

Decision making behaviour of Medicinal Plant Growers

Abstract:

Farm household today is constrained by shrinking net income, increased cost of cultivation and uncertainty in prices, hence this forced the farmers to switch over to Horticulture, Agro forestry and Sericulture. Consequently, in this back drop, cultivation of medicinal plants is a new venture and has advantages when comparing between other crops. At this juncture, the decision making behaviour of the farmers was studied in order to highlight their preference in decision making viz., take independent/ self decision or by consulting with family members/relatives, progressive farmers, extension workers, traders in the field of crop shift, selection of variety, adoption of new practices, buy/sell land, post harvest measures change in cropping pattern., to buy/sell land, for borrowing credit, marketing, to buy equipment, for hiring labour and to start new enterprises.

Key words: *Decision, Medicinal plant cultivation, self, progressive farmers, crop shift*

Introduction

A wide range of medicinal plants are found in India due to agro climatic variability which is responsible for increased demand for Indian medicinal plants in the International market in the recent years. The World Health Organization (2002) has estimated that the world herbal market is growing at the rate of 7-10% every year and is likely to increase more than 5 trillion US dollars. Regarding the export of medicinal plants India's contribution to the international market is increasing rapidly (Kumar, 2004). Utilizing our biodiversity with proper planning, Indian herbal products can very well enter the overseas markets. This can be achieved through increased cultivation of medicinal plants. Due to erratic rainfall, decreased water table, increased labour problem the farmers prefer to shift

26 their cropping pattern. At this point the cultivation of medicinal plants is found to be a
27 new venture for the farmers. Keeping this in mind, the decision making behaviour of the
28 respondents towards cultivation of medicinal plants was studied in various aspects viz.,
29 take independent/ self decision or by consulting with family members/relatives,
30 progressive farmers, extension workers, traders in the field of crop shift, selection of
31 variety, adoption of new practices, buy/sell land, post harvest measures change in
32 cropping pattern., to buy/sell land, for borrowing credit, marketing, to buy equipment, for
33 hiring labour and to start new enterprises.

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35 Emotional aversion to loss, our tendency to prioritise short-term gain over long-term
36 needs, humans' propensity to 'blend-in' with what others are doing, and our collective
37 preference for supporting the status quo over change is decision making (John *et al.*
38 2011)

39 40 **Methodology:**

41 The study was conducted during the year 2012 in Salem and Dindigul districts of
42 Tamil Nadu. Out of the 31 districts in Tamil Nadu, Salem and Dindigul districts of has
43 been selected purposively for the study due to its area under medicinal plants cultivation
44 is more while comparing other districts of Tamil Nadu.

45 In Tamil Nadu, four medicinal plants namely *Coleus forskholii* (Coleus), *Gloriosa*
46 *superba* (Glory lily), *Cassia angustifolia* (Senna), *Catharanthus roseus* (Periwinkle) are
47 widely cultivated. For the study, it has been decided to select the medicinal plants that
48 occupy the maximum area under cultivation. Consequently, the medicinal plants viz.,
49 Coleus and Glory lily are cultivated in more than 1000 acres in Salem and Dindigul,
50 hence these districts were purposively selected for the study.

There twenty blocks in Salem district and fourteen blocks in Dindigul district, one block from each district namely Attur, Thoppampatti were selected purposely, the reason that these blocks had the maximum area under Coleus and Glory lily cultivation.

There are fourteen and ten villages under Attur and Thoppampatti blocks of Salem and Dindigul districts respectively. For this study, out of 24 revenue villages four villages from each of the two blocks were selected. The villages namely, Manjini, Valaiyamadevi, Pungavadi and Paithor (South) from Attur block of Salem district and Kallimathayam, Kariyampatti, Kuthampundi and Pusaripatti villages from Thoppampatti block of Dindigul district, were selected in terms of area under cultivation in each village.

A sample size of 150 respondents was selected. Respondents were selected by using proportionate random sampling method.

