Adoption of recommended practices for cultivation of cardamom (*Elettaria cardamomum* Maton) in the Hill Zone of Karnataka, India

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Abstract

A study was conducted in the Hill Zone of Karnataka, India, to find out the relationship of selected independent variables with dependent variables on adoption of improved practices for cultivation of M-1 variety of cardamom (*Elettaria cardamomum*). The study indicated that experience had a positive significant relationship with adoption of improved practices and education and land holding had no significant relationship with the same.

Key words: cardamom, cultivation, *Elettaria cardamomum*, sociopersonal factors.

In Karnataka, India, cardamom (*Elettaria cardamomum* Maton) cultivation is confined to Western Ghats of *malnad* region (Hill Zone). However, low productivity is a conspicuous phenomenon in this region. A high yielding variety M-1 has been released in 1984 by the Regional Research Station, Mudigere (University of Agricultural Sciences, Bangalore) with a package of improved practices to obtain an yield of 250-300 kg/ha. A study was conducted to find out the extent of adoption of improved practices in the cultivation of M-1 variety and the factors influencing it in this region. Two of the seven farming situations (No. 2 & 4) of the Hill Zone were selected for the study since a large area was under cardamom cultivation in these areas. All the cardamom growers of these two farming situations consituted the population of the study. Three villages were selected randomly from each of the farming situations (Banakal, Hosakere and Kirugunda from Farming Situation-2 and Somavarpet, Vastare and Kabbinasethuve from Farming Situation-4) and 16 growers from each village were randomly selected constituting a sample size of 96. The respondents were randomly interviewed with the help of a structured, pretested schedule. The dependent variable "adoption" was measured in the nominal scale of assigining relative scores to the framed

Table 1. Extent of adoption of specific improved cultivation practices of cardamom

Improved practices	Adoption (%)	Non adoption (%)
Nursery		
Bed size	60	40
Formalin spray	15	85
Bed cover	5	95
Seed treatment	31	69
Sowing time	88	12
Seed rate	22	78
Spacing	39	61
Disease control	56	44
Mulching	88	12
Shade regulation	94	6
Fertilizer application	17	83
Planting age of seedlings	67	33
Main field		
Pit size	72	28
Spacing	74	26
Planting time	90	10
Staking	90	10
Mulching	77	23
Fertilizer application	31	69
Shade regulation	84	16
Irrigation time and frequency	23	77
Katte disease managment	58	42
Clump rot control	49	51
Leaf spot control	40	60
Nematode control	21	79
Thrips control	39	61
Shoot and capsule borer control	37	63

n=96

items. Response was elicited to all the 27 items with a two point continium "yes" or "no" measured by assigning "one" if the respondent adopted and "zero" for non adoption. To classify the respondents as high, medium and low based on their adoption score, a statistical formula, mean $\pm$ $\frac{1}{2}$ SD was employed. The selected independent variables, education, experience and land holding were measured, in the nominal scale of assigning relative numerical scores to the selected items of a variable. The data was analysed suitably to draw inferences.

The analysis indicated that a majority of the gowers had a moderate score range (14-20) indicating a medium level of adoption of practices. The improved practices that were not adopted by a majority of them were, covering the beds with polythene sheets, spraying formalin to seed beds, application of recommended dose of fertilizers, irrigation schedules, spacing (seed bed), seed treatment and control of pests and diseases (Table 1). There was no significant relationship between education level and adoption (Table 2). Education might have had acted as a mere tool to read and write and there was no exposure to printed literature available from different sources. There was a significant relationship between experience and adpotion of practices (Table 3). Experience might have given an opportunity to comprehend the pros and cons of production process and to identify technical gaps to take suitable efforts of action to counter recurring problems, formulate alternatives and to prioritise and choose the best one based on various factors. There was no significant relationship between land holding and adoption of practices (Table 4). Efficient managment of available resources is probably easier in smaller holdings. The higher achievement motivation in small holdings might have also enabled them to produce more per unit area.

Table 2. Bivariate frequency distribution of respondents with respect to adotpion and education level

Education level	Adoption class intervals				
	0-6	7-13	14-20	21-27	Total
Illiterate	-	--	2	1	3
Primary and Middle	5	14	32	8	50
High school	-	7	10	1	18
Pre university	1	7	7	2	18
Degree and above	-	1	-	1	2
Total	6	29	51	13	100

n=96; Values indicate per cent adoption under different class intervals
Σdi^2 =857604; rk=0.03^{NS}; Adoption min - max score: 0-27, Education min-max score: 1-6

Table 3. Bivariate frequency distribution of respondents with respect to experience and adoption level

Experience score	Adoption class intervals				
	0-6	7-13	14-20	21-27	Total
1-3	2	15	11	2	30
4-6	1	4	23	2	30
7-9	-	6	8	2	16
>10	3	4	9	7	24
Total	6	29	51	13	100

n=96; Values indicate per cent adoption under different class intervals
Σdi^2 =646759.5; rk=0.50*; *Significant at 5% level; Adoption min-max score: 0-27 Experience min- max. score: 1-11

Table 4. Bivariate frequency distribution of respondents with respect to adoption and land holding

Land holding	Adoption class intervals				
	0-6	7-13	14-20	21-27	Total
Big (n=55)	4	16	30	7	57
Small (n=23)	1	7	13	3	24
Marginal (n=18)	1	6	8	3	19
Total	6	29	51	13	100

Values indicate per cent adoption under different class intervals
Σdi^2 =57887; rk =0.3^{NS};Adotpion min-max score: 0-27

Since experience was found to be a significant factor to adopt improved practices, experienced growers may be identified as resource persons for participating in training programmes conducted by various institutes. Conducting field trips to experienced and progressive cardamom growers fields would also enable others to adopt improved practices.