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## A Micro Analysis Of Cost And Return Of Coleus Herbal Cultivation In Tamil Nadu.

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### Abstract:

*The Herbal plant sector has traditionally occupied an important position in social-cultural, spiritual and medicinal area of rural and tribal lives of India. In recent years, due to growing re cognition of natural products and process in sustaining human as well as environmental, importance of medicinal plants resources have increased tremendously. Cultivation of medicinal plants in wasteland can improve the ecology and economy of the area. World Health organization (WHO) has issued several sidelines pertaining to quality control, assessment of herbal medicines, programme on traditional medicine and for evaluation the safety and efficacy of herbal medicines.*

### KEYWORDS:

The cost and returns, Coleus cultivation, meditational plants.

### 1.INTRODUCTION:

India is endowed with a medicinal plants wealth of the over 9,500 species. The Annual exports of those plants are Rs. 1,200 million (Kathiresan 2000). The potential for earning foreign exchange by India from export of medicinal plant is estimated to be over Rs.90,000 crores per annum. It has been estimated that there are more than 7,800 manufacturing units of medicinal drugs in India. Herbal plants industries although old and vast are still being managed in traditional ethos and practices and lack a proactive and socially responsible images. Many studies have confirmed that traders and phyto -pharmaceutical companies are responsible for in efficient, imperfect, informal and opportunistic marketing of herbal plants. As a result the raw metrical supply situation is sdaly, in sustainable and exploitative. It is in the best interest of the industries to develop long term social contract with the cultivators growers or collectors. The scale of international trade in medicinal pant is difficult to asses because of persity of reliable statistics, trade secrecy, and closed marketing system. According to the reports to Export and Import of India (1997) the value of medicinal plant related trade in India is to the order of Rs. 5.5 billion per year while world trade is over us 60 billion and is rapidly growing, Thus, India has only 0.5% share in the global export in market of medicinal plants. Thus, need to enhance our export by Rs. 5,000 crores annually which in turn generate productive employment and income to two crores families (D.N. Tewari 1999).

### OBJECTIVES

- 1.To find out the cost of cultivation of the selected herbal plants.
- 2.To estimate resource use efficiency and technical efficiency in the production of selected crops
- 3.To suggest policy measures for promotion of the selected herbal crops.

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## METHODOLOGY

A multistage stratified random sampling methodology was adopted with salem district as universe (first stage). Athur blocks as second stage unit, village of third stage and farm households cultivating coleus as the ultimate sampling units, there were 30 revenue villages in Athur block.

The Village were arranged in the declining order of magnitude of area under coleus.

## RESULT AND DISCUSSION

Various statistical models were employed to test the stated hypotheses and the outcome of the study on eoleus production is presented in this chapter. The sample of 15 farmers have been post - stratified into two size groups based on the government definition to lending financial supports. They were classified into 104 small farmers less than two hectors and 46 large farmers having more than two hectors.

Several social economic factors would have line influence on economics of eoleus group production and they were important for the study. The structural characteristics include sample size, farm size, family size, age, education, experience in herbal forming and annual income of the selected farmers. The sample size and socio economic status of the selected eoleus cultivating are presented in table 1

**Table 1 Characteristics of the selected colous cultivating sample Households**

S.No.	Particulars	SF	LF
1.	Sample size (no)	104	46
2.	Farm size (no)	1.50	2.46
3.	Family size (no)	5.10	5.98
4.	Ratio of the family labour to family size	1.28	1.54
5.	Age of the head (years)	41.12	57.56
6.	Education	3.98	3.57
7.	Farming experience (years)	24	31
8.	Colous farming experience	7	5

Note: A.SF: Denotes small farmers owning big then two hectors. LF; Denotes larger fanners having more than two hectors.

