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CONSTRAINTS FACED BY THE PADDY GROWERS IN ADOPTING THE POST HARVEST TECHNOLOGIES

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Abstract

In India rice is grown in 43.86 million ha, the production level is 104.80 million tones and the productivity is about 2390 kg/ha. It is grown under diverse soil and climatic conditions the productivity level of rice is low compared to the productivity levels of many countries in the world. Also about 90 per cent of the cultivated land belongs to marginal, small and medium farmers which are another constrain in increasing the productivity of rice in the country. It is, therefore, there is ample scope to increase the productivity of rice in the country. The highest productivity is 6710 kg per ha of China followed by Vietnam (5573 kg /ha), Indonesia (5152 kg/ha), Bangladesh (4375 kg/ha) etc. There are improved technologies and various interventions which could be adapted to increase the productivity in the country. Cultivation of hybrid rice has potential to increase the productivity and needs to be promoted.The constraints in rice production vary from state to state and area to area. The major rice growing areas are concentrated in Eastern region and this region is generally experiences high rainfall and severe flood almost every year. The loss to the rice crop is considerably very high. Besides, in upland areas the crop gets setback either from high rainfall or drought condition. It has also been observed that certain category of soils do not give the desired yield response to the balanced application of N.P.K. fertilizers. The main reasons for this lack of response to the application of balanced fertilizers are associated with certain inherent characters of the soil. All these problems/constraints are affecting the productivity of the rice crops in different growing zones. In certain area, the availability of suitable high yielding varieties and quality seeds are also a problem. To identify the constraints faced by the paddy growers in the adoption of post harvest technology, the present study was conducted in Nagapattinam district of Sirkali block, Tamil Nadu where paddy is the main cereal crop, in which 6 villages were selected, among those 120 respondents were randomly selected. The study is expected to bring to limelight, the constraints faced by the paddy growers in the adoption of post harvest technology and the same could be eliminated by taking appropriate corrective measures.
***Keywords*:** Paddy growers, post harvest technologies, constraints.

Introduction

Rice is the most important food crop of India covering about one-fourth of the total cropped area and providing food to about half of the Indian population. This is the staple food of the people living in the eastern and the southern parts of the country, particularly in the areas having over 150 cm annual rainfall. There are about 10,000 varieties of rice in the world out of which about 4,000 are grown in India. Rice is life for thousands of millions of people. In Asia alone, more than 2,000 million people obtain 60 to 70 per cent of their calories from rice and its products.

Rice is the stable food of over half the world population. Rice is one of the most important food crops of India contributing to 43 per cent of total food grains production in the country. The rice harvesting area in India is the world's largest. The major rice growing States are West Bengal, Uttar Pradesh, Andhra Pradesh, Punjab, Tamil Nadu, Orissa, Bihar and Chhattisgarh, which together contribute about 72 per cent of the total area and 76 per cent of the total production in the country.

In Tamil Nadu, the cultivated area of the state is 4.7 million ha, comprising 36 per cent of the total geographical area. The irrigated area covering 2.15 million ha is 46 per cent of the cultivated area. Farmers are facing losses in paddy cultivation due to improper adoption of post harvest techniques.

The causes of post-harvest losses, which some estimates suggest could range from 15 to as high as 50 percent of what is produced. Post-harvest losses can occur during any of the various stages of post-production system. The main causes of rice losses in post-harvest operations include: delayed harvesting and threshing, heavy dependence on traditional threshing practices, heavy rainfall during harvesting and drying seasons, lack of mechanical drying facilities, over-boiling or under-boiling instead of steaming the paddy in parboiling, high broken percentage in hulling and polishing, lack of proper technical knowledge (BRRI/FAO, 1985). Post-harvest losses result from spillage, inefficient retrieval, inefficient processing of rice as well as inadequate machinery, poor operator skills, biological deterioration and infestation by storage pest. Poor transport conditions or defective packaging of grain can lead to quantitative packaging of grain leading to quantitative losses of product (FAO, 2008). In addition, other causes of post-harvest losses are birds attack, poor marketing system, government policies, bumper harvest and poor post-harvest management system. However, some of these factors can be controlled by the producer and the government whilst others are beyond their control (Taiwo1, 2016). There are many reasons for farmers not following post harvest techniques properly. This study has found it in the study of paddy farmers in Tamil Nadu.

Materials and Methods

Nagapattinam district in Tamil Nadu was purposively selected for this study for the following reasons. Paddy is the most important commercial crop cultivated in this district. Majority of the farmers, farm women and agricultural labourers are directly or indirectly involved in rice crop cultivation which forms the basis for the agrarian economy of Nagapattinam district. Sirkali taluk was randomly selected for the study. A total number of 120 respondents were identified from the selected six villages by using the

proportionate random sampling technique. To analysis the constraints faced by the paddy growers in the adoption of post harvest technology the percentage analysis were used in the study.

Results and Discussion

Post-harvest technology has the important role in the effectiveness of rice production to ensure the rice quality. About 60.00 per cent of respondents perceived lack of post-harvest technology as constraint by which they faced many problems such as lack of threshing, combine-harvester, lack of dryer (mostly farmers using sun drying of their products) and lack of other advanced post-harvest technologies. This constraint has been contributing into increased loss after harvestand decreased rice quality (Nguyen Cong. 2006).

Most of them use the traditional techniques and this kind of technique cause more humidity to rice produce and more loss and reduce quality. This study identified the post harvest technological constraints among the rice growers in Tamil Nadu and this section deals with the reported constraints as experienced by the paddy farmers for their non-adoption of post harvest technologies. The results are presented in Table1.

Table 1 : Constraints faced by the farmers in the Adoption of post harvest technologies in paddy

Sl. No	Constraints	Per cent
1.	Labour shortage and high wages	75.00
2.	Lack of technical knowledge and guidance about improved post harvest technologies of paddy	71.67
3.	Time consuming process in adopting technologies	63.33
4.	High fluctuation in market price	62.50
5.	Non-availability of sufficient credit	54.17
6.	High cost of pesticides and other inputs	53.33
7.	Non adoptability of post harvest technologies and equipments	51.66
8.	Non-availability of inputs and facilities	48.33
9.	Lack of processing units	44.17
10.	Lack of irrigation	39.17
11.	High transportation cost	18.33

It was observed that, a higher per cent of respondents highlighted the constraints of labour shortage and high wages of labour (75.00 per cent), followed by lack of technical knowledge and guidelines about improved post harvest technologies of paddy (71.67 per cent). About two-third of the respondents expressed the constraints of time consuming process (63.33 per cent) in adoption of new technologies and high fluctuation in market price (62.50 per cent). Around fifty per cent of the respondents highlighted the constraints of non-availability of sufficient credit (54.17 per cent), high cost of pesticides and other inputs (53.33 per cent) and non-availability of post harvest technologies and equipments (51.66 per cent).

The moderate percentage of farmers expressed the constraints of non-availability of input and facilities (48.33 per cent), lack of processing units (44.17 per cent), lack of irrigation facilities and power shortage (39.17 per cent). Lastly, the constraints of high transportation cost were highlighted by only 18.33 per cent of respondents.

Conclusion

The result concludes that more than 50 pr cent of the respondents highlighted the constraints of labour shortage and high wages of labour, lack of technical knowledge and guidelines about improved post harvest technologies of paddy, time consuming process, in adoption of new technologies and high fluctuation in market price, non-availability of sufficient credit, high cost of pesticides and other inputs and non-availability of post harvest technologies and equipments.

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