

ECONOMICS OF PADDY PRODUCTION AND MARKETING IN CAUVERY DELTA ZONE, TAMILNADU

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Abstract

As indicated by 2011 evaluation, paddy development had been the occupation of more than 1.8 million homestead families in Tamil Nadu. The yearly rice creation of 2.1 million tons in 1980 had expanded to 5.8 million tons in 2019. Paddy ranchers are commonly profited by bunch exercises. This investigation inspected the creation and showcasing factors adding to the accomplishment of paddy ranchers in the Cauvery Delta Zone of Tamil Nadu with an emphasis on the advancement and selection of new works on, cultivating experience, and information sharing and group conduct among ranchers. Effect of sex on paddy cultivating rehearses was analyzed. 63 paddy cultivators (32 male, and 31 females) were chosen for the investigation from Cauvery Delta Zone of Tamil Nadu zone dependent on delineated arbitrary testing. Mann-Whitney test, Wilcoxon rank-whole test, Correlation, and Chi-square tests were utilized for inferential investigation of information alongside elucidating examination. Information sharing conduct in cultivating connected unequivocally with the respondents' impression of cultivating as a vocation. Information sharing corresponded decently with their cultivating experience. Development and reception of new practices was the major contributing component in the efficiency of paddy cultivating. Huge contrasts were seen among sex and cultivating rehearses, with male ranchers recording better exhibitions over female ranchers in many cultivating rehearses.

Keywords: Paddy farming, gender, knowledge sharing, group work, productivity, marketing.

Introduction

The significance of cultivating increments with the worldwide populace anticipated to arrive at almost 9 billion by 2050 in the midst of a falling proportion of arable land to populace. According to the Food and Agricultural Organization (FAO), world's complete horticultural land territory of 4.93 billion hectares is almost 38% of the world's absolute land zone. Asia adds to practically 90% of the world's rice creation. China, India, Vietnam, Burma, Indonesia, Bangladesh, and Sri Lanka are the significant rice creating nations in Asia (FAO, 2012). The agrarian commitment to Tamil Nadu economy was almost 11.9% of GDP. About 32.7% Indian labor force had been associated with rural area. Indian horticulture area is overwhelmed by smallholders, with over 64% of the cultivating families developing property of under 0.8 hectares.

Paddy Cultivation

Rice is the staple food of the occupants of Tamilnadu. Paddy is developed generally as a wetland crop in all the regions. Absolute land gave for paddy is assessed to be around 708,000 Hectares. Tamilnadu horticultural areas significant commitment originates from the paddy area. Paddy development is the work of more than 1.8

million homestead families in Tamilnadu. They had delivered 2.1 million tons of rice in 1980, and this has been expanded to 5.8 million tons in 2019.

Objectives of the Study

The study contains the following objectives

- To estimate cost of cultivation and cost of production of Rice.
- To identify the marketing channels and estimate marketing cost, marketing efficiency and price spread, for Rice.

Methodology

This study is devoted to discuss the methodology adopted in present study. In very beginning of the chapter sampling design are deals whereas scope of study, method of enquiry of data, scope and nature of enquiry and analytical tools.

Sampling Technique

Three phases defined testing procedure with improvement square of first stage unit, locale as second stage unit and homestead families a definitive or third unit of study is embraced for leading the current enquiry extreme examining units were chosen on following lines.

From the head quarters of the Delta Zone Districts a rundown of the occupied towns alongside the quantity of family units was acquired and a rundown of town, having in excess of 88 town was set up as indicated by alphabetic request, the towns was chosen haphazardly by the assistance of irregular numbers.