B. Sources are given to different levels of education such as illiterate -

### 1, primary secondary and collegiately.

From the total sample of 150, the small farmers continued 69.33% and large farmers accounted 30.67% the average farm size is 1.50 in small farmers and 2.46 ha. In large farmers. It was evident that small

size of holding had less family size and the ratio of family labour to the family size is also minimum where as the more family size in the large farms contributing more ratio to the family labour. The under family leads to more numbers in small farmers having lesser age group where as joint family / undivided family structure in the large family are having more ever age farm size with higher family size and high ratio to the family labour with the large farmers having higher age group than small farmers. The education status of the small farmers is also higher than large farmers. The age factor directly influence the experiences in farming years and in particular more coleus cultivation. Thus, it could be noted that the young age, compiled with higher education influence directly in the involvement of farmers in new crops. Even though the crop was introduced in 1997, a smaller group of farmers had higher experience. Most of the farmers have activated in smaller extent in earlier years and later increased the extent of herbal crops. While in large farms, the farmers having higher experience in farming with the herbal cropping experience was lesser than small farmers. So it was pertinent to note that small farms having less general farming experience when compared to the large. Literacy is also an important factor determining the adoption of new crops and technology. Further, it could be seen the education and age has not played any difference in diversifying to a crop like coleus.

Ability, to save to borrow and to invest in productive activity farmers depended upon the asset holding which could provide security for loans and world yield in come to save both contributing to investments. Hence, the assets of the sample farms would serve as a measure of their economic viability and liquidity. The pattern of asset holding in colons of Athur block is summarized in table.

**Table 2 Asset holding pattern in coleus farmers**

S.No.	Assets	SF	LF
1.	Value of lands	179735 (79.05)	422613 (77.62)
2.	Value of farm buildings	20685 (9.10)	39418 (7.24)
3.	Value of livestock	14167 (6.23)	26314 (4.83)
4.	Value of implements and machineries	12783 (5.62)	56123 (10.31)
5.	Average asset position	56842.5	136112
6.	Total	227370 (100.00)	544468 (100.00)

Asset holding pattern plays an important role in' decision making while diversifying to a new commercial crop. Coleus cultivation is dominated by small farmers and hence the reflection of value of land is quite higher percent (79.05). all farmers of the sample coleus farmers has high percent value of land assets. As per the agronomic practices coleus cultivation need a good irrigation for better yield. The agricultural allied activities could support to the livelihood of the small farms through the animals, good rearing accounted more in large farms since coleus is a new commercial herbal crop and hence there is

always an apprehension to collect best land for the cultivation of this crop. The value of land has been appreciated due to the coleus cropping crop yield and assured market collectively helped them to increase the value of lands.

The annual gross income was obtained from different sources. The details about annual gross income obtained from different sources are presented in table 3.

**Table 3 Source wise Annual Gross Income**

S.No.	Income source	Small farmers	Large farmers
1. a	On farm coleus	67015 (73.93)	139983 (78.81)
b	Other crops	14692.10 (16.21)	22324.75 (12.57)
2.	off farm income	2705.90 (2.98)	6390.25 (3.60)
3.	Non Farm income	6230.22 (6.87).	8928.31 (5.03)
4.	Average income per family	90643.12 (100.00)	177626.30 (100.00)
5.	Average size of farm (ha)	1.50	2.46

(Figures in parentheses indicates percentage to total)

It could be seen from the table 3 that the major source of income in all the two groups of farmers is sale of coleus. Thus income coleus alone contributed more than 84% in two groups. It indicates that the incursion of diversities agriculture into new commercial herbal crop from the traditional system of cropping herbs is more remunerative to the farmers for this region. Further the coleus contribution to the gross income is more in large farms than in small farms. The income from other crops is more in small farms than in large farms. It could be inferred that the small size of farmers having more cropping in a year with short duration crops like and vegetables. A large group of farmers allows the land offer coleus crop as fallow for periodical ploughing operations and cultivated kolinsi as a summer green manure crop. The off-farm income is more in smaller farms than in large farms. It could be noted that from table 2. The higher percentage of line stock asset might have contributed more income to the off-farm sector. In addition to that farmers work in off-farm mostly as wage earners to supplement crop income. This was found to be true from a further look at the above table. In large farmers, the proportion off-farm income to total income was low because they did not want to go for off-farm labour but very few of them hired out few equipments and machineries to others, thus, it could be concluded that agriculture is a major source of income in the sample farm families.

