

# PRODUCTION AND MARKETING CONSTRAINTS OF MEDICINAL PLANTS CULTIVATION IN TAMIL NADU

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## Abstract

Total global market for medicinal plants is worth about 150 billion dollars and India's share is only 1.3 billion dollars (0.90 per cent). India's dismal performance in the global trade can be attributed to many factors. Among these, the major problem is that India exports only 30.00 per cent of the commodity in the processed form and bulk of 70.00 per cent in raw form thereby causing loss in employment as well as foreign exchange reserves. Besides, over 90.00, per cent of medicinal plants are collected from the wild source, very often in a destructive and unsustainable manner.

India is said to be the home to 8,000 species out of 21,000 species used for medicinal purpose in the world. Around 800 species are used by industries and out of which 25.00 per cent are cultivated. This rich bio-diversity together with diverse agro-climatic conditions provides unlimited opportunities for India to cultivate a variety of medicinal plants demanded by the market. In Tamil Nadu, a significant number of farmers are cultivating medicinal plants. Dindigul district is one of the leading commercial growers of medicinal plants in the state. Coleus and Aloe vera are the best in production. They face various production and marketing constraints while cultivating them. The results of this study illustrate such constraints faced by farmers who cultivate them.

**Key words:** Coleus, Aloe vera, medicinal plant growers, production and marketing constraints

## Introduction

Asia has abundant species of medicinal and aromatic plants (MAPs) and traditional medicine has been practiced in Asia since ancient times. The Chinese and the Indians have made use of medicinal plants to cure ailments for thousands of years. According to the World

Health Organisation (WHO), the goal of 'Health for All' cannot be achieved without herbal medicines. While the demand for herbal medicines is growing in developing countries, there are indications that consumers in developed countries are becoming disillusioned with modern healthcare and are seeking alternatives in traditional medicines. There is, therefore, an increasing consumer demand for herbal medicines in developed countries. India, with approximately eight per cent of world's biodiversity including plant genetic diversity with medicinal properties, has the potential of becoming a major global player in market for medicinal plants based herbal formulations, medicines and products. Given the extent of biodiversity in India, a major task for all the stakeholders including the policy planners is the identification and guided development of new products with large export potential such as medicinal plants. Recognising and addressing the needs of each of the different stakeholders involved requires a holistic approach for overall development of the medicinal plants sector (Harbir Singh, 2014).

Though economic importance of medicinal plants is well known, it is considered as a forestry sub-sector in India. Till Medicinal Plants Board was constituted in year 2000, no nodal agency was there to look into medicinal plants as an 'economic sector' and different organisations were dabbling with different aspects of medicinal plants without any focus and co-ordination there by leading to paradox of simultaneous existence of under-utilisation and over-exploitation. Further, the lack of co-ordination has also led to critical research gap, that is, there is a regrettable absence of any research community working on socio-economic and policy aspects of medicinal plants, such as that which exists with regard to agro-technology, biotechnology etc. In fact, scientists working in natural sciences themselves conducted socio-economic research in medicinal plants resulting in generally unprofessional analysis leading to over-simplification of complex issues and providing very general suggestions to tackle socio-economic issues.

Tamil Nadu, situated at the southern tip of India is blessed with diverse ecological habitats, which harbour and sustain immense plant diversity with a total area under medicinal and aromatic plants of about 7000 ha. Dindigul and Tuticorin have suitable agro-climatic conditions for cultivation of medicinal plants. There is a need to take up a systematic approach towards cultivation of medicinal plants to provide a consistent supply of medicinal plant

produce of international quality. Coleus and Aloe vera is two of the medicinal plants widely cultivated by the farmers in the district. Production and marketing is important in any business avocation, it is also essential in medicinal plants cultivation. The farmer in his day to day business uses a wide range of resourced. With this in view, this study was conducted in Dindigul district and identified and explained the production and marketing constraints faced by the farmers.

