhya Pradesh, and Gujarat, along with 435 nalis in Uttarakhand, have been planted with 21,42,080 medicinal saplings (as verified through participating respondents).

- Before participating in the project, 55% of respondents were engaged in non-medicinal farming or had fallow/barren land, demonstrating a significant shift towards medicinal plant cultivation.
- Additionally, training programs on cultivation techniques, pest management, and post-harvest processing
 have improved farmers' technical knowledge. The project has also increased employment opportunities,
 particularly for economically weaker sections and women, highlighting its inclusivity.

Efficiency MEDIUM

- The provision of high-quality seeds, technical training, and infrastructure support has allowed farmers to cultivate medicinal plants with minimal investment. In Gujarat, natural fencing techniques (e.g., Guggulu plantations) have reduced crop damage from Nilgai, lowering additional farm protection costs.
- Regarding sapling survival, 55% of respondents reported a mortality rate between 10-30%, indicating moderate losses. 24% reported less than 10% mortality, reflecting strong sapling survival, while 21% experienced a higher mortality rate of 30-50%, suggesting potential challenges in some regions.

Impact MEDIUM

- While the full economic impact may take time to materialize due to the long gestation period of medicinal plants, early signs indicate positive outcomes. For instance, a farmer in Madhya Pradesh reported a 50% increase in income after adopting cultivation of Ashwagandha.
- The project has also generated employment, with 149 respondents from Andhra Pradesh and Gujarat engaged in labour activities such as land preparation, plantation, and post-plantation care.
- Environmental benefits from the project are notable, particularly in Gujarat, where farmers observed a
 revival of local bird populations. Additionally, medicinal plants generally require fewer chemical fertilizers,
 contributing to reduced dependency on synthetic fertilizers.

Sustainability HIGH

- The project exhibits strong sustainability potential, with 70% of respondents planning to harvest their crops only after full maturation, as recommended during training. However, 29% prefer early harvesting, possibly due to unforeseen financial pressures.
- Follow-up support from NGOs has been well-received, with 69% of respondents "satisfied to some extent",
 while 31% respondents reportedly being "very satisfied". The endorsement of medicinal tree cultivation is
 high among participants, with 95% of respondents at least partially recommending it to others. This level
 of acceptance suggests that farmers see long-term value in continuing medicinal plant cultivation,
 further strengthening the project's sustainability.

Chapter 3: Recommendations & Way Forward

The implementation of the Dabur's Herbal Kingdom Project across the project states showcases the potential of medicinal plant cultivation as a profitable alternative crop, fostering economic diversification for farmers while promoting ecological conservation. This chapter highlights key areas for improvement identified through the impact assessment and presents strategic recommendations to enhance the long-term sustainability and effectiveness of the project.

Further strengthen market linkages for sustainable uptake of medicinal plants cultivation

A key concern raised by participating farmers is the challenge of reliable market access for selling their produce. Despite the availability of a buy-back arrangement with Dabur, nearly one-third of respondents (34 out of 95) identified market access as a potential future challenge. It is important to note that the majority of plantations have not yet reached maturity, and farmers anticipate potential difficulties in selling their produce once the project concludes. This underscores the need for strengthening market linkages and developing sustainable sales channels to ensure long-term viability for beneficiaries.

Recommendation

To address market access concerns, it is recommended to facilitate long-term contracts between farmers or farmer groups and herbal product manufacturers, including Dabur and other Ayurvedic companies. Additionally, forming farmer groups or cooperatives can help streamline the sales process, enhance collective bargaining power, and provide better negotiation leverage, ensuring stable demand and fair pricing for medicinal plant produce.

9

Enhance Financial Incentives & Institutional Support

While the financial prospects of medicinal plant cultivation are promising, the long gestation period of these crops may pose cash flow challenges for farmers during the interim period before harvest and revenue generation. This underscores the need for financial support mechanisms, such as interim income opportunities, credit access, or diversified cropping strategies, to ensure economic stability for farmers throughout the cultivation cycle.

Recommendation

To mitigate cash flow challenges during the long gestation period of medicinal plant cultivation, it is recommended to introduce bridge financing schemes or establish partnerships with microfinance institutions to provide short-term financial support to farmers. Additionally, reviving government subsidies and integrating medicinal plant cultivation into existing agricultural support schemes can further ease financial constraints, ensuring sustained farmer engagement and economic stability throughout the cultivation cycle.

