

# PADDY CULTIVATION AMONG OWNER AND TENANCY FARMERS IN TIRUNELVELI DISTRICT, TAMIL NADU

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## Abstract

*Paddy is the most important crop and it occupies the largest area in the Indian Union. India is the second largest producer in the world, next only to China. The productivity of paddy in India is low when compared to other countries. At present the development of agriculture does not merely depend upon increasing the agricultural produce and productivity, but also upon the promotion of a better and well organized marketing by which the agricultural goods are moved from the field of the farmer to the places of ultimate consumers. The study is confined to production of paddy in Palayamkottai block, Tirunelveli district of Tamil Nadu. The study concluded that the levels of input application were greater for the owner farmer when compared with the tenancy farmers producing paddy. The more intensive use of energy inputs were done by the owner farmers than by the tenancy farmers. The net income earned would be comparatively higher even though the owner farmers and spent more on cultivation of paddy crops. The total cost for the tenancy farmers was found to be less than that of the owner farmers.*

Key Words: Paddy, Owner, Tenancy, farmers, Cost and Return.

## Introduction

Paddy is the important food crop in India. India is one of the world's largest producers of white rice and brown rice, accounting for 20 per cent of all world rice production. India exported substantial quantity of both Basmati as well as Nonbasmati rice to the world, and import in the same categories were insignificant during 2009-10 and 2016-17 (up to January 2017). Tamil

Nadu has a seven per cent share in the total rice production in India. The state has 19 lakh hectares of land under paddy cultivation. In terms of per hectare production, Tamil Nadu is right at the top among all the states with a staggeringly high number of 3900 kg. This is the reason why the state, despite having lesser land under paddy cultivation, is placed fifth in the country in terms of production. Tamil Nadu produced 75.85 lakh tonnes of rice during the 2016.

Production is a process, where by some goods and services called inputs and transformed into other goods and services called outputs. Many types of activities are involved in the production including changes in farms, location and the time of use of products. Each of these changes involves the use of inputs to produce the desired outputs. The farms outputs of products depend upon the quantities of inputs used in production. This relation between input and output can be characterized by a production function. A production function provides information concerning the quantity of output that may be expected when particular inputs are combined in a specific manner. The chemical, physical and biological properties determine the kind and amount of output which will be received from particular combination of inputs. The present study has the cost analysis of paddy cultivation in Palayamkottai block of Tirunelveli district, Tamil Nadu.

### Statement of the Problem

Paddy is the most important crop and it occupies the largest area in the Indian Union. India is the second largest producer in the world, next only to China. The productivity of paddy in India is low when compared to other countries. At present the development of agriculture does not merely depend upon increasing the agricultural produce and productivity, but also upon the promotion of a better and well organized marketing by which the agricultural goods are moved from the field of the farmer to the places of ultimate consumers.

Further, land ownership is mainly confined to upper castes in terms of social strata of the population. It is likely that, under dynamic agricultural setting, the access of vulnerable classes to land might even decline faster because of commercialised farming. Even when poor sections of the population owned some small size of land, unless they were also able to manage the supply of co-operating factors, particularly for cultivation of high value crops and entering the corporate companies, they might end up out their small size of land holding and join the ranks of the agricultural labourers. Under these circumstances, paddy is importance, both from the angle of access to land. The present study examines the production of paddy, cost and returns, yield, yield gap and its constraints, supply responsiveness and labour absorption. The study is confined to production of paddy in Palayamkottai block, Tirunelveli district of Tamil Nadu.

### Objectives of the Study

1. To estimate the cost and returns structure of paddy cultivation for two groups of farmers namely owner and tenancy.
2. To identify the economics of paddy cultivation in the study area.

## Methodology

Tirunelveli District comprises of 13 blocks, out of which the Palayamkottai block is selected for this study. The field survey was conducted from October 2023 to December 2023 for the collection of primary data. The period of study was confined to a single agricultural year 2022-23, one Kharif season and one Rabi season.

Multistage stratified random sampling technique has been adopted for the study taking Tirunelveli district as the Universe, the block as the stratum, the village as the primary unit and paddy cultivators as the ultimate unit. From 25 revenue village on this block, 10 per cent of the paddy cultivators were selected randomly for the study. Hence, a total of 460 sample paddy cultivators were selected.

## Results and Discussion

### Cost and Returns Structure of Cultivation of Paddy

The analysis of cost of cultivation by different cultivation activities made for owner and tenancy farmers under cultivation of paddy in Palayamkotai block presented in Table in Table 1.