The information to study the objective was collected by using the well planned interview schedule. A pilot study was conducted in the non sample area to pretest the schedule in order to test and verify the applicability of the schedule. Percentage analysis was used for making simple comparison for calculating percentages for different items in their Decision making behaviour.

Findings and Discussions

Adoption usually starts with the recognition that a need exists and moves to searching for solutions, then to the initial decision to attempt the adoption of a solution and finally to the actual decision to attempt to proceed with the implementation of the solution (Mendel *et al.*, 2008). In this study, decision making behaviour was operationalized as the pattern of decision taken by the Coleus and Glory lily respondents with respect to their farming conditions. The respondents may take independent decision or by consulting with family members/relatives, progressive farmers, extension workers,

traders. In this study, responses regarding decision making pattern of several farm operations were obtained. Table 1 and Figure 1 explains the distribution of the respondents according to their decision making behavior.

Table 1. Distribution of respondents according to their decision making behaviour
(n=150)

S.No	Category	Coleus growers (n=75)		Glory lily growers (n=75)		Total (n=150)	
		No.	%	No.	%	No.	%
1.	Self decision without consulting others	47	63.00	26	35.00	73	49.00
2.	Consulting Parents/ friends/ relatives	12	16.00	19	25.00	31	21.00
3.	Consulting with Progressive / contract farmers	9	12.00	23	30.00	32	21.00
4.	Consulting with extension workers	4	5.00	5	7.00	9	6.00
5.	Consulting with traders	3	4.00	2	3.00	5	3.00
	Total	75	100.00	75	100.00	150	100.00

From the analysis of the results in Table 1 it could be observed that, little less than half (49.00%) of the medicinal plant growers took self decision regarding their farming practices, 21.00 per cent consulted their friends and progressive farmers and the remaining 6.00 per cent and 3.00% per cent of the growers consulted the extension workers and traders for taking decision respectively. Majority (63.00%) of the Coleus growers took self decision followed by 16.00% per cent who consulted with their friends/relatives, 12.00 per cent consulted with progressive farmers/contract farmers. The remaining 5.00 per cent and 4.00 per cent of the growers consulted extension workers and traders for taking decision respectively.

And 35.00 per cent of the Glory lily growers took self decision, 30.00 per cent took decision in consultation with progressive farmers, 25.00 per cent consulted friends/relatives, and 7.00 per cent and 3.00 per cent of the Glory lily growers consulted extension workers and traders for taking decision respectively. While comparing the

Coleus and Glory lily growers we can analyse that more than half of the Coleus growers (63.00 %) took self decision whereas only 35.00 per cent of the Glory lily growers took self decision. While comparing the age category of the growers, little less than half (47.00%) of the Coleus growers belonged to the old age category whereas among Glory lily growers nearly half (49.00%) of the growers were found to be middle aged, two-fifth (35.00%) were found to be young hence this might be the reason behind their decision making behaviour.

Similarly to support the study, Deepa Bharathi (2003) found that more than three fourth (75.83%) of Senna growers were taking self- decisions before marketing the produce

