

Profitability and performance of coir pith units in western region of Tamil Nadu

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ABSTRACT

Coir pith is a biomass residue generated during the extraction of coir fibre from coconut husk and is a by-product of the coir manufacturing industry. About two kg of coir pith is obtained for every kg of coir fibre extracted. The profitability of coir pith units have been examined using primary data collected from 30 sample coir pith producers. Garrett's ranking technique was used to identify the constraints faced by the coir pith producer. For every rupee of investment in coir pith processing, about Rs 1.13 was obtained as returns, indicating its profitability. The neighbours were the main source of information, ranked first followed by traders and internet. The major problems faced by the coir pith producers were limited electricity and inadequate labour. The study has clearly brought out that the urgency of developing innovative technologies to reduce the labour usage and uninterrupted electricity which lead to maximum production and compete in international markets.

KEY WORDS : Coir pith, Costs and Returns, Production, Garrett's ranking Technique

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Coir pith is a biomass residue generated during the extraction of coir fibre from coconut husk and is a by-product of the coir manufacturing industry. About two kg of coir pith is obtained for every kg of coir fibre extracted. Till recent year, it was considered as waste and research has found many applications of coir pith. It is eco-friendly and bio-degradable. It is used as an organic fertiliser in horticulture and floriculture as a soil conditioner and substitute for soil. Its' water holding capacity and compressibility besides light weight are the main characteristics which make it widely applicable.

Coir pith industry is a one of the fastest growing

industries and it has got high export value. Several products have been developed based on coir pith. There is very good market potential for coir pith products in export sector as many countries where coconut cultivation is not in practice require this material. The present paper has examined average cost of production and returns of coir pith unit in the western region of Tamil Nadu and problems faced by the coir pith industry and suggestion for improvements were discussed.

METHODOLOGY

The study was conducted in western region of Tamil Nadu. According to the coir board statistics (Coir Board Report, 2012), nearly 35 per cent of the coir and coir products unit were located in the Coimbatore district and Tirupur district. In western region of Tamil Nadu, Pollachi and Udumalpet taluk are major coconut producing areas and also major coir producing industries. The list of coir pith industries were obtained from Coir Board, Pollachi. Based on the list, 30 coir pith units were selected at random by using simple random sampling method. Data were collected during December 2012

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to January 2013. The data thus collected were processed using tabular analysis, and Garrett's ranking techniques.

Costs and returns :

Costs :

To estimate the cost of production of coir pith, cost approach method was used. The total cost was classified into fixed costs and variable costs. Fixed cost included interest on fixed capital, permanent labour charges depreciation on fixed investment and others. The variable costs included, cost on raw materials, power charges, human labour charges, machine labour charges and interest on working capital and others.

Returns :

Gross return was obtained by adding the total value of produce. Net income was estimated as the difference between the gross return and total cost of production.

ANALYSIS AND DISCUSSION

Data were analyzed by using tabular analysis, costs and returns and ranking techniques.

Socio-economic characteristics of sample respondents :

The socio-economic characteristics of sample respondents including age, education, experience and income level, etc. of sample firms were analysed and are presented in Table 1.

Sr. No.	Particulars	Numbers	Per cent
I	Age (years)		
	30-40	9	30.00
	41-50	14	46.67
	51-60	7	23.33
	Above 60	0	0.00
	Total	30	100.00
II	Education		0.00
	Primary	5	16.67
	Secondary	11	36.67
	College	14	46.67
	Total	30	100.00
III	Experience		0.00
	Less than 5 years	11	36.67
	6-10 years	8	26.67
	More than 10 years	11	36.66
	Total	30	100.00
IV	Annual income (in Rs.)		0.00
	Less than 10 lakhs	13	43.33
	10.1-15 lakhs	10	33.33
	More than 15 lakhs	7	23.34
	Total	30	100.00