In first visit of the chose town a rundown of the apparent multitude of families along their operational region was readied and all the families were gathered in three classes:

- (a) Small and marginal
- (b) Medium
- (c) Large

The family units having underneath 1.0 ha of land holding held under the gathering of little and negligible size ranchers developing families having and region of operational possessions between 1.00-2.00 ha were recorded in medium size ranchers and those family units of the town activity 2.00 ha or more are recorded in the gathering of the enormous size ranchers. Every classification of rancher notice above has been viewed as layers of the size gathering of operational holding 5% families were chosen haphazardly by the assistance of arbitrary numbers. The accompanying table shows the connection between test families and all out families in every layers of chosen town. Along these lines examining configuration received under present examination comprise of three phase delineated testing extreme inspecting units are the families.

Scope of the Study

The investigation relates to feature the land use and editing example of the chose towns with regards to sources and technique for water system and trimming force. It additionally focuses on legitimate and effective usage of various info factors utilized in the creation of paddy; its creation proficiency and minimal worth

efficiency of decide further extent of venture on these creation assets for expanding pay and creation on paddy ranches in the chose town.

Cost and Returns of Rice Production

The current part manages the information – yield gauges for the distinctive size gathering of rancher of rice cultivator. For this reason the conveyance of cost on different information sources has been examined by size of homestead for the rice development. Other than , gauge of complete expenses based on seven ideas , in particular Cost A1, Cost A2 , cost B1 , Cost B2 , Cost C1 , Cost C2 , Cost C3 have been worked out. These cost ideas incorporate Cost A1, Cost A2, Cost B1, Cost B2, Cost C1, Cost C2 and Cost C3. Various costs have been worked out by applying following methods:

Cost A1 = All actual expenses in cash and kind incurred in production

Cost A2 = Cost A1+ Rent paid for leased in land

Cost B1 = Cost A1+ Interest on value of owned capital assets

Cost B2 = Cost B1+ Rental value of owned land and rent paid for leased in land

Cost C1 = Cost B1+ Imputed value of family labour

Cost C2 = Cost B2+ Imputed value of family labour

Cost C3 = Cost C2+10% of Cost C2 on account of

Administrative capacities performed by the rancher. Essentially, the different proportions of ranch benefits, for example, total compensation, family work pay and so forth Info – out proportion for the distinctive size gathering of rancher.

Inputs

For input estimate the a variety of factors which enter into cost have been considered, like that family labour, hired labour, machinery, seed, manure and fertilizer, irrigation, land revenue, interest on working capital, depreciation and rental value of land.

Cost Allocation

Family work has been charged at current rates in the area, for example @ day of 8 span. Cost of ranch created seeds has been charged at current costs in the area. The manures have been esteemed at their cost costs in addition to ship charges. The worth home delivered ranch yard excrement has been determined at the rates winning in the territory. Water system charges have been paid at fixed channel rates and power rates existing in the zone. The land income has been dictated by partitioning the absolute income paid for the developed territory.

Interest on working capital has been charged at the 8 percent for annum. While on as been charged at the pace of 11 percent. Rental estimation of claimed land has been charged at the pace of 11 percent of the estimation of the land winning in the area. Un keeps of actualizes (devaluation) have been allocated with respect to farm vehicle work hour used. This premise was received as the utilization of a large portion of executes likewise includes the utilization of work vehicle on the ranch.

Distribution of Cost by Inputs

Dispersion expenses of development by inputs per hectare in various size bunches for the rice are given in Table 1. Human work (family work, employed work) from the most noteworthy offer in the all out expense followed by compost, excrement, water system, seeds, plant security.

Further it was additionally seen that the portion of family work decays with the expansion in the size of ranch where as inverse pattern is seen on account of employed work at the town.

The subtleties of expenses and return of MTU7029 (Swarna dhan) rice creation and complete variable expense and absolute expense per ha by various size of rancher for MTU7029 (Swarna dhan) rice under examination are introduced in table 1.