#### **COST AND RETURNS IN COLEUS CULTIVATION**

An analysis of herbal crop economy can be undertaken through absolute economic behaviour in terms of cost and returns. These parameters help as to understand the reasons and relative merits of

accepting the crop. Coleus was selected for an analysis as herbal crop on the basis of the criteria that is explained.

Since, the study was to find the production of coleus tubers, an analysis was undertaken to estimate the cost and returns in coleus production. The various costs and their percentage total are presented in table 4.

**Table 4**  
**Cost and return for coleus cultivation**

S.No	Cost	Small Farms		Large Farms	
		Value (Rs/ha)	Percent to total	Value (Rs/ha)	Percent to total
1.	Casual labour	6260	21.22	6765	19.98
2.	Bullock labour	1400	4.75	750	2.22
3.	Machine labour	1125	3.81	1875	5.54
4.	Cost of planting material	2500	8.48	2500	7.38
5.	Organic manures	5240	17.76	5710	16.87
6.	Chemical fertilizers	2745	9.31	2925	8.64
7.	Plant protection measures	220	0.75	285	0.84
8.	Irrigation	1800	6.10	1920	5.67
9.	Interest on working capital @ nine percent	1916	6.50	2046	6.04
10.	Depreciation	256	0.87	1122	3.32
11.	Land revenue	75	0.25	88	0.25
12.	Total of cost A	23537	79.80	25986	76.76
13.	Rent on owned land	1250	4.24	13.40	3.96
14.	Interest on owned fixed capital	1862	6.31	3542	10.48
	Total of cost	26649	90.34	30,873	91.22
15.	Inputed labour wages	2850	9.66	2980	8.80
	Total of cost				
16.	Yield in kgs / ha	29,499	100	33853	100
17.	Gross returns main product & by produce	6758	-	8639	-

18.	Net returns	44677	-	569045	-
19.	Input output ratio	1.51	-	1.68	-
20.	Cost of production (per kg inRs)	4.36	-	3.92	-
21.	Price of coleus Tubers (per kg in Rs)	6.5	-	6.5	-

### CONCLUSION

The total sample of coleus respondents small farmers, accounted 69% followed by large farmers of 31%. The mean area under coleus for small farmers is 1.5 ha and large farmer 2.46 ha. The major asset holding of the selected sample are agricultural land and income source is agricultural income. Most of the coleus cultivating farmers have made contract agreement with processing company. It helps them to provide sufficient in parts and assured market price. In cost of cultivation the casual labour occupied a major share in both groups. It indicates that the coleus cropping is a labour intensive cultivation.

It was observed that organic manures occupied that second important cost component of cultivation. Coleus cropping requires chemical supplement nutrition constituted around line percent of the total cost of cultivation. Further, it could be noted that coleus cultivation requires irrigation. It occupied six percent of the cost. The cost of planting material was fixed and it was applied by the contract company. Timely supply of top slips would be a cranial factors. The delayed planting materials supply to the small farmers have cultivate effect of large planting and the crop was supported with not temperature during the harvesting season leads to reduction in the field due inadequacy of supplementary irrigation.

### POLICY MEASURES

1. The national apex body has concentrated effort on various promotional measures to boost the domestic production of coleus. Further. It may Co- ordinate department of Agriculture to implement and support the coleus cropping.
2. For smooth functioning of coleus cropping system. The procurement companies may adopt split price mechanism under this mechanism the agreed price may be fixed for wet tubers and dry tubers.
3. The large farmers may be encouraged on post harvest management and establishment of processing and semi processing units in future.
4. The technique of inter cropping in other suitable crop may be evolved for maximize the net profit.
5. Periodical soil testing for coleus crop cultivation is essential so establisliment of soil testing laboratory in the block is essential.

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