It clearly indicated that among the 30 sample respondents, 47 per cent were in the age group of 41-50 years followed by 30 per cent of the owners were in the age group of 30-40 years. Regarding education, it was found that 47 per cent of the owners had studied college level education followed by Secondary School education (37 per cent). The overall experience about the coir pith industry of sample respondents showed that about 37 per cent of the respondents had less than 5 years of experience in the field of coir pith industry followed by 36.66 per cent of the respondents having the experience of more than 10 years. The distribution of average annual income among the respondents showed that about 43 per cent of the respondents were in the income category of less than Rs. 10 lakhs followed by the income category of Rs. 10.1 –Rs. 15 lakhs.

Occupational status :

The pattern of investment would be influenced by occupational position. The primary occupation mainly concentrates on more investment in coir pith business.

Type of ownership :

Type of ownership would influence the decision making authority of the firm. In the study area, most of the sample respondents were single proprietors. Single proprietorship would influence for quick decision making, innovation and risk taking of the business.

Asset position :

Assets play a major role in assessing the infrastructure available in the firms. Assets included immovable assets like land, shed, godown, and movable assets like hydraulic pressure machine for pith blocking, screener, conveyors and packing machine. The asset position of the sample respondents are presented in Table 2.

Sr. No.	Particulars	No. of respondents possessed	Average value of asset (Rs.in lakhs)
Immovable assets			
1.	Land	30	17.75
2.	Shed	30	8.48
3.	Godown	30	8.30
	Total		34.53
Movable assets			
4.	Hydraulic pressure machine	30	12.00
5.	Screener	30	3.73
6.	Conveyors	30	1.77
7.	Packing machine	30	0.29
	Total		17.79

It could be observed from Table 2 that, all the sample respondents possessed all immovable assets (land, shed and godown) and moveable assets (hydraulic pressure machine, screener, conveyors and packing machine). The average value of movable assets like land, shed and godown were Rs.17.75 lakhs, Rs.8.48 lakhs and Rs.8.30 lakhs, respectively. The average value of immovable assets like hydraulic pressure machine, screener, conveyors and packing machine were Rs.12 lakhs, Rs.3.73 lakhs, Rs.1.77 lakhs and Rs.0.29 lakh, respectively. The asset position would influence for increasing the production and reduction of labour usage.

Structure of processing costs and returns of coir pith block :

Coir pith is a byproduct of coir fibre processing industry. The structure of costs incurred by processors in coir pith block making is presented in Table 3. The total processing cost of coir pith into coir pith block was worked out to Rs.5, 475 per ton, out of which Rs. 5,145 (93.98 %) was incurred in

variable inputs, while Rs. 330 (6.02 %) was fixed cost. The cost of raw material (Rs. 3977) formed major (72.65 %) component of total processing of coir fibre block followed by causal labour wages (6.39 %), power charges (2.74 %) and quality maintenance cost.

A perusal of Table 4 showed that from 1.09 tonnes of coir pith processed for one tonne of coir pith block were produced in the processing unit. The gross return was worked out to Rs. 1,82,57,373/- per year from coir pith block, considering average market price of Rs. 6,192 /-per ton of coir pith block. Thus, the net return per year amounted to Rs. 21,15,399/-. In other words, Rs. 717 was obtained as net returns for every ton of coir pith block. Further, for every rupee of investment in coir pith processing, about Rs. 1.13 was obtained as returns, indicating its profitability.