Table 1: Per hectare Costs and Returns in Rice Cultivation

S. No.	Particulars	Size group(ha)		
		0-2 (ha.)	2-4 (ha.)	4 and above (ha.)
1.	Family labour	24,000	17000	2000
2	Hired labour	2000	10,000	27000
3	Seeds	900	1050	1600
4	FYM	8000	6750	5900
5	Chemical fertilizer			
	a. DAP	1920	2270	2550
	b. Urea	2480	2790	2900
6.	Plant protection	2000	2250	2400
7	Irrigation charges	500	550	600
8	Machinery charges	5600	6200	6600
9	Interest on working capital @ 8 per cent per annum	2840	2813.4	2736.04
10	Harvesting and Winnowing	4000	4500	5200
I	Total Variable cost (TVC)	54420	56173.4	59486.04
11	Depreciation	290.41	320.45	350.55
12	Land Revenue	60	75	90
13	Rental value of land	3457.95	3581.36	3685.63
14	Interest on Fixed capital @11 per cent per annum	391.75	415.69	515.96
II	Total fixed cost (TFC)	4200.11	4392.5	4642.14
15	Total cost (I +II)	58620.11	60565.9	64128.18
	Output			
16	Main product(Rs./ha)	96560	99280	102000
17	Price of rice(Rs/qt)	1360	1360	1360
18	Main product (qt/ha.)	71.00	73.00	75.00
19	By product (Rs./ha)	150	200	230
20	By product (qt/ha)	2.5	3.07	3.83
21	Gross return	96710	99480	102230
22	Return over variable cost	42290	43306.60	42743.96
23	Return over total cost	38089.89	38914.10	38101.82
24	Benefit-cost ratio over			
	A. Variable cost	1.78	1.77	1.72
	B. Total cost	1.65	1.64	1.59

Costs and returns of Rice cultivation

Cost of absolute expenses based on seven ideas, to be specific Cost A1, Cost A2, cost B1 , Cost B2 , Cost C1 , Cost C2 , Cost C3 have been worked out (Table no. 2) Costs and returns of Rice creation demonstrated that the human work, rental estimation of claimed land, hardware charges, water system charges, seed cost and FYM were significant supporters of the complete expense. The cost structure per ha of Rice creation in study zone indicated that cost A1, cost A2, cost B1, cost B2, cost C1 and cost C2 , cost C3 were. ₹72710, ₹72710, ₹73101.75, ₹76559.7, ₹100559.7 and ₹124559.7, ₹12455.97 of little rancher , cost A1, cost A2, cost B1, cost B2, cost C1 and cost C2 , cost C3 were ₹82480, ₹82480, ₹82895.69 ₹86477.05, ₹103477.05, ₹20477.05, ₹2047.70of medium rancher, cost A1, cost A2, cost B1, cost B2, cost C1 and cost C2, cost C3 were ₹100230, ₹100230, ₹10745.96, ₹104431.59, ₹106431.59, ₹108431.59, ₹10843.15for enormous rancher individually.

Table 2: Details of costs and returns in Rice cultivation in Cauvery Delta Zone in Tamilnadu

Item	Size group		
	0-2 (ha)	2-4 (ha)	4 (ha) and above
.Gross return (Rs./ha) over	96710	99480	102230
Cost A1	72710	82480	100230
Cost A2	72710	82480	100230
Cost B1	73101.75	82895.69	100745.96
Cost B2	76559.7	86477.05	104431.59
Cost C1	100559.7	103477.05	106431.59
Cost C2	124559.7	120477.05	108431.59
Cost C3	12455.97	12047.70	10843.15

MARKETING CHANNELS AND PRICE SPREAD FOR RICE MARKETING

Marketing Aspects

The marketing cost, margins and price spread, computed for two vital marketing channels are presented in this section.