## Methodology

The state of Tamil Nadu was selected for the present investigation. The selected medicinal plants, Coleus and Aloe vera, are grown in this state in large geographical area. Dindigul district were selected purposively for conducting the survey with respect to, Coleus and Aloe vera respectively. The Dindigul district has larger area under commercial cultivation of Coleus and Aloe vera and is expanding the area in the recent years. Because of this process, the buyers from all over India have established their purchasing counters in this area. In view of this, Dindigul district was selected purposively for the analysis of production and marketing of glory lily.

The purposive sampling technique was used to select one block in the Dindigul district. Oddanchatram was selected from among the fourteen blocks, as it has the largest area under Coleus and Aloe vera cultivation. Paraivalasu, Ambilikai, Kallimandayam, Rotupudur and Kappalpatty having large area under Coleus and Aloe vera were the five selected villages in Oddanchatram block.

Random sampling technique was used to select the respondents cultivating medicinal plants in the study area. Hundred and twenty respondents were selected randomly from the selected villages. Interview schedule is the tool having a set of questions, which are used to gather data from the respondents by an interviewer in a face to face situation. A well-structured interview schedule was prepared in English taking into consideration the various objectives of the study. Necessary precautions were taken to ensure that the questions in the schedule were unambiguous, concise, complete and comprehensive. Besides, the schedule was pre-tested in a non-sample area and necessary modifications were carried out before the final administration. In this study, the constraints were divided under two heads, viz. production constraints and

marketing constraints. Based on the responses, percentage analysis was carried out to rank the constraints.

## Results and discussion

Constraint analysis has become one of the important components of extension research. Without analyzing the constraints, it is impossible to diffuse the needed technologies among the farming community. Therefore the possible items of constraints were enumerated from related studies, also in consultation with scientists, development workers and by having discussion with medicinal plant growers. The respondents were asked to express the agreement / disagreement with the various items listed out.

The findings on the constraints experienced by the medicinal plant growers are presented in this selection. The constraints were ranked according to the number of farmers responded and the salient findings are given in subsequent Tables.

### A. Production constraints

**Table-1. Production constraints experienced by the farmers in the medicinal plant cultivation** (n=120)

S. No	Production constraints	Number of Respondents	Per cent	Rank
1	Improper availability of seed/planting material	91	75.83	I
2	High cost of labour	89	74.16	II
3	Lack of credit facilities	75	62.50	III
4	High cost of inputs	71	59.16	IV
5	Lack of assured irrigation facilities	57	47.50	V
6	Inadequate extension service on the cultivation aspects	51	42.50	VI

It could be noticed from the above Table-1 that with regard to the production constraints nearly three-fourth of the respondents (75.83 per cent) indicated the improper availability of seed / planting material as the major constraints, which is followed by higher cost of labour as expressed by 74.16 per cent of the respondents. These have emerged as the first and second

major constraints. The contractor or the private agent only supplies the seed planting materials and sometimes they are not viable and the government does not take adequate steps to supply seedling material. The migration of labourers to cities results in the non-availability of labourers for the technical operations. Hence higher wages are demanded. This finding is in line with the findings of Sudhakar (2007).

The third constraint experienced by 62.50 per cent of the respondents was lack of credit facilities. Most of the farmers do not have adequate savings for the purchases of vital inputs for future uses. They always depend on private institutions and sometimes nationalized banks. Some of them failed to repay the loans in time and became defaulters. Those who came under the defaulter category do not get credit further. This finding is in agreement with the findings of Varadharajan et al (2005).

The fourth constraints experienced by 59.16 per cent of the respondents were high cost of inputs. This might be due to the fact that they get the inputs from the private agencies. They only fix the price and get the maximum price for the given inputs like fertilizers, pesticides, seeds etc. This finding is in agreement with the findings of Kalimuthu (2006). Fifth constraints experienced by 47.50 per cent of the respondents were lack of assured irrigation facilities. Basically the study area is a drought prone area. Due to failure of monsoon and poor storage in reservoirs, the water let in to canal for irrigation purpose is not adequate. In addition, based on the electricity availability and demand of the entire state, government imposes certain restrictions to issue the connections to new bore wells. This finding is in line with the findings of Jeyaseelan (2005).