Coir pith is an exportable product. Coir pith unit receives market information from multitude of sources such as traders, neighbours, internet, coir board and media. The information were ranked by using Garrett’s ranking technique and are

Table 3 : Structure of processing costs of coir pith block (Two shift-270 days)

Sr. No.	Particulars	Amount (Rs./year)	Amount (Rs./ton)	Percentage
A	Fixed cost			
1.	Interest on fixed capital	627720	213	3.89
2.	Depreciation	118533	40	0.73
3.	Salaries to permanent employees	216000	73	1.34
4.	Others	10000	3	0.06
	Total fixed cost	972253	330	6.02
B	Variable cost			
1.	Cost of raw material	11726775	3977	72.65
2.	Power charges	442260	150	2.74
3.	Wages for casual labours	1031940	350	6.39
4.	Quality maintenance cost	294840	100	1.83
5.	Cost of yarn for coir block making	294840	100	1.83
6.	Interest on working capital	1379065	468	8.54
	Total variable cost	15169720	5145	93.98
	Total cost	16141974	5475	100.00

Table 4 : Returns structure of coir pith block (Two shift-270 days)

Sr. No.	Particulars	Amount (Rs./year)		Amount (Rs./ton)	
		Quantity	Value	Quantity	Value
1.	Quantity of coir pith processed	3226.50	11726775	1.09 ton	3977
2.	Quantity of coir pith blocked	2948.40	18257373	1 ton	6192
	Total cost		16141973		5475
	Gross return		18257373		6192
	Net return (per year)		2115399		
	Net return (per month)		176283		
	Net return (per ton)				717
	BC ratio		1.13		1.13

Source : Marketing information for coir pith unit

presented in Table 5. The neighbours were the main source of information ranked first by the sample respondents followed by traders and internet. The coir board and media are the comparatively least source of market information to the sample respondents. Thus, it could be concluded that coir board and media take more initiative to upgrade the market information for the benefit of coir industry.

Table 5 : Sources of market information (Rank)

Sr. No.	Particulars	Garrett score	Rank
1.	Neighbours	56	I
2.	Traders	54	II
3.	Internet	53	III
4.	Media	33	IV
5.	Coir board	28	V

Problems faced by coir pith units :

The major constrained faced by coir pith units were ranked by using Garrett's ranking technique and are presented in Table 6. It could be inferred that the most of the respondents faced the major problems as limited electricity and inadequate number of labourers followed by off season, heavy rain, highly inflammable, and less price realization.

Table 6 : Problems faced by coir pith industry (Rank)

Sr. No.	Particulars	Garrett score	Rank
1.	Limited electricity	65	I
2.	Inadequate labour	60	II
3.	Off season	50	III
4.	Rain	46	IV
5.	Highly inflammable	40	V
6.	Less price realization	37	VI

Motivation of labour is important and at the same time a hike in the wages and compensations are also important to attract the labour force into coir industry. Provision of uninterrupted electricity leads to maximize the coir pith block production and compete in international markets.

Conclusion :

The study has revealed that most of the respondents were in the age group of 41-50 years and completed college level education. All the sample respondents of the firm possessed all immovable assets like land, shed and godown. In movable assets, all the sample respondents were having hydraulic pressure machine, screener, conveyor and packing machine. The asset position would influence the maximization of coir pith production. It led to minimize the

cost of production and maximize the quantity as well as quality of pith production. Majority of the respondents were single proprietor and their main business was fibre industry. It would influence the quick decision making, innovation, risk taking of the business and pattern of investment in coir pith units. The average costs worked out to per tonne of coir pith production was Rs. 5,475/- , the gross return per tonne of coir fibre was Rs. 6,192/- and the net return per tonne of coir pith was Rs. 717/- . For every rupee of investment in coir pith processing, about Rs 1.13 was obtained as returns, indicating its profitability. The neighbours were the main source of information ranked first by the sample respondents followed by traders and internet. The major problems faced by the coir pith producers were limited electricity and inadequate labour followed by off season, rain, highly inflammable and less price realization.

The policy implications emerging out of the study are outlined below :

- Coir pith drier are the most important and needed technologies for maximizing the fibre production, minimisation of cost of production and reduce the labour usage.
- To develop innovative technologies for further value addition and pith may be used for agricultural purposed.
- Provision for uninterrupted electricity which lead to maximum production and compete in international market.
- There is a need to disseminate information on international markets, price behaviour and other trade matters to fibre producer for their betterment.

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