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IMPACT OF AGRICULTURE WAREHOUSING ON ECONOMIC STATUS OF FARMERS: A CASE STUDY OF MYSURU DISTRICT.

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ABSTRACT

India holds the second-largest agricultural land in the world. India is the 2nd largest populated country in the world and ranks 7th in the world for land coverage; to satisfy food need of such huge country self-sufficiency in food supply is necessary. Efforts for bridging the gap between India's food production and storage capacity can be useful for achieving self-sufficiency in food supply. The paper aims to know the agriculture warehousing system in Mysuru and the impact of agriculture warehousing facilities on farmers' income. The primary data analysis tools used for the primary data are the chi-square test, SPSS. Paper finds the warehousing facility helps to store agricultural products and control the price fluctuations. It uses bank credit and improves the income of the farmers. The study suggested establishing extra storage and clearing the problems in warehouses. Storage capacity can also be increased, which will help farmers' economic status, avoid poverty, and provide food security in the country.

Keywords: Agriculture, Warehouse, GDP, Production and Income.

INTRODUCTION

Agriculture, which is the backbone of the Indian economy, contributes to the overall economic growth of the country and determines the standard of life for more than 50% of the Indian population. It contributes only about 14% to the overall GDP, but its impact is felt in the manufacturing sector as well as the services sector as the rural population has become a significant consumer of goods and services in the last couple of decades. Supply channel bottlenecks and a lack of proper marketing channels are serious issues for farmers who face problems in marketing and production. These issues must be solved at the regional, state, and national levels. Due to a lack of proper marketing channels, farmers are forced into distress sales, becoming victims in the hands of middlemen and ultimately limiting their income. An improper marketing and storage channel also leads to storage

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problems. Even if there is good progress in the production, there would be problems with maintenance quality, leading to a degradation in agricultural exports, and in many cases, it leads to gross wastage of valuable food grains and other farm output. Wastage of food, running into thousands of crores of rupees every year, is nothing less than a crime in a country such as India, where more than one-fourth of the population is below the poverty line and where millions go hungry day after day.

DEFINITION OF WAREHOUSE

Warehousing refers to the activities involving the storage of goods on a large scale in a systematic and orderly manner and making them available conveniently whenever needed. In other words, warehousing means holding or preserving goods in huge quantities from the time of their purchase or production to their actual use or sale. It removes all the hindrances and creates time utility by bridging the time gap between the production and consumption of goods or commodities.

In the words of O.N. Chhibber "man needs houses, goods need warehouses" both are essential for the progress and survival of mankind. The term 'warehousing' derived from the word ware refers to commodity and housing means accommodation. The literal meaning of Warehousing is the housing of goods or commodities.

The food and Agriculture Ministry of India has estimated that almost 30% of agricultural produce in India go waste due to improper and inadequate storage, preservation, and processing. It is found that rural markets have been operating in a non-efficient manner. One can identify the basic minimum need to store the surplus of food grains and reduce wastage through efficient commodity management. It is well known that the small farmers do not have the economic strength to retain the produce with them till the market prices are favourable. A need is felt all over the country to provide the farming community with facilities for scientific storage so that wastage and produce deterioration are avoided and also to enable it to meet its credit requirements without being compelled to sell the produce at a time when prices are low. A network of godowns will enable farmers to enhance their holding capacity to sell their produce at remunerative prices and avoid distress sales. Warehouses are considered a backbone of commodity exchange. Noting the benefits of the futures market in commodities trading for reducing price fluctuations,

knowing future returns to farmers and industries through commodity exchanges, supporting increasing population and growing demand from the industry, to facilitate warehousing as infrastructural support, the government of India is promoting warehouse industry. So it is worthwhile to study things related to warehousing considering its increasing importance as an economic activity and the huge untapped potential of warehouse receipt finance and trade-related to it.

REVIEW OF LITERATURE

Gurpreet Randhawa1 and NehaChaudhry(2014) in "Status of Warehousing Sector: A Study of Punjab State" tries to identify the present status of the warehousing sector in India and particularly in Punjab state. The paper used secondary sources. The result of the study is warehousing problems like storage of food grains in open space, inefficiencies in the process, poor infrastructure, high cost of credit and, poor management, lack of trained manpower, poor cold storage facilities. This paper suggests the need for an intervention of the government's active role in solving the warehousing problem then government providing loans, proper and hygienic storage space

Datt Rudder and Sundharam K.P.M. (2006) attempted in the book "Indian Economy" to explain Agricultural Marketing and warehousing. They are mainly focused on basic facilities needed for agricultural marketing & defects in it. The author assesses that taking an overall view, at the macro level, there is no shortage of capacity for food grain storage. While, there is a mismatch at the micro-level, especially for the rural public distribution system, hilly, remote, and inaccessible areas, hence that efforts should be directed to bring about balance at the micro-level as well.

Dr. J. Rengamani and V. Venkatraman(2015) examined**in their paper** " Study on the Development of Industrial Warehousing in India" Objective of the paper is to identify challenges and opportunities for warehousing in India and find out the warehouse connectivity through multimodal transport in India. The study observes that the State and Central governments supported the warehousing Sector. It is one of the sectors that took place recently. But taking into account the present scenario India will have to upgrade its technology and extend more facilities. It must ensure a proper plan for the warehousing development in India.

RashