Coconut Farmer's Collectives in enhancing farmer's income

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Abstract

India being an agrarian economy enhancing farmer's income is imperative for economic growth. Farmers' collectives are playing a significant role in this direction of facilitating farmer's. The study focused to understand role of FPOs in extending benefits and members constraints based on size of land holdings and educational level. It is found that, coconut farmer collectives in the state of Karnataka need to have a workable business plans to facilitate their member farmers. The educational qualification and land holding size of farmer members do not have any impact on availing the services but FPOs facing constraints in extending services due to lack of workable business ideas and professional acumen as well as financial constraint. Policy makers need to organize capacity building programs on professional management, good agricultural practices etc., including manufacturing techniques of coconut based value added products to enhance coconut farmer's income.

Keywords: *Coconut, Collectives, Education, Farmers, Income, Land holding size,*

Overview

Coconut tree popularly known as "Kalpavriksha" is one of the important agriculture crop, provides food, fiber, oil, beverage, and other outputs having economic importance (Naik, 2017). It is cultivated across 95 countries in an area of 12.30 million hectares, with an annual production of 60.77 million tones of nuts. Indonesia is a leading producer of coconut in the world followed by Philippines, India, Sri Lanka, Brazil, Vietnam, Papua New Guinea, Mexico, Thailand and Tanzania (FAO, 2018). The coconut sector provides employment opportunities to millions of people in Asia Pacific countries and also contributes for the economic development and financial empowerment (Kishore & Murthy, 2016). India produces 22.16 million nuts in an area of 2,088 million hectares with an annual productivity of 10,616 nuts/ hectare. In India, state of Kerala (35.51%) and Karnataka (26.36%) jointly contributes around 61.87% to country's total production (CDB, 2019). This sector consists majorly of small and marginal farmers having holding less than 5 hectare's. However, it is facilitating in removing regional imbalances by creating rural employment through plantation and associated industries. It is estimated that around 10 million people depend directly or indirectly on coconut sector for their livelihood in India (CDB 2018).

Most of the coconut farmers are exposed to more risks and uncertainties due to high degree of price fluctuations and are not able to realize remunerative prices for their marketable produce (Lijo Thomas, et al., 2018). Indian coconut sector is facilitated by Coconut Development Board as a nodal agency of Government of India. In its efforts of enhancing coconut farmer's income promoted coconut farmer collectives to strengthen the competitiveness of unorganized coconut farmers for financial empowerment. Farmer collectives such as co-operatives and farmer producer organization (FPOs) emerged as best alternative among others, to increase market participation and reduce transaction costs through collective action (Padmaja, S. S. et al., 2019). It also acts as an essential element for enhancing farmer's income as well as rural development of the nation (Mukherjee, et al., 2018). The form of farmer producer's organization (FPO) in India has been introduced based on the recommendations of YK Alagh Committee by inserting a new part IX A in 2002 by amending Companies' Act 1956. Subsequently, FPO has been promoted in all the sectors of agriculture i.e., crops, dairy, fishery, horticulture etc. with an intention to increase sustainability of small and marginal farmers in India. These organizations are acting as an effective agent in the development of poor and rural areas by providing immense benefits to the rest of society (Mukherjee, et al, 2018). Farmer producers organizations with three tier structure of coconut producers societies, federation and companies of farmers in coconut sector are expected to reduce cost of production, improve marketability, production of diversified and value added coconut based products, food security, poverty reduction, socio economic development apart from enhancing farm income.

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Background of the study

Karnataka, being the second largest coconut producing state in India, produces 6,273.79 million nuts, in an area of 518.39 thousand hectares with higher productivity of 12,102 million nuts as against Kerala. In spite of higher productivity in the state, coconut processing units is not been developed to produce high value coconut based products to enhance farm income. In addition, issue of small holdings of small and marginal farmers, lack of awareness on coconut based market opportunities, technical and capital requirements etc., also posing challenge to reap the benefit of coconut business. In the recent past, Government of Karnataka procured coconuts directly from farmers due to sever price crash for coconut and copra's. The farmers generally face challenges of lower price realization, low farm income, financial, technical and marketing skills in manufacturing of coconut based value added products leading to difficulties to sustain their livelihood with coconut farm. In this regard, Coconut Development Board and Government of Karnataka initiated many developmental schemes to promote coconut plantation and allied processing units by socio-economic integration of coconut farmers through farmer collectives to enhance their farm income. Accordingly, as on date around 400 coconut producer societies, 125 coconut producer federations and 13 coconut producer companies were registered in the state of Karnataka. However, coconut farmers are generally not getting benefited from these collectives due to certain factors and constraints. It is, therefore, this study has been initiated to understand the challenges and constraints of coconut farmers in deriving benefits from coconut farmer collectives.

Literature Review

Small and marginal farmers in India consists 87% of the total farm house hold (Singh & Vatta, 2019). The sustainable growth of Indian agriculture sector depends upon the overall performance of small and marginal farmers (Dev, 2015). Small farm holders are unable to realize better price for their produce, as they are exiting early in the trade value chain (Ramappa & Yashashwini, 2018). Hence, it acts as a major constraint for financial and economic empowerment of farmers (Trebbin & Hassler, 2012). Most of the small and marginal farmers does not have access to consumer markets, as they sell their produce to intermediaries at unreasonable prices (UNDP, 2014). The integration of individual farmers, food markets and raise of modern retail chains has created both opportunities as well as challenges (Singh & Vatta, 2019). These small and marginal farm holders are facing various problems like indigent infrastructure, low access to finance, assets and services resulting in high transaction cost, less market participation (Padmaja, S. S. et al., 2019) limited access to credit and insurance, vulnerability to drought, pests and other associated risks (Desai & Joshi, 2014 ; Fan, et al , 2013).

Integration of small farm holders in local, national and international level helps in grater specialization, higher productivity and income(Otekunrin, et al., 2019). This resulted of significant improvements in agriculture, food security, poverty reduction and economic growth of the nation (Bernard & Spielman, 2009). A variety of alternative approaches emerged in response to the challenges and constraints faced by small and marginal farmers (Bikkina, et al., 2018). The numerous efforts had been taken by various institutions to mobilize small and marginal farmers to improve their financial status and their wellbeing. These efforts consequently led to emergence of collectives in various forms such as societies, trusts and cooperatives. Even though, co-operatives played a vital role, it did not facilitate in strengthening the economic condition of small and marginal farmers (Ramappa & Yashashwini, 2018). However, the performance of co-operatives in India suffered from lack of active participation of member farmers, poor management skills, financial irregularities, lack of resource mobilization, over-dependence on state assistance, poor benefits to intended target group, social structures based on castes, political and bureaucratic interference in functioning of co-operatives (Abraham, 2015). In spite of the challenges faced in community based collective action and co-operatives, Government and other policy makers emphasized the importance and necessity of nurturing producer organization to deal with the constraints and to empower small farm holders.

Farmer producer organizations (FPOs) formed by primary producers or farmer member of agriculture and allied activities, artisan, non-farm products, etc, intends to bring the spirit of collectivism of co-operative and professionalism of private limited companies. The participation, organizational structure and membership pattern of these organizations are similar to co-operatives, but their day to day business activities looks similar to a professionally managed private companies (Mukherjee, et al., 2018). FPOs play a major role in enhancing the earnings of their member farmers by enabling them to enhance productivity by effective utilization of resources and to obtain higher returns for their produce through collective action (Krishna, Gupta, & Kademani, 2018). They extend backward and forward linkage services to its members such as seed, fertilizers, credit, insurance, technical know-how and processing, market-led agriculture production as well as collective marketing (Singh & Vatta, 2019). These FPOs require technical and managerial skills in order to carry out their activities in a sustainable and profitable manner to benefit member farmers. The FPOs also facilitates member farmers to reduce cost of

production by supplying inputs at reasonable cost by procuring in bulk and with affordable transportation cost. Similarly, collectivizing the produce of member farmers and marketing them in bulk would also fetches remunerative prices. It even, provides market information to the farm producers to hold their produce till their market price become favorable and skill sets through workshops, conferences, focus group gatherings etc. to assist farmers for enhancing their farm income (Mathur, 2018).

