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Adoption Constraints of Commercial Mangoginger Cultivation

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Abstract

A study was conducted in Orissa during 2006—08 for determination of different constraints in adoption of mangoginger cultivation techniques on commercial basis by random sampling. The over all adoption level of improved cultivation practices was observed in 46.74%. It was quite worthy to study the factors responsible for commercial mangoginger cultivation. In all the categories of farmers the highest and lowest constraints were faced in lack of technical guidance (43.2%) and involvement of middlemen during marketing (8.80%).

Key words : Mangoginger, *Curcuma longa* var Amba, Commercial cultivation, Adoption constraints.

Mangoginger (*Curcuma longa* var Amba) is one of the highly remunerative spice crop because of its various use from salad to pickle making. Mangoginger is usually cultivated in the peri urban areas of Subarnapur district on commercial basis under small production system. Favorable ecological condition and good market approachness of this locality have encouraged the farmers to attain success in mangoginger cultivation. The traditional cultivation is not at all beneficial as the cost of cultivation is being increased gradually. In a micro-production system better quality and higher yield of mangoginger mostly depends on the adoption of its full package of practices like use of selected variety, manuring, weeding, mulching, plant protection measure, water management, harvest and post harvest operations (1). Keeping the view to enhance the production with higher return the present study was conducted to assess the extent of adoption of improved agro-techniques in commercial mangoginger cultivation and its constraints coming in the way of adoption by the farmers.

Methods

In this study the farmers were selected and categorized into marginal (upto 5 cent), small (5—10 cent) and large (above 10 cent) on the basis of their total area under mangoginger. Five major urban areas of Subarnapur district were chosen namely Sonepur, Biramaharajpur, Tarva, Binika and Ullunda. Altogether 50 number of mangoginger growers were randomly selected from there peri-urban areas to assess the adoption constraints. All the required primary information and related data were collected from them for the purpose.

Results and Discussion

Adoption of Practices

Six main agronomical practices were taken into account for this study like use of selected variety, recommended doses of fertilizer (PDF) and organic manuring, pest and disease management, water and weed management, mulching and top dressing and rhizome harvesting and post harvest operations. Table 1 shows that use of improved selected variety i.e. Amba was very poor as compared to small and large categories which was also below over all adoption level (40.20%). The same trends were also observed in the use of recommended doses of fertilizer (RDF), organic manuring, pest and disease management (2). In water and weed management most of the farmers adopted this technique with more than 42% and marginal and small categories farmers had less difference between them. Mulching and top dressing were also observed as a popular technique among the mangoginger growers. In rhizome harvest and post-

Table 1. Adoption of improved package of practices of commercial mangoginger cultivation.

	Improved package of practices of mangoginger	Category of farmers: Marginal Adoption (%)	Rank	Small Adoption (%)	Rank	Large Adoption (%)	Rank	Over all adoption Adoption (%)	Rank
1.	Use of selected variety	32.86	6	48.25	4	70.73	1	40.20	5
2.	RDF & organic manuring	35.63	5	60.40	1	54.26	6	44.06	4
3.	Pest & disease management	51.32	2	58.55	2	62.48	3	54.24	2
4.	Water & weed management	46.05	3	42.73	5	57.55	4	46.04	3
5.	Mulching & top dressing	55.40	1	55.48	3	65.83	2	56.26	1
6.	Rhizome harvest & post harvest operating	37.44	4	39.40	6	56.74	5	39.60	6
	Average adoption (%)	43.14		50.82		61.27		46.74	

harvest operations the adoption level in marginal small and large farmers was found to be 37.55, 39.40 and 56.74% respectively.

Adoption Level

The level of adoption of different improved cultivation practices of mangoginger by the farmers were categorized into high (above 55%) medium (46—55%) and low (upto 45%). The average adoption level was observed to be 43.14, 50.82 and 61.27% in marginal, small and large farmers, respectively. The over all adoption level was found to be 46.74% in all categories of mangoginger growers. Table 2 shows that the frequency distribution of all these categories had 62, 24 and 14% for low, medium and high level of adoption of different improved agro-techniques of mangoginger cultivation respectively which is in agreement with the findings of Tripathi and Das (3). They reported that more than 60% of farmers did not adopt the recommended package of practices due to their resource constraints.

Constraints Responsible

The constraints and its barrier were studied through ten improved practices of mangoginger cultivation separately for all the three categories of farmers. The constraints opined by 50 sample respondents are given in Table 3. The major constraints observed by sample respondent were lack of technical guidance (43.20%) followed by their ignorance (31.40%), labor intensive practices (28.20%), complicacy of practices (27.00%) and local marketing problems (17.00%). Farmers gave least importance to involvement of middlemen during marketing (8.80%).These findings were in conformity with those of mahapatra and Acharya (4).

This study indicated that the adoption level of different improved package of practices by the mangoginger farmers had a pivotal role for bumper harvest of good quality rhizome. It was found that 46.74% over all adoption level of mangoginger cultivation in commercial basis among all the categories

Table 2. Adoption level of improved commercial cultivation practices of mangoginger by different categories of farmers.

	Category of farmers	No.	Adoption level: Low (upto 45%) No.	%	Medium (46—55%) No.	%	High (above 55%) No.	%	Overall adoption level %
1.	Marginal	32	28	87.50	03	9.38	01	3.12	43.14
2.	Small	14	02	14.23	08	57.14	04	28.57	50.82
3.	Large	04	01	25.00	01	25.00	02	50.00	61.27
	Total	50	31	62.00	12	24.00	07	14.00	46.74

Table 3. Constraints responsible for the adoption of improved commercial cultivation techniques of mangoginger.

	Improved practices	Farmer's ignorance	Luck of technical guidance	Labour intensive practice	Complicacy of practice	Lack of credit facilities	Non-availability of agro-inputs	Susceptibility to disease and pest	Lack of cold storage & transportation facilities	Involvement of middlemen	Local marketing problem
1.	Selected variety	28	36	10	26	15	27	19	12	08	15
2.	Recommend doses of fertilizer	17	21	22	16	13	10	04	–	–	07
3.	Hoeing & weeding	15	19	20	14	05	05	05	–	–	03
4.	Water management	05	08	11	03	–	–	–	–	–	–
5.	Mulching by straw	18	24	12	15	–	–	–	–	–	–
6.	Organic manuring	12	23	08	10	–	–	–	–	–	–
7.	Plant Protection	17	25	13	08	06	12	20	14	03	05
8.	Harvesting	19	15	15	12	08	18	13	17	05	11
9.	Post harvest operations	14	22	23	20	12	07	09	28	07	19
10.	Marketing	12	23	07	11	18	04	06	11	21	25
	Total	157	216	141	135	77	83	76	82	44	85
	Percent	31.4	43.2	28.2	27.0	15.4	16.6	15.2	16.4	8.80	17.0
	Rank	II	I	III	IV	VIII	VI	IX	VII	X	V

of farmers within the study areas.

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