The sixth and the last constraint experienced by 42.50 per cent of the respondents was inadequate extension service on the cultivation aspects. Most of the farmers are primarily literates but they lack technical information about the cultivation of medicinal plants. Some of the private sectors only provide some information regarding the cultivation aspects and promote them to cultivate the medicinal plants Also insufficient research findings in medicinal plant was due to lack of established crop management studies as the cultivation of the medicinal plant has been flourishing from a recent past only. This finding is in agreement with the findings of Muthukumar (2013).



## B. Marketing Constraints

**Table-2. Marketing constraints experienced by the farmers in the medicinal plant cultivation** (n=120)

S. No	Marketing Constraints	Number of respondents	Per cent	Rank
1	Lack of fixed price policy for medicinal plants by the government	112	93.33	I
2	Lack of processing industries in the nearby area	108	90.00	II
3	Lack of proper marketing channel	86	71.66	III
4	Lack of information on post harvest technology and lack of standard specification of the produce	74	61.66	IV
5	Lack of transport facilities	61	50.83	V
6	Lack of trained personnel and equipments	56	46.66	VI

It could be observed from Table-2 the major constraint expressed by 93.33 per cent of the respondents was lack of fixed price policy for medicinal plants by the government. The contributing reason for the problem of fixed price policy was the varying economics and fluctuating demand and supply in the regional, national and international levels. This indicates that there is a need to open co-operative marketing centre and regarding price fixation government has to take steps to formulate comprehensive policy measures for price fixation. This finding is in agreement with the findings of Muthukumar (2013).

The second major constraint experienced by 90.00 per cent of the respondents was lack of processing industries in the nearby area. Medicinal plants are mainly processed within a few weeks or months and used for many other purposes like cosmetics, tablets etc., especially the Aloe Vera has to be processed within six hours after harvest. These cultivators mainly cultivate the crops nearby processing industries only. So if the government encourages processing industries in each block then the area under cultivation of medicinal plants can be increased.

Third constraint experienced by 71.66 per cent of the respondents was lack of proper marketing channel. In study area most of the farmers do not know from where they can get the planting material and to market. The middlemen can contact with the private industries and they

collect all the produce and supply them. They may get the money in this transition from the farmers and lack of knowledge on marketing might be the reason for reporting this constraint. This finding is in agreement with the findings of Muthukumar (2013).

The fourth constraint experience by 61.66 per cent of the respondents was lack of information on post harvest technology and lack of standard specification of produce. Most of the farmers directly supply their produce to the contractors at the field itself. Due to this they did not care much for post harvest technology. However the growers are aware of the fact that they can get better prize if they store and sell the produce at an opportune time. In study area only for the past few years they have been cultivating the medicinal plant. They are not much aware of the details like the specification of the produce about the medicinal plants.

Fifth constraint experienced by 50.83 per cent of the respondents was lack of transport facilities. The study area was mostly dry and rural and there are no proper road facilities to transfer their produce from one place to another. The contractor or commission agent also collects extra charges for their transport. This might be the reason for reporting this as a constraint.

The sixth and the last constraint experienced by 46.66 percent of the respondents was lack of trained personnel and equipments. Most of the reported that farm labourers need to be properly trained. Moreover, some of the practices are carried out simultaneously by all the farmers and hence there have been a heavy demand for labourers. These might be the reasons for above reported constraint. . This finding is in agreement with the findings of Jeyaseelan (2005).

## **Conclusion**

Based on the findings of this study, improper availability of seed/planting material and high cost of labour were identified as the major production constraints faced by the medicinal plant growers in Dindigul district of Tamil Nadu. The contractor or the private agent only supplies the seed planting materials and sometimes they are not viable and the government does not take adequate steps to supply seedling material. The migration of labourers to cities results in the non-availability of labourers for the technical operations. Hence higher wages are demanded. Lack of proper marketing channel, lack of processing industries in the nearby area, lack of fixed price policy for medicinal plants by the government were identified as the major

marketing constraints faced by the growers. The policy makers need to devise plans to create marketing opportunities, start processing industries in the region and offer products at reasonable prices.

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