The above scholastic evidences highlighted role of farmer producer organizations in providing various services, technical know-how, collective marketing to realize remunerative prices for their produce. However, hardly any research studies have been found focusing on farmer's collectives of Karnataka coconut sector. It is, therefore, posing a research gap to understand the role of farmer collectives in enhancing coconut farmer's income and also to explore various challenges of coconut farmers in receiving the benefits from such collectives. Hence, this paper has been conceptualized to add new insights to the existing literature.

Objectives of the study are as fallows-

1. To study coconut farmers initiatives for enhancing their farm income
2. To review the benefits derived from coconut collectives by member farmers
3. To understand constrains and challenges of farmer collectives (FPOs) in serving member farmers.
4. To study the impact of land holdings and educational qualification of member farmers on constraints and receiving benefits from collectives.

Research Methodology

This study focusing on intended objectives adopted descriptive and explanatory research method. The scope of study is limited to Karnataka coconut sector focusing on coconut farmers and collectives. The study used both primary and secondary sources of data. Primary data has been collected through structured questionnaires from member farmers of collectives by personal interview method. This study also used secondary sources of data from Coconut Development Board, Government of India, Department of Horticulture, Government of Karnataka and other published sources. The data has been subjected to statistical test of one way ANOVA and descriptive statistics using SPSS 21.0 software for analysis and interpretation.

Sample

Coconut production in the state of Karnataka is being concentrated in the districts as mentioned in the table no. 1

Table no.1: Coconut production in the state of Karnataka

Sl No.	Districts	Production (lakh nuts)	%	Cumulative of %
1	Tumkur	11397.18	34.94	34.94
2	Chitradurga	5042.71	15.46	50.41
3	Ramnagara	1081.94	3.32	53.72
4	Mysore	1778.53	5.45	59.18
5	Mandya	1493.54	4.58	63.76
6	Hassan	3198.00	9.81	73.56
7	Devanagere	618.15	1.90	75.46
8	Dakshina Kannada	2198.77	6.74	82.20
9	Udupi	1779.39	5.46	87.65
10	Chamaraja Nagar	585.13	1.79	89.45
11	Uthara Kannada	616.30	1.89	91.34
12	Chikmagalur	2395.53	7.34	98.68
13	Shimoga	429.94	1.32	100.00
		Total	**32615.11**	**100.00**

(Source: Coconut Development Board, 2019)

The districts of Tumkur, Chitradurga and Mysore contribute around 55.85 % of total coconut production, hence using proportionate and convenience sampling method chosen the sample size of 120 respondents. The same has been proportionately related to the districts for data collection as mentioned in Table No.2.

Table No. 2: Sample Size

Sl No.	Districts	Production (%)	Proportion	Sample Size
1	Tumkur	34.94	63	75
2	Chitradurga	15.46	28	33
3	Mysore	5.45	10	12
	Total	55.85	100	120

(Source: Coconut Development Board, 2019)

The member farmers of collectives having coconut farm holdings up to 2 hectares of marginal and small farmers and also from semi-medium farmers with holding from 2 to 4 hectares at Karnataka have been considered in the sample frame.

Limitations

The study focused on farmer producer organisations in coconut sector of Karnataka. The sample size is limited to 120 respondents of member farmers of collectives due to time and cost constraints. The quantitative data on evaluation of financial performance of FPOs is not part of the study due to unavailability of data at this movement.