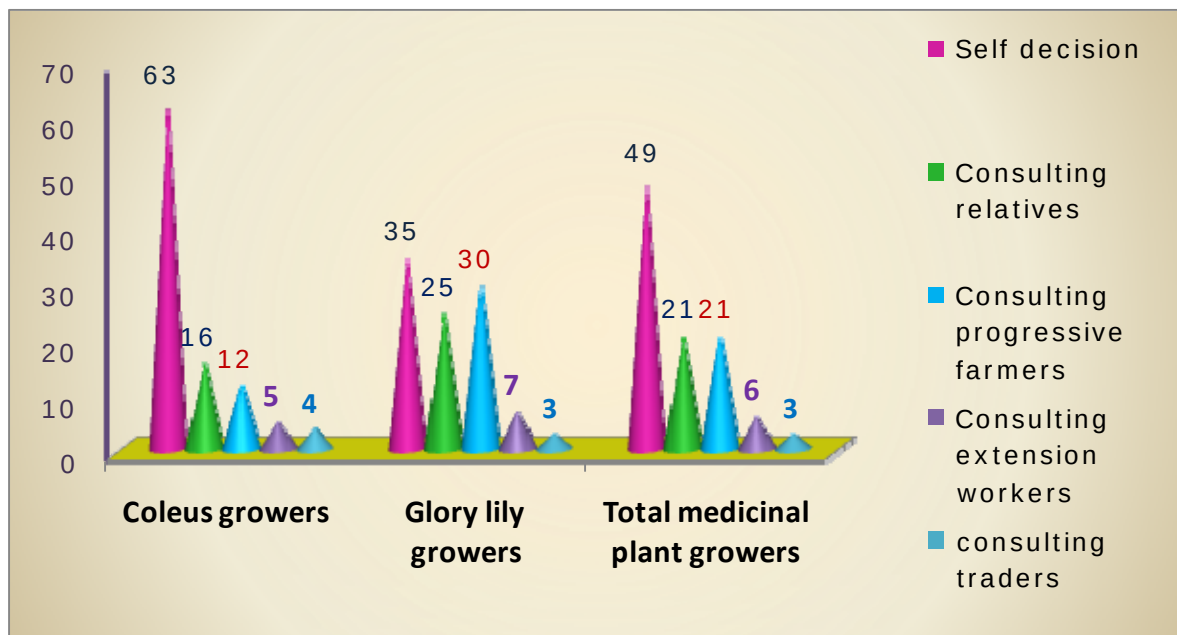


Fig.1 Distribution of respondents according to their decision making behavior

109 Table 2. Category wise decision making behavior of the respondents

S. No	Decision making behavior	Self decision				Consulting with parents/ friends/ relatives				Consulting with progressive / contract farmers				Consulting with extension workers				Consulting with traders			
		Coleus respondents		Glory lily respondents		Coleus respondents		Glory lily respondents		Coleus respondents		Glory lily respondents		Coleus respondents		Glory lily respondents		Coleus respondents		Glory lily respondents	
		No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1.	Crops to be grown	64	85.00	17	23.00	9	12.00	10	13.00	2	3.00	46	61.00	-	-	2	3.00	-	-	-	-
2.	Selection of variety	69	92.00	15	20.00	3	4.00	10	13.00	-	-	48	64.00	3	4.00	2	3.00	-	-	-	-
3.	About cultivation practices	66	88.00	27	36.00	2	3.00	14	19.00	-	-	31	41.00	-	-	3	4.00	7	9.00	-	-
4.	To adopt new practices	71	95.00	41	55.00	4	5.00	5	7.00	-	-	29	38.00	-	-	-	-	-	-	-	-
5.	Post harvest measures	70	90.00	57	76.00	5	7.00	18	24.00	-	-	-	-	-	-	-	-	-	-	-	-
6.	To change cropping	66	88.00	17	23.00	4	5.00	17	23.00	-	-	41	54.00	5	7.00	-	-	-	-	-	-

	pattern																				
7.	To buy/sell land	70	93.0 0	45	60.0 0	5	7.0 0	30	40.0 0	-	-	-	-	-	-	-	-	-	-	-	-
8.	For credit borrowin g	64	85.0 0	53	71.0 0	-	-	9	12.0 0	-	-	-	-	11	15. 00	13	17.0 0				
9.	Marketin g	25	33.0 0	13	17.0 0	6	8.0 0	3	4.00	-	-	5	7.00	-	-	-	-	44	59. 00	54	72. 00
10.	To buy equipme nt	62	83.0 0	40	53.0 0	6	8.0 0	11	15.0 0	-	-	14	19.0 0	7	9.0 0	10	13.0 0	-	-	-	-
11.	Land improve ment	70	93.0 0	52	70.0 0	-	-	7	9.00	-	-	4	5.00	5	7.0 0	12	16.0 0	-	-	-	-
12.	Hiring labour	71	95.0 0	72	96.0 0	4	5.0 0	3	4.00	-	-	-	-	-	-	-	-	-	-	-	-
13.	To start new enterpris es	53	71.0 0	40	53.0 0	12	16. 00	14	19.0 0	6	8.00	9	12.0 0	4	5.0 0	12	16.0 0	-	-	-	-

111 The probable reasons for self decision among both the growers might be due to their
112 experience, reliability, trustworthiness and self confidence they placed upon themselves and the
113 age of the Coleus respondents might have been an added advantage for the above result. These
114 findings are in line with the findings of Sujatha (1996).