**Table1 - The Per Acre Average Cost and Returns Structure of Owner and Tenancy Farmers of Paddy**

SI. No.	Cost Component	Owner Farmers	Tenancy Farmers	Overall Farmers
1.	Human labour (including family labour)	4845.65	4778.65	4810.24
2.	Bullock labour	845.65	965.48	898.48
3.	Chemical fertilizer	3485.60	3100.75	3245.85
4.	Pesticide cost	1750.00	1700.00	1700.00
5.	Seed cost	440.95	432.56	428.65
6.	Farm manure	2800.00	2600.00	2550.00
7.	Cost of irrigation	2400.00	2300.00	2250.00
8.	Interest on working capital	1820.25	1768.50	1747.15
.	Cost A	18388.10	17645.94	17630.37
9.	Rent	1200.00	1150.00	1200.00

10.	Interest as fixed capital (excluding land cost) land revenue, cess and taxes, depreciation of implements and machinery	2152.50	2089.55	2071.45
	Total – Cost C (total)	21740.60	20885.49	20901.82
	Yield per acre in kg	2068.45	2009.65	2002.85
	Gross Returns (₹)	33096.00	32154.40	32045.60
	Net Returns (₹)	11355.40	11268.91	11143.78

Source: Survey data.

It is inferred from Table 1 that the owner farmers produced 2,068.45 kgs of paddy and earned ₹33,096 per acre while their net returns per acre were ₹11,355.40. In the case of tenancy farmers, the yield per acre was 2,009.65 kgs and they realised ₹32,154.40 per acre as gross returns while their net return per acre was ₹11,268.91. In overall yield per acre, gross returns and net returns earned were 2,002.85 kgs, ₹32,045.60 and ₹11,143.78 per acre respectively. It indicates that the owner farmers were getting higher yield and thereby higher net income than tenancy farmers in the case of cultivation of paddy.

The cost analysis reveals that the per acre total cost, that is operational cost of cultivation for owner farmers, worked out to ₹18,388.10 whereas it was ₹17,645.94 for tenancy farmers. It is observed that total cost incurred was found higher in the case of owner farmers compared to tenancy farmers.

The cost of human labour forms the major component of the total cost of production for both owner and tenancy farmers. Next to human labour, the amount spent on the use of chemical fertilizers occupied the major portion in the total cost of production. It came behind the cost of farm manure, cost of irrigation, pesticides, seed cost and bullock labour. The costs of all the inputs except bullock labour were found to be higher for owner farmers than for tenancy farmers. Thus, it is inferred from the analysis that the owner farmers were found more efficient than the tenancy farmers, both cost-wise and returnwise.

### Economics of Paddy Cultivation

The details of the economics of paddy cultivation in the case of owner and tenancy farmers are furnished in Table 2.

**Table 2 - Economics of Cultivating Paddy for Owner and Tenancy Farmers**

Particulars	Owner Farmers	Tenancy Farmers
Gross return (₹)	33096.00	32154.40
Total operating cost (Cost A) (₹)	18388.10	17645.94
Net return over Cost A (₹)	14707.90	14508.46
Total production cost (Cost C) (₹)	21740.60	20885.49
Net return over cost (Cost C)(₹)	11355.40	11268.91
Cost of production per kg. (Cost A) (₹)	8.89	8.78
Cost of production per kg. (Cost C) (₹)	10.51	10.39
Input-Output Ratio (Gross return/Cost A)	1.80	1.82
Input-Output Ratio (Gross return/Cost C)	1.52	1.54
Cost-Benefit Ratio (Net return over Cost C / Cost C)	0.52	0.54

Source : Survey data.

It is observed from Table 2 that the economics of cultivating paddy for owner and tenancy farmers, the input-output ratios in terms of operational cost and total cost were found to be 1.80 and 1.52 respectively for owner farmers and 1.82 and 1.54 respectively for tenancy farmers. The cost benefit ratio for owner farmers showed that each rupee spent on paddy cultivates resulted in a benefit of 0.52 per acre and in the case of tenancy farmers it was 0.54.

The economics of cultivating paddy revealed that the cultivation by owner farmers was more beneficial in terms of both yield and profit per acre. The total cost was also higher for the owner farmer, indicating the requirement of a more intensive care in use of inputs.

Therefore the hypothesis namely “There is no significant difference in the amount of return and spent for inputs between owner and tenancy farmers producing paddy in the study area” is invalid and rejected.

### Conclusion

The study reveals that the levels of input application were greater for the owner farmer when compared with the tenancy farmers producing paddy. The more intensive use of energy inputs were done by the owner farmers than by the tenancy farmers. The net income earned would be comparatively higher even though the owner farmers spent more on cultivation of paddy crops. The total cost for the tenancy farmers was found to be less than that of the owner farmers.

### Suggestions of the Study

- Introduction of early maturing and improved varieties of paddy would help in obtaining two or three harvest in a year.
- Integration of modern scientific knowledge and proven eco-friendly techniques of conservation and utilization of natural resources using area specific tools, implements and agricultural practices as well as scientific management of cattle and others. These indigenous systems can be made more economically viable.
- Water is major constraints outside the monsoon period. Rain water harvesting and storage in tanks offers immense possibilities for irrigation.
- The utilization of the available energy resources more efficiently to partially address the supply constraints and obviously, technological solutions have an advantage in this task.
- The next approach should be on promoting alternative renewable sources of energy involving technologies, institutions and policy measures.

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