Coconut Producer Organization an approach

Coconut Producers Society (CPS) is formed by associating 40-100 coconut growers in a particular area with range of 4000-6000 yielding palms. It is mainly registered under the Charitable Societies Act. Coconut Producers Federation (CPF) is formed by combining 8-10 CPS. A CPF would have around 1,00,000 palms under it, also registered under the Charitable Societies Act. Coconut Producers Company (CPC) formed with 8-10 CPFs. A CPC would consist of around 10,00,000 yielding palms. This company generally registered under Indian Companies Act of 1956 and it is wholly/fully owned by the farmers.CDB channelizes various promotional activities of production and distribution of quality planting materials, expansion of area under coconut in non-traditional areas, adapting to integrated nutrient and pest management, replanting and rejuvenation of old and senile coconut gardens, technology mission on coconut for promotion and processing of coconut value added products, setting up of coconut points/kiosks and facilitating farmers through farmer producer organization for sustainable development of the coconut sector (Jnanadevan, 2019). At present there are 9736 CPS, 743 CPF and 67 CPC functioning in the country, Kerala stand first with maximum number of collective organizations followed by Tamil Nadu, Karnataka, Andhra Pradesh, West Bengal, Odisha, Assam, Gujarat, Maharashtra. In the state of Karnataka, various districts in their geographical frontiers have taken initiative for the formation of farmer collectives by organizing small and marginal farmers and facilitate them for their inclusive growth. The table no.3 shows number of societies, federations and companies in various districts of Karnataka, where in Tumkur stands first with more farmers collectives followed by Chitradurga, Ramnagara, Mysore, Mandya, Hassan, Devanagere, Dakshina Kannada, Udupi, Chamrajnagara and Uthara Kannada.

Table No. 3: Coconut Farmer Collectives in the state of Karnataka

Sl No.	Districts	CPS Regd	CPF Regd	CPC Regd
1	Tumkur	334	38	6
2	Chitradurga	19	11	2
3	Ramnagara	16	27	2
4	Mysore	3	7	2
5	Mandya	3	14	1
6	Hassan	2	16	
7	Devanagere	10	1	
8	Dakshina Kannada	7	4	
9	Udupi	6	2	
10	Chamaraja Nagar		3	
11	Uthara Kannada		2	

(Source: Coconut Development Board, 2019)

Analysis and Interpretations

Primary data collected on demographic profile of respondents has been show below:

Table No.4: Educational Qualification

Particulars	No. Respondents	Percent
Below Matriculation	19	15.8
Matriculation	29	24.2
10+2	36	30.0
Under Graduation	36	30.0
Total	**120**	**100.0**

(Source: Field survey)

The table no. 4 denoting qualification of respondents observed that among 120 respondents, 60% were undergraduates and have passed 10+2 respectively, where as 24.2% have passed matriculation and 15.8% were non matriculates.

The table no.5 depicts size of land holdings of small, marginal and semi medium coconut farmer respondents from sample districts. Tumkur being the largest coconut producing district in the state comprises 50% of small and marginal coconut farmers and 15% of the respondents are in the category of semi-medium. In total, 75% of the respondents are marginal and small coconut farmers having landholdings up to 2 ha. Similarly 25% of respondents are semi-medium coconut farmers having a land holding from 2 to 4 ha. It is observed that majority of the coconut farm holders are small and marginal farmers.

Table No. 5: Size of Coconut farm Holdings (Figures in parenthesis are in %)

Particulars	Tumkur	Chitradurga	Mysore	No. Respondents
Marginal and Small (upto 2 ha)	60 (50)	22 (18.3)	8 (6.6)	90 (75)
Semi- medium (2 to 4 ha)	15 (12.5)	11 (9.2)	4 (3.3)	30 (25)
Total	75 (62.5)	33 (27.5)	12 (10.0)	120 (100.0)

(Source: Field survey)

The table no. 6 shows various initiatives taken by coconut farmers to enhance their income. It is noticed that most of the respondents (60.8%) practice multi /inter cropping system. Although, 39.2% of the respondents depend upon off-farm activities like dairy farming, sheep breading, poultry etc., Around 29.2% and 12.5% of the farm holder replace with high yielding coconut varieties and rejuvenate coconut gardens respectively. But, very less percent of the respondents (25.8%) are engaged in processing of coconut based value added products especially copra making. Coconut being a perennial crop acts as hindrance for realizing regular cash flow to sustain their livelihood. It is, therefore, observed that majority of the respondents are engaged in various activities to enhance their income.