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Enhance Climate Resilience and Disaster Preparedness

In the initial years, medicinal plant saplings are particularly prone to damage due to erratic weather, grazing animals, and inadequate irrigation as well as natural disasters such as cyclones (as witnessed in Gujarat). These challenges can significantly impact sapling survival rates and overall project success.

Recommendation

Introducing crop insurance programs, tailored for participating farmers, could help mitigate financial risks associated with crop loss due to extreme weather or other events. Partnerships with government or private insurers could be established to provide subsidized premium options for small landholding farmers to overcome the risks involved.

4

Scale Up Women's Participation & Leadership

The project has successfully included women in nursery operations and plantation activities, particularly in Uttarakhand. However, structured mechanisms to empower women-led groups and expand their roles remain limited.

Recommendation

Strengthen Self-Help Group (SHG) engagement in project operations, including nursery management, training facilitation, and community awareness programs could prove useful to expand women engagement. Further, targeted training on providing services such as pest management, market related services could potentially open up avenues for service based local entrepreneurs.

5

Institutionalizing Knowledge Transfer & Training

Survey responses indicate that while training sessions were effective, knowledge retention varies across states, with farmers in Uttarakhand reporting lower confidence in market linkages compared to other states.

Recommendation

To enhance knowledge-sharing and skill development, it is recommended to establish farmer-to-farmer learning networks, allowing experienced farmers to mentor and guide new participants. Additionally, digitizing training materials through video tutorials and mobile- based advisory services can ensure wider accessibility, enabling farmers to acquire technical knowledge and best practices at their convenience, ultimately improving adoption rates and cultivation success.



6

Addressing Early Harvesting Trends

While 70% of farmers plan to harvest at full maturity, 29% prefer early harvesting due to financial constraints. This practice reduces the market value of the produce and affects long-term profitability.

Recommendation

Introduce harvest-linked incentives or short-term income-generating activities to support farmers financially until their medicinal crops fully mature. Strengthen awareness on the benefits of full maturation through refresher training.

Strengthen NGO & Community Follow-Up Mechanisms

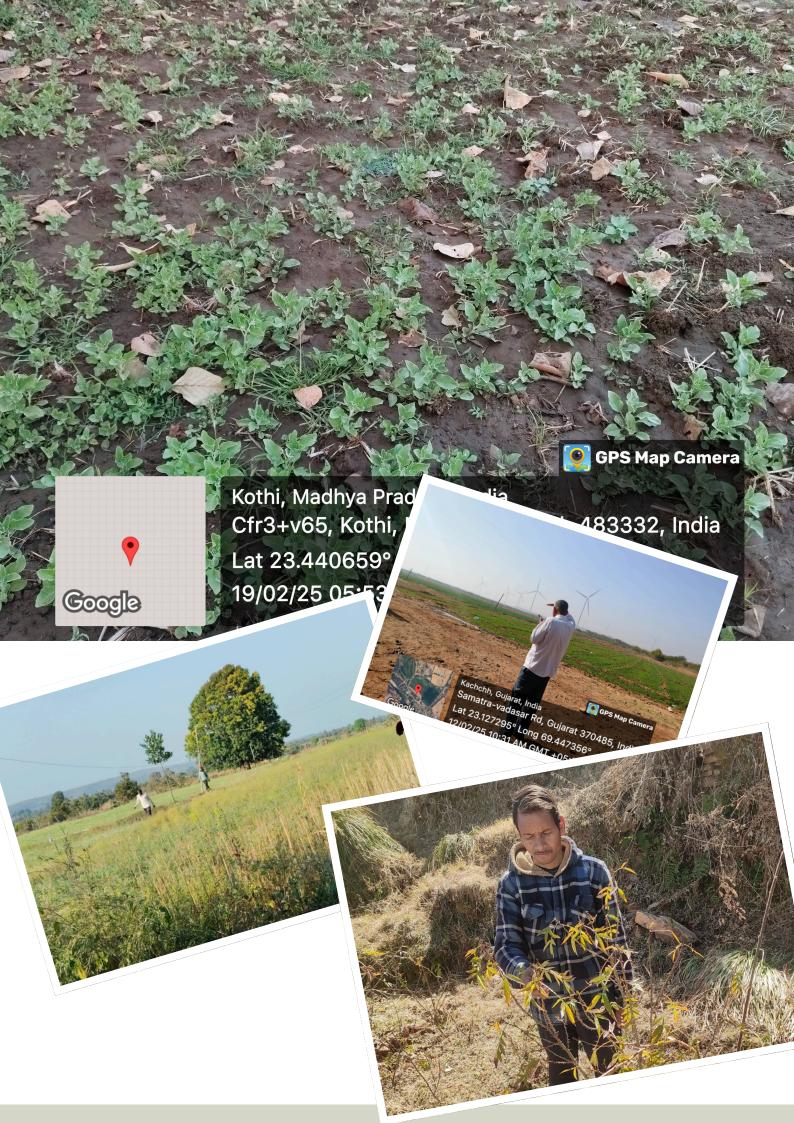
Survey responses indicate 69% of beneficiaries were satisfied with NGO follow-up, while 31% were "very satisfied", suggesting room for improvement in follow-up support.