Marketing Channels for Rice Marketing

Marketing cost brought about by maker in channel-I and channel-II was practically same which Rs. 50 was per quintal for paddy. Cost brought about by commission operator was 0.42 percent, by distributor 3.95 percent, by mill operator 12.44 percent and by retailer 2.33 percent of buyer rupee in channel-I. The rancher's offer in the buyer rupee was 54.54 percent in channel-II and value spread was as 45.45 percent, out of which, 22.84 percent was represented by showcasing cost and 22.61 percent was represented by edges. In channel-II, cost acquired by commission specialist was 0.43 percent, by mill operator 15.18 percent, by distributor 2.59 percent and by retailer 2.36 percent of buyer rupee. The rancher's offer in buyer rupee was 54.54 percent. This shows that Channel-II guaranteed higher maker's offer in customer rupee than Channel-I. The scrutiny of table 5.5 uncovers that maker's offer in shopper rupee was 51.68 percent and value spread was as high as 48.32 percent, out of which, 21.41

percent was represented by promoting cost and 26.89 percent was represented by edge. The subtleties identifying with advertising channels and value spread for rice showcasing has been introduced under after heads.

Marketing Channels

Marketing channels are courses through which horticultural items move from makers to customers. The length of the channel changes from ware to product contingent upon the amount to be moved and the type of shopper's interest. There were two normal promoting directs saw in showcasing of rice in the examination region. These were

1. Channel- I : Producer→ Commission agent→ Wholesaler→ Miller→ Retailer→ Consumer
2. Channel-II : Producer→ Commission agent→ Miller→ Wholesaler →Retailer→ Consumer

Price spread

Price spread was determined considering Rice isn't burned-through straightforwardly. Thus, processor was considered as a definitive customer and processor's price tag was considered as shopper's cost for working out the value spread. The costs spread in various advertising channels of Rice are introduced in Table 3 In channel-I, Producer's offer was 51.68 percent in buyer's rupee. The promoting expenses and absolute edges were 21.41 percent and 26.89 percent in customer's rupee, individually. The edges shared by commission operator, discount, Miller and Retailer were 1.82, 2.78, 19.01 and 3.28 percent, individually of the shopper's rupee.

In channel-II, maker's offer was 54.54 percent in shopper's rupee. The showcasing expenses and complete edges were 22.84 percent and 22.61 percent in shopper's rupee, individually. The edges shared by commission specialist, distributor, Millers and retailer were 1.08, 2.06, 10.24 percent and 2.19 percent, separately of the buyer's rupees.

**Table 3: Price spread in Marketing of Rice in Channel- I and Channel- in
Cauvery Delta Zone**

Particulars	Channel- I (Percentage)	Channels – II (Percentage)
Producer's net price	1150 (51.68)	1200 (54.54)
Cost incurred by		
Producer	50 (2.24)	50 (2.27)
Commission Agent	09.50 (0.42)	09.50 (0.43)
Wholesaler	88 (3.95)	57 (2.59)
Miller	277 (12.44)	334 (15.18)
Retailer	52 (2.33)	52 (2.36)
Total cost	476.50 (21.41)	502.50 (22.84)
Margin of		
Commission agent	40.50 (1.82)	40.50 (1.84)
Wholesaler	62 (2.78)	43 (1.95)
Miller	423 (19.01)	366 (16.63)
Retailer	73 (3.28)	48 (2.18)
Total margin	598.50 (26.89)	497.50 (22.61)
Sale price of retailer/purchase price of consumer	2225 (100)	2200 (100)

- Figures in square brackets are the per cent of price spread in marketing of rice in channel – I and channel -II

Marketing Efficiency

It was determined by utilizing Acharya's technique for Modified Marketing effectiveness which is as per the following Table 4 uncovers that the channel-I was less proficient at that point channel-II. Showcasing productivity of channel-I was 1.06 trailed by channels-II 1.20. Absolute showcasing cost is ₹502.50 and absolute net edge of delegates was ₹497.50. Retailer deal cost was ₹2200 and net cost got by rancher was ₹1200.

Table 4: Marketing Efficiency in Channel I and Channel II

Particulars	Channel I(Rs.)	Channel II(Rs.)
Retailer's sale price	2225	2200
Total marketing costs	476.50	502.50
Total net margin of intermediaries(MM)	598.50	497.50
Net price received by farmer	1150	1200
MME*	1.06	1.20

* MME =Modified measure of marketing efficiency

Findings of the Study

The important findings of the study are summarized below:

1. The expense of Rice development in Cauvery Delta Zone in Tamilnadu has been found in study that variable expense of little, medium and huge rancher was ₹54420, 56173.4 and 59486.04 per ha individually.
2. Fixed expense of rice development of medium rancher was ₹4392.5. per ha , huge rancher for ₹4642.14 per ha and ₹4200.11 per ha of little rancher.
3. The consequences of expenses and returns of Rice creation showed that the human work, rental estimation of claimed land, apparatus charges, water system charges, seed cost and FYM were significant supporters of the all out expense. The cost structure per ha of Rice creation in study zone demonstrated that cost A1, cost A2, cost B1, cost B2, cost C1, cost C2 and cost C3 were. ₹72710, ₹72710, ₹73101.75, ₹76559.7, ₹100559.7 and ₹124559.7, ₹12455.97 of little rancher , cost A1, cost A2, cost B1, cost B2, cost C1 and cost C2 , cost C3 were ₹ 82480, ₹ 82480, ₹82895.69 ₹86477.05, ₹103477.05, ₹120477.05, ₹12047.70 of medium rancher, cost A1, cost A2, cost B1, cost B2, cost C1 and cost C2 , cost C3 were ₹100230, ₹100230, ₹10745.96, ₹104431.59, ₹106431.59, ₹ 108431.59, ₹10843.15 for huge rancher individually in Cauvery Delta Zone in Tamilnadu.
4. The gross return per ha was discovered to be Rs. 96710 for little rancher, Rs. 99480 for medium rancher and enormous rancher for Rs. 102230 in Cauvery Delta Zone in Tamilnadu square of Cauvery Delta Zone in Tamilnadu area and Benefit-cost proportion was more to little rancher (1.78) contrasted with enormous rancher (1.72) and medium rancher (1.77).
5. In Cauvery Delta Zone in Tamilnadu area the channel-I makers net offer in buyer cost is a 51.68 percent, promoting cost of maker 2.24 percent, commission specialist 0.42 percent, distributor 3.95 percent, mill operator 12.44 percent and retailer was 2.33 percent individually. The edge of commission specialist in channel - I was 1.82 percent, distributor 2.78 percent, mill operator 19.01 percent and retailer 3.28. In channel - II maker net value share in buyer rupee is 54.54 percent, maker 2.27 percent, commission operator 0.43 percent, distributor 2.59 percent, mill operator 15.18 percent and retailer was 2.36 percent and edge of various delegates like commission specialist 1.84 percent, distributor 1.95 percent, mill operator 16.63 percent and retailer was 2.18 percent separately.

Conclusion

Cauvery delta zone is the rice bowl of TamilNadu. It is considered as the horticultural state with satisfactory cultivatable grounds and water system offices. Paddy is the chief yield developed and gathered in Cauvery delta locale and different items incorporates banana, sugarcane, beats, blackgram, greengram, groundnut, ginjelly, maize assortment of vegetables and organic products and so on, Most of the horticultural creation and water system in these territories has done through the Cauvery water and the upheld water assets. Cauvery waterway assuming a vital function in the horticulture creation and loaning crude materials to the farming enterprises. It creates substantially more business occasions to the educated and ignorant people groups through rural and modern units. Along these lines, Cauvery delta zone is novel in nature to jam its situation to fulfill the necessities and cases of the overall population in and around Tamilnadu. Paddy the main issue recognized by the

ranchers in the investigation region was the postponement in acquirement of the paddy in the business sectors followed by allowance in installments by commission specialists because of higher dampness content in the grains. For rice the serious issue looked by the ranchers was the exploitative acts of the go-betweens followed by absence of public acquirement which was positioned second. In the event of maize, the serious issue looked by the ranchers was the absence of public acquirement of the produce because of which ranchers were left helpless before the private brokers who get their produce at costs lower than the suggested MSP followed by the exploitative practices by agents. The serious issue distinguished by the cotton cultivators was the absence of gainful cost for their produce followed by variance in cost of the harvest.

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