Table No. 6: Initiatives of Coconut Farmers to enhance income

Sl.no	Particulars	Yes	%	No	%	Mean	Rank
1	Multi cropping / Inter cropping	73	60.8	47	39.2	.6083	1
2	Off Farm Income	47	39.2	73	60.8	.3917	2
3	Bee keeping	9	7.5	111	92.5	.0750	6
4	Replacing of high yielding coconut varieties	35	29.2	85	70.8	.2917	3
5	Replanting and Rejuvenation of coconut gardens	15	12.5	105	87.5	.1250	5
6	Processing the coconut for value added products	31	25.8	89	74.2	.2583	4

(Source: Field survey)

Benefits derived from coconut farmer collectives by member farmers

The primary data collected from respondent member farmers of coconut producers companies has been presented to analyze the benefits -

Table No. 7: Benefits derived from FPOs (collectives)

Sl.no	Particulars	Mean	Std. Deviation	Rank
a.	Availability of inputs at concessional rates	4.8833	.32237	1
b.	Bulk transport of coconut harvest at lower transportation cost	3.5667	.82740	2
c.	Coconut FPO facilitates by attracting traders to collect produce at farm gate	2.8500	.86627	7
d.	Easy access to modern technologies	1.4417	.51524	13
e.	Facilitation of capacity building, extension and training programmes.	2.1000	1.07999	12
f.	Value addition and efficient management of value chain to overcome harvest loses	3.4917	.85990	3
g.	Facilitate quality control and increased production and farm management	3.3333	.91975	4
h.	Coconut FPO facilitates in managing Price fluctuation through contract farming forward agreements, etc.	3.0500	.96884	5
i.	Easy access of coconut price, volume and other farming related advisories	2.9167	.96653	6
j.	Facilitates to access finance	2.6500	1.07414	8
k.	Access to support services by government and other service providers	2.5750	1.05848	9
l.	Improved collective bargaining power through FPO	2.5000	1.02899	10
m.	Access to Storage Facility	2.4750	1.00388	11

(Source: Field survey)

The study explored different facilities of coconut FPOs in serving its members. The above table no.7 reveals that, inputs at concessional rates have facilitated majority of the farmers and ranks first with the mean value of 4.88. Coconut farmers are also facilitated with bulk transport of coconut harvest and FPOs activity in value addition to overcome the harvest losses that is depicted from the above table with 3.56 and 3.49 respectively. Coconut FPOs are also facilitating coconut farmers with quality control measures and farm management as well as assisting them in managing price fluctuations which ranks fourth and fifth among the benefit. CPOs are also assisting farmers by providing information on price and farming related advisories etc., however, these facilities need to be extended to more farmers. Very less number of farmers has access to finance through FPOs; and other support services from government has been channelized from FPOs, as these facilities need to be extended to more number of small and marginal farmers to facilitate in sustaining their livelihood. Coconut FPOs should focus in providing storage facility to farmers as it is less focused with low ratings. Most of the coconut farmers lack in good agricultural practices, multi-cropping etc., these skills can be imbibed through capacity building and training programmes through coconut FPOs.