Recommendation

Formalize structured follow-up schedules, ensuring periodic on-ground visits and digital advisory check-ins. Develop a feedback mechanism where farmers can report challenges and receive timely solutions.

Dabur's **Herbal Kingdom** Project has established a strong foundation for integrating environmental conservation with the economic development of small landholding farmers. However, among the four surveyed states, significant women participation was observed only in Uttarakhand, highlighting the need for greater focus on women's involvement in future projects.

To ensure long-term self-reliance among participating farmers, enhanced economic stability, and to maximize ecological benefits, it is essential to address the identified challenges and implement the recommended strategies, fostering a more inclusive and sustainable approach to medicinal plant cultivation.



Case Studies

Jivan Singh Bisht

Village: Sakuna Jutiya Block: Ramgarh District: Nainital State: Uttarakhand

Background:

In Sakuna Village, Jivan Singh's family faced severe agricultural challenges due to the persistent invasion of wild animals, ultimately leading them to abandon farming nearly 20 years ago. Once fertile and well-irrigated, their farmland gradually turned barren, becoming overgrown with dense bushes, making cultivation extremely difficult. With agriculture no longer a viable livelihood, the family's financial condition deteriorated, forcing them to consider selling their land as a last resort to meet their daily needs.



Intervention under Dabur's Herbal Kingdom Project:

Dabur's Herbal Kingdom Project became a turning point for Jivan Singh's family, offering a pathway to revive their abandoned farmland. After learning about the initiative from fellow villagers, Jivan visited TERI Farm to gather more information. Encouraged by the project's potential, he registered as a beneficiary and took proactive steps to reclaim his land. The first phase of intervention focused on land clearing and water management, ensuring the land was once again suitable for cultivation. With support from the project, 2,500 medicinal plants of Timur and Sugandhbala were planted. The project team provided saplings, along with technical assistance, to ensure successful establishment and growth of these medicinal plants, marking a significant step toward agricultural restoration and sustainable livelihood development.

Impact and Future Prospects:

The intervention proved to be a transformative success, restoring the once-abandoned land to productive use. With the revival of cultivation, the farmer now perceives the project as a significant milestone, expressing deep appreciation for the support that enabled him to reclaim and cultivate his farmland.

Looking ahead, he remains optimistic about the economic benefits the plantation is expected to yield, ensuring long-term livelihood security for his family. Moreover, the initiative not only enhances his financial stability but also contributes to sustainable agricultural practices, reinforcing the potential of medicinal plant cultivation as a viable and ecologically responsible alternative for farmers facing similar challenges.

Ramdev Singh

Village: Samtra State: Gujarat

Background:

Located 22 km from Bhuj Taluka headquarters, Samtra Village is home to the Patel community, where agriculture serves as the primary occupation for nearly every household. Among the residents, Ramdev, a doctor by profession, owns a 30-acre farm, which is actively managed by his partners.

Despite making regular weekend visits to oversee the farm's progress, he encountered a recurring challenge – severe crop damage caused by Nilgai (blue bulls). The persistent losses due to animal intrusion raised serious concerns about the farm's long-term viability, necessitating an alternative approach to ensure sustainable agricultural productivity.

Intervention under Dabur's Herbal Kingdom Project:

In 2017, a chance meeting with Mohabat Singh, a worker from an organization, introduced a natural solution to the persistent Nilgai intrusion problem. He recommended planting Guggulu saplings along the farm boundary, explaining that Nilgai tend to avoid areas where Guggulu grows due to the plant's properties.