115 From the perusal of the results in Table 2 it could be noticed that, self decision making
116 was widely prevalent among the Coleus growers, the Glory lily growers took self decision with
117 the support from relative/friends and progressive farmers. But for marketing purpose both Coleus
118 and Glory respondents had to depend on traders/brokers for taking decision. In the rest of the
119 twelve aspects, more than three-fourth of the Coleus growers took self decision viz., crops to be
120 grown, selection of variety, about cultivation practices, adoption of new practice, change in cropping
121 pattern, buying land, credit borrowing, buying equipment, for land improvement, post harvest
122 measures, for starting enterprise and for hiring labour. The reason for self decision among Coleus
123 respondents might be their age, experience and confidence level.

124 The Glory lily growers especially relied on progressive farmers for taking decision in the
125 aspects like crops to be grown, selection of variety, about cultivation practices and to change
126 cropping pattern. The farm related activities are highly interwoven with each other and involves
127 many risk factors. However the farmer to farmer communication could have enabled the farmer
128 to triangulate on every factor before taking up decision. Hence Glory lily growers might have
129 relied on the progressive farmers for taking decision. More than three-fourth of the Glory lily
130 growers took self decision in the other aspects like, post harvest measures, credit borrowing, for
131 land improvement and for hiring labour.

132 More than half of the Glory lily growers took self decision in buying equipment, adoption
133 of new practice, for starting enterprise and for buying land. Regarding the Glory lily growers
134 nearly half (49.00%) of the growers were found to be middle aged, two-fifth (35.00%) were
135 found to be young and 16.00 per cent of the Glory lily growers were old aged, so along with
136 their decision they also relied upon the progressive farmer's decision too. Physical proximity and
137 less contact with extension officials and scientists might be the reasons for less dependence of
138 these sources for decision making. This finding is in line with the findings of Sujatha (1996) and
139 contradictory with the findings of Ramasubramanian (2003).

Conclusion:

While the rational perspective has been shown to describe decision making adequately in certain contexts, applying it to operational decision-making in agriculture is problematic and even impractical (Davde *et al.* 2014). Hence decision making in agriculture especially marketing is very crucial and important. Here self decision, consulting progressive farmers and traders played a major role in decision making. Particularly when the marketing aspect is considered majority (72.00 per cent) and little more than half (59.00 per cent) of the Glory lily and Coleus growers had to depend on the traders. The attributed reasons might be due to existence of contract farming in Coleus Cultivation which might have helped the growers to sell their produce but the non existence of contract farming might have made the Glory lily growers to fully depend upon the brokers to sell their produce.

The extension professionals played a meager role in consulting with the farmers in the decision making process. Hence the Extension personnel and agricultural officers may be involved in creating awareness towards medicinal plant cultivation for quick dissemination of timely information to the growers. Enough field trials/ demonstration may be conducted on medicinal plants by the SAU's and State Department of Horticulture. Standardization of prices by the Government for each medicinal plant might be a good initiative.

The marketing behaviour of the medicinal plant growers is low. The channel involves a lot of intermediaries, hence to reduce the risk in marketing both the medicinal plant growers and the private firms could be brought under one roof called 'contract farming'.

It is a qualitative study, which largely relied on the responses received from the farmers about what they knew and felt about. Therefore, the validity of responses and generalizations made out of them may be applicable only to similar situations. This study also suffered from paucity of literature since only limited studies are available on the said dimensions. The suggestive areas for future research may include viz., A study on potentials, scope of integrated farming system and their influence on cultivation of medicinal plants may be analysed and Identification of indigenous knowledge in medicinal plant cultivation, its usage, documentation and validation may be an effective study.

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