Table no. 8: Constraints and Challenges of member farmers face tough FPOs

Sl.no	Particulars	Mean	Std. Deviation	Rank
a.	Lack of trust with FPO office bearers	1.9417	.63901	9
b.	Lack of Market Info	2.8083	.95527	8
c.	Lack of Basic Infrastructure	4.5083	.50203	4
d.	Lack of Storage of produce	4.1750	.66941	7
e.	Political Intervention	1.3500	.47897	10
f.	Lack of access to Finance	4.5083	.50203	5
g.	Lack of access to Economic benefits	4.5000	.50210	6
h.	Leadership and Management crisis	4.5667	.49761	2
i.	Divergent interest	4.5083	.50203	3
j.	Lack of Business ideas	4.9333	.25049	

(Source: Field survey)

Constraints and challenges of FPOs

The study explored challenges of FPOs in operations and constraints in serving member farmers of coconut farmer collectives. The data has been presented with descriptive statistics and in order of ranking at the table no.8-

In the table no. 8 depicts constraints and challenges that member farmers face from farmer collectives (FPOs). It is found that, farmer collectives in the state of Karnataka lack in workable business ideas with a mean value of 4.93 to carry out viable business activities for enhancing financial performance. Most of the coconut farmer collectives also face leadership and management crisis as well as divergent interests among the office bearers with mean value of 4.56 and 4.50 respectively, indicating challenging work atmosphere for effective functioning. It is found that with mean value of 4.50 indicating coconut farmer collectives lack in assessing basic infrastructure for carrying out their business activities as well as unaware about the financial assistance for farmer collectives (example SFAC capital grant. Farmer collective in the state should focus on extending economic benefits to facilitate farmers, processing value added products and warehousing facility to manage price crash. It is observed that farmer collectives are not able to procure outputs (copra, raw nut, tender coconut etc.) from member in spite of having market information due to lack of trust on FPOs office bearers by member farmers it is having a mean values 2.80 and 1.94 respectively. These collective are working with minimal political intervention with less mean value of 1.35 is a good sign.

It is observed that, generally, small and marginal coconut farmers are not getting benefited from coconut farmers' producers' organizations in the state. The study, therefore, considering the member's land holding size and educational qualification explored for understanding impact on on receiving benefits from FPOs.

Impact of land holding size on constraints and benefits

It is observed from table no. 9 the impact of land holding size of coconut farmer members (marginal and small as well as semi-medium) on receiving benefits and their constraints from FPOs has been analyzed.

Accordingly member farmers often and not really (mean with 3) face constraints in accessing the services from FPOs. This situation is not encouraging member farmers to access services from FPOs in enhancing their farm income. Similarly, member farmers are not really getting (with mean of 2.9) benefited from coconut farmers producer organizations in the

Table no. 9: On land holding size - Descriptive statistics

Particulars		Number	Mean	Std. Deviation	Std. Error
Constraints	Mar ginal and small	90	3.71 11	.45579	.04804
	Semi- medium	30	3.5667	.50401	.09202
	T otal	**120**	**3.6750**	**.47034**	**.04294**
Benefits	Mar ginal and small	90	2.9444	.52705	.05556
	Semi- medium	30	2.9000	.66176	.12082
	T otal	**120**	**2.9333**	**.561 11**	**.05122**

sample. The statistical result justifies, limited functioning and non-pro active role of coconut farmer producer organizations have an effect on enhancing financial performance of members.

Testing of Hypothesis - 1

The size of land holdings of member farmers in facing constraints and availing benefits from farmer producer companies has been analyzed using one way ANOVA. The study postulated following hypothesis to understand the impact - Null Hypothesis (H0) – There is no impact of land (coconut) holding size of member farmers on facing constraints and receiving benefits from coconut FPOs.

Alternative Hypothesis (H1) - There is an impact of land (coconut) holdings size of member farmers on facing constraints and receiving benefits from coconut FPOs.

The statistical results of ANOVA (table no. 10) with p values of constraints (0.146) and benefits (0.709) are not statistically significant and it is also not less than general acceptance level of 0.05. It is, therefore the null hypothesis cannot be rejected.

Table no. 10 ANOVA

Particulars		Sum of Squares	df	Mean Square	F	Sig.
Constraints	Between Groups	.469	1	.469	2.142	.146
	W ithin Groups	25.856	118	.219		
	T otal	**26.325**	**119**			
Benefits	Between Groups	.044	1	.044	.140	.709
	W ithin Groups	37.422	118	.317		
	T otal	**37.467**	**119**			

The study with one way ANOVA test concludes that land holding size of marginal and small as well as semi-medium member farmers does not have an impact on facing constraints and availing benefits from coconut producer companies. It is further concludes that, Coconut FPOs in the state need to improve business ideas and grow for mutual benefit of their member farmers.

