

An Analysis of extent of Adoption of good Agronomic Practices in Coconut Cultivation among Farmers of Ramanagara District

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ABSTRACT: The present study was carried out in two taluks of Ramanagara district in Karnataka state during 2020-21 to assess the Extent of Adoption of good agronomic practices in coconut cultivation. A total of 120 coconut growers were interviewed for the purpose. The results revealed that 40.84 per cent of coconut growers possess medium level of adoption followed by low (34.16 %) and high (25.00 %) level of adoption, respectively. It was found that, cent per cent of coconut growers have fully adopted time of planting. Practice which is not adopted by cent per cent of coconut growers were Magnesium application. Other practices which are adopted partially by coconut growers were time of application of NPK (87.50 %), recommended water requirement in basin irrigation (67.50 %), management of rugosspiralling white fly (53.34 %), recommended dose of NPK (50.84 %) and recommended spacing (45.83 %).

Keywords: Ramanagara, Adoption, Kalpavriksha.

INTRODUCTION

Coconut (*Cocos nucifera* L.) is one of the most useful tree. It is popularly called as 'Kalpavriksha' which means tree of heaven or tree of paradise because of its manifold uses. It belongs to family Arecaceae (palmaceae). It is estimated that about 12 million people in India are dependent on coconut sector in areas of cultivation, processing and trading activities. With an annual production of 17,000 million nuts, coconut contribution to nation's GDP is about 15,000 crore rupees (Raghavi *et al.* 2019). India along with the two other major producers, Indonesia and Philippines accounts for 75 per cent of the world production. The productivity of coconut is the highest in India at 10,616 nuts per hectare followed by Indonesia (4,530 nuts) and Philippines (4,196 nuts) (Anon, 2018). Coconut is one of the major plantation crops in India with a total cultivated area of 2088 thousand hectares with a production of 22,167 million nuts which makes India stand 3rd in the world having 19.02 percentage of the area under coconut production. There is an increasing trend in the area, production and productivity of coconut in Karnataka state. Karnataka occupies second

position (2018) accounting for an area of 518 thousand ha with a production of 4,326 thousand metric tonnes and productivity of 8,351 nuts per ha. In Ramanagara district, Channapatna and Kanakapura are the leading taluks in both area and production of coconut. The area under coconut cultivation in Ramanagara was 20,052 ha with a total annual production of 1283 lakh nuts and productivity of 6401 nuts per ha (Anon., 2019).

METHODOLOGY

Ramanagara district was selected purposively, because of its one of the major plantation crop. It is one of the major producers of coconut in Karnataka and also coconut cultivation is being taken up in almost all the taluks of the district. Ramanagara district has four taluks, out of which Channapatna and Kanakapura taluks were selected purposively considering the highest area and production. The top six villages having the highest area under coconut cultivation in Channapatna taluk and top six villages having the highest area under coconut cultivation in Kanakapura taluk were selected from the district for the purpose of the study. From each village, ten coconut farm growers were selected. Thus, from each selected taluk, sixty

farmers were selected by using simple random sampling. The total sample constituted from two taluks was 120.

RESULTS AND DISCUSSION

A close look at Table 1 shows that, 40.84 per cent of coconut growers possess medium level of adoption followed by low (34.16 %) and high (25.00 %) level of adoption, respectively. The probable reason may be that, lack of knowledge about improved practices, lack of

motivation and conviction to use innovations and non-availability of critical inputs at right time. The possible reasons for low level Adoption of the technologies by the coconut growers may be due to incorrect knowledge of the respondent regarding recommended good agronomic practices. The findings of the study were in agreement with the findings of Bhati (2014); Akshath (2015); Nagappa *et al.* (2017).

Table 1: Extent of Adoption of good agronomic practices by coconut growers (n=120).

Extent of Adoption	Coconut growers (n=120)	
	f	%
Low (<32.85)	41	34.16
Medium(32.85-40.39)	49	40.84
High(>40.39)	30	25.00
Mean=36.62		SD= 07.54

Practice-wise Adoption level: A glance at Table 2 shows that, cent per cent of coconut growers have fully adopted time of planting. Practice which is not adopted by cent per cent of coconut growers were Magnesium application. Other practices which are adopted partially by coconut growers were time of application of NPK (87.50 %), recommended water requirement in basin irrigation (67.50 %), management of rugosspiralling white fly (53.34 %), number of fronds in palm while selecting motherpalm for seednut (57.50 %), recommended dose of NPK (50.84 %) and recommended spacing (45.83 %). This might be due to, all coconut farmers followed the correct time of planting due to monsoon rains which is essential for proper root growth in seedling and majority of farmers have partially adopted the above mentioned practices due to the fact that farmers were not well aware about the importance of the practices and significant number of farmers expressed intercropping is also reason for partial adoption of recommended practices like NPK application, Spacing, basin irrigation, time of application of NPK similar result reported by (Alimul Islam *et al.*, 2021) (Priya Bhati, 2014).