Encouraged by this advice, the farmer implemented the innovative approach, planting 80,000 Guggulu saplings along all four sides of the farm, creating a natural protective barrier. This intervention not only offered a sustainable, non-invasive method to prevent crop damage but also aligned with ecological conservation efforts by promoting the growth of medicinal plants.



Impact and Future Prospects:

The results were remarkable. Within just a year, Nilgai completely stopped entering the farm, ensuring protection for cultivated crops. Beyond serving as a natural fence, Guggulu trees unexpectedly became a new source of income:

- Guggulu seeds can be sold to the Forest
 Department at ₹3,000 per kg, with trees producing
 seeds twice a year, potentially generating 400 kg
 annually.
- Bees that settle on Guggulu trees produce highvalue honey, which fetches a higher price than regular honey.
- Additionally, 2,000 kg of Guggulu resin has been successfully sold, further boosting farm earnings.

Kailash Singh Marko

Village: Sivni District: Umariya

State: Madhya Pradesh

Background:

Before the intervention, Kailash Singh's income was modest, with agricultural expenses ranging between ₹15,000 to ₹20,000 per crop cycle. These costs included irrigation, pesticides, fertilizers, and electricity, adding financial strain to traditional farming practices.

Awareness about the intervention came through a Dabur/Manav Jivan-led initiative, during which a committee was formed, and awareness sessions were conducted at the Panchayat level. These sessions introduced farmers to the economic and agronomic benefits of cultivating Ashwagandha as a profitable alternative crop.

As part of the intervention, Manav Jivan provided farmers with Ashwagandha seeds, facilitating a smooth transition into medicinal plant cultivation, reducing input costs, and offering new income opportunities for participating farmers.



Intervention under Dabur's Herbal Kingdom Project:

With the guidance and support of the NGO, Kailash Singh transitioned to Ashwagandha cultivation, investing in essential agricultural inputs such as irrigation, fertilizers, and pest management. The 6-7 month cultivation cycle was carefully managed to ensure optimal yield and quality.

To maximize profitability, the NGO played a crucial role in market facilitation, leveraging its network to connect farmers directly with buyers. By handling transportation and sales logistics, the NGO enabled direct market access, ensuring better price realization and eliminating intermediaries, thereby enhancing Kailash Singh's earnings from Ashwagandha cultivation.

Impact and Future Prospects:

Following the successful cultivation and sale of Ashwagandha, Kailash Singh generated an income of ₹50,000 per crop cycle, marking a significant improvement in financial stability. The intervention not only established a sustainable and profitable source of income but also introduced a structured market access approach, reducing dependency on intermediaries and ensuring higher returns. This shift empowered him with greater financial independence and a more resilient agricultural model, reinforcing the long-term benefits of medicinal plant cultivation.

P.B.V. Seetharamayya

Village: Singampalli District: East Godawari State: Andhra Pradesh

Background:

Before the intervention, P.B.V. Seetharamayya relied solely on palm oil tree cultivation as his primary source of income.

However, fluctuations in market prices and limited diversification in crops posed challenges to financial stability. The opportunity to explore a new income stream came through JKWS NGO representatives, who introduced him to Dabur's Herbal Kingdom Project and its potential benefits for farmers.

Intervention under Dabur's Herbal Kingdom Project:

As part of the project, Pippali (long pepper) cultivation was introduced as an intercrop within existing palm oil plantations. This method allowed for efficient land utilization without affecting the primary crop.

The intervention involved:

- Providing Pippali saplings for planting.
- Technical training on cultivation, pest management, and harvesting.
- Market linkage support for direct sales to Dabur. Seetharamayya invested in essential inputs such as irrigation and fertilizers, ensuring optimal growth of the intercrop.



Impact and Future Prospects:

The introduction of Pippali as an intercrop significantly boosted income levels. Seetharamayya now earns an additional ₹20,000 per crop cycle, supplementing his existing palm oil revenue.

Dabur's Herbal Kingdom Project has played a crucial role in enhancing farmer income through sustainable agricultural practices. By integrating Pippali as an intercrop, farmers like P.B.V. Seetharamayya have unlocked new economic opportunities while maintainingtheir primary crop production. This case highlights the power of strategic interventions in improving livelihoods and ensuring financial resilience for small-scale farmers.

Field Survey Photos























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