Mean Plots

Figure no.1 Mean of Constraints

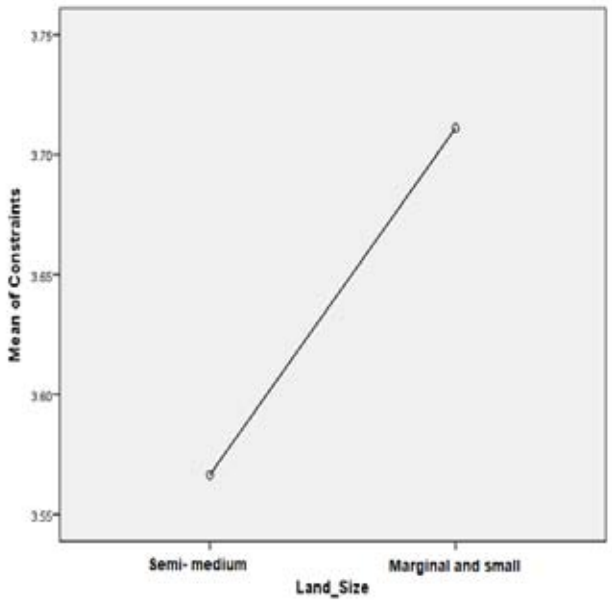
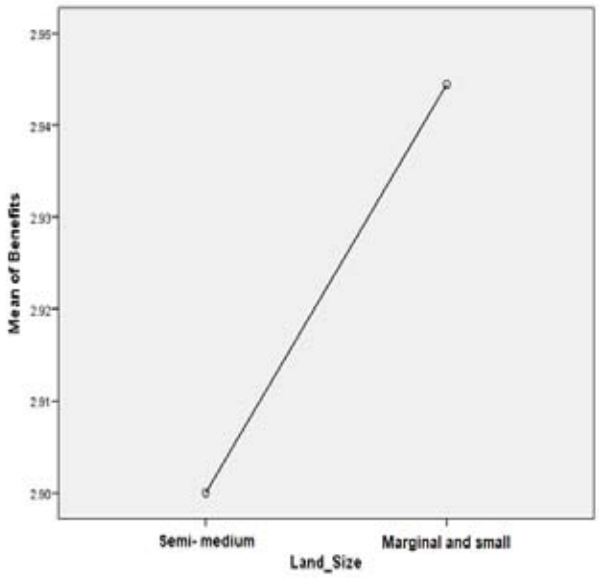


Figure no.2 Mean of Benefits



Educational Qualification on Constraints and benefits

It is observed from the table no.11 that, the impact of educational qualifications of member farmers in receiving benefit and facing constraints from FPOs has been analyzed. The member farmers regularly face constraints in accessing the services from FPOs. This in turn does not facilitate member farmers in enhancing their farm income. Similarly, member farmers of FPOs are not actually getting benefited in the sample. The statistical results show that non-performance of coconut farmer producer organizations in enhancing financial performance is due to lack of business acumen skills and indigent infrastructural facilities.

Testing of Hypothesis - 2

The study using one way ANOVA postulated a presumption considering educational qualification of member farmers in facing constraints and availing benefits from farmer producer companies as under –

Null Hypothesis (H0) – There is no impact of educational qualification of member farmers on facing constraints and receiving benefits from coconut FPOs.

Alternative Hypothesis (H1) - There is an impact of educational qualification of member farmers on facing constraints and receiving benefits from coconut FPOs.