Majority of the coconut growers had fully adopted intercropping (82.50 %), growing of green manure crop (79.16 %), selection of matured seednut (77.50 %) from motherpalm, selection of oblong shape and medium size seed nut (76.66 %) from motherpalm, correct age of motherpalm for seed nut selection (77.50 %), recommended yield capacity of motherpalm for selection of seednut (73.34 %), recommended pit size (62.50 %), recommended varieties (58.34 %) and recommended spacing (54.17 %). These practices are simple, most important and crucial operations in production. Hence, majority of the farmers adopted these practices.

A significant percentage of coconut growers have not adopted management of bud rot (87.50 %), growing of cover crop with in 2m surrounding of coconut (83.34 %), management of red palm weevil (62.50 %), management of eriophid mite (58.34 %), boron application (58.34 %), zinc application (54.17 %), anaberoga management (53.33 %) and controlling of rugosspiralling white fly (42.50 %). This may be due to poor knowledge about recommended technologies, non-availability of inputs in time, risk involved in treating of palm with chemicals for controlling diseases and pest leads to non-adoption.

Table 2: Extent of adoption of good agronomic practices by coconut growers (n=120).

Sr. No.	Recommended Technologies	Coconut grower					
		Full adoption		Partial adoption		No adoption	
		f	%	f	%	f	%
Selection of planting material.							
1.	Varieties	70	58.34	00	00.00	50	41.66
Planting of seedling in the mainfield.							
2.	Pit size	75	62.50	45	37.50	00	00.00
3.	Spacing	65	54.17	55	45.83	00	00.00
4.	Time of planting	100.00	100.00	00	00.00	00	00.00
Selection of seedling from nursery.							
5.	Age of seedling	80	66.67	40	33.33	00	00.00
6.	Collar girth of seedling	65	54.17	20	16.66	35	29.17
Maintenance of established plants.							

7.	Mulching	50	41.67	40	33.33	30	25.00
8.	FYM application	69	57.50	31	25.84	20	16.66
a)	Physiological disorder						
9.	Boran Application	15	12.50	35	29.16	70	58.34
10.	Magnesium Application	00	00	00	00	120	100.00
11.	Zinc Application	05	04.16	50	41.67	65	54.17
b)	Chemical fertilizer						
12.	Recommended dose of NPK	24	20.00	61	50.84	35	29.16
13.	Time of application	10	08.34	105	87.50	05	04.16
c)	Pest management						
14.	Leaf eating caterpillar/ Black headed caterpillar	66	55.00	19	15.84	35	29.16
15.	Eriophyid mites	05	04.16	45	37.50	70	58.34
16.	Red palm weevil	05	04.16	40	33.34	75	62.50
17.	Rugosespiralling white fly	05	04.16	64	53.34	51	42.50
18.	Rhinoceros beetle	35	29.16	50	41.68	35	29.16
d)	Disease management						
19.	Stem bleeding	34	28.34	66	55.00	20	16.66
20.	Bud rot	00	00.00	15	12.50	105	87.50
21.	Anaberoaga	24	20.00	32	26.67	64	53.33
e)	Irrigation						
22.	Recommended water requirement in basin irrigation	34	28.34	81	67.50	05	04.16
23.	Recommended water requirement in drip	40	33.33	30	25.00	50	41.67
f)	Inter cropping system						
24.	Have you adopted intercropping	99	82.50	16	13.34	05	04.16
25.	Have you grow any cover crop with in 2m surrounding of coconut	20	16.66	00	00.00	100	83.34
g)	Green manure crop						
26.	Do you grow green manure crop	95	79.16	00	00.00	25	20.84
	Selection of mother palm						
27.	Age of motherpalm	89	74.16	21	17.50	10	08.34
28.	Yield capacity of mother palm	88	73.34	22	18.33	10	08.33
29.	Number of fronds in mother palm	50	41.67	69	57.50	01	00.83
	Selection of seed nuts from mother palm						
30.	Harvesting of seed nut	93	77.50	02	01.66	25	20.84
31.	Size of seed nut	92	76.66	03	02.50	25	20.84
32.	Shape of seed nut	88	73.34	07	05.83	25	20.83
33.	Storing of seed nut	25	20.83	71	59.17	24	20.00

CONCLUSION

In order to get good yield, adoption of recommended technology by coconut grower is essential. Even with advancement of improved technology in coconut cultivation. It has been observed that either the same has not reached to field or farmers are reluctant to use this technology. There is need of recommended coconut production technology are being communicated to coconut grower though various extension programme and activities.

FUTURE SCOPE

This study help us to understand the extent of adoption of good agronomic practices in coconut cultivation among farmers of ramanagara district of Karnataka state. The data help the agricultural extension officers in demonstarting the new tehnology which is needed for the coconut farmers.

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Conflict of interest. None

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