Table no. 11: Descriptive statistics of educational qualification

Particulars		N	Mean	Std. Deviation	Std. Err or
Constraints	1.00 Below Matriculation	19	3.7368	.45241	.10379
	2.00 Matriculation	29	3.7241	.45486	.08447
	3.00 10+2	36	3.6667	.47809	.07968
	4.00 Under Graduation	36	3.61 11	.49441	.08240
	T otal	**120**	**3.6750**	**.47034**	**.04294**
Benefits	1.00 Below Matriculation	19	3.1053	.45883	.10526
	2.00 Matriculation	29	2.7586	.63556	.1 1802
	3.00 10+2	36	2.9167	.36839	.06140
	4.00 Under Graduation	36	3.0000	.67612	.1 1269
	T otal	**120**	**2.9333**	**.561 11**	**.05122**

The statistical results of ANOVA (table no.12) with p values of constraints (0.729) and benefits (0.162) are not statistically significant and it is also not less than general acceptance level of 0.05. It is, therefore, the null hypothesis cannot be rejected.

The study with one way ANOVA test concludes that educational qualification of member farmers does not have an impact on facing constraints and availing benefits from coconut producer companies. The farmer collectives need to

Table no. 12 ANOVA

Particulars		Sum of Squares	df	Mean Square	F	Sig.
Constraints	Between Groups	.292	3	.097	.434	.729
	W ithin Groups	26.033	116	.224		
	T otal	**26.325**	**119**			
Benefits	Between Groups	1.617	3	.539	1.744	.162
	W ithin Groups	35.850	116	.309		
	T otal	**37.467**	**119**			

Mean Plots

Figure no.3 Mean of Constraints

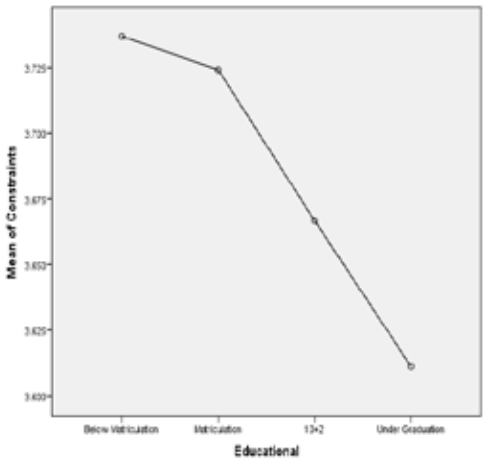
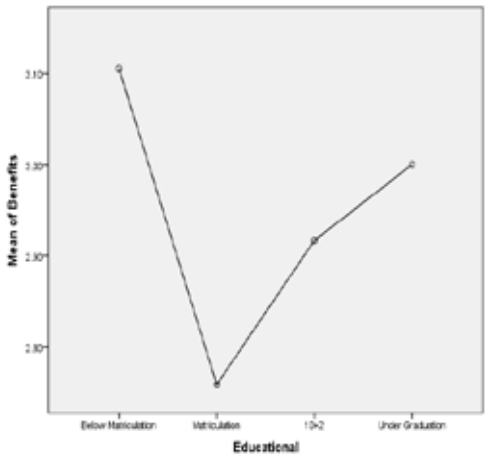


Figure no.4 Mean of Benefits



direct themselves in undertaking new business ideas and professionalize in serving its coconut member farmer.

Conclusion

Coconut farmers are the integral part of agri-plantation sector; due to lack of business insights and resources they are not able enhance their income and sustain their livelihood in the state. It is, therefore, coconut farmer producer organizations need to play a vital role in enhancing economic power of their members. These collectives' services are not adequately facilitating coconut farmers nor are they favorably getting benefited. However, Coconut collectives in the state have been associated in distributing (providing) inputs and acting as a channelizing agent between member farmers and government agencies. They need to have a workable coconut business plans and adopt professional management in leading their trade to uplift the spirit of farmers' collectivism. These organizations need to work effectively with professionalism for sustainable growth and development. The Governments at center and state should also assist coconut farmers and collectives by linking with techno-management professional organizations to en-cash abundant coconut business opportunities to grow in the competitive world and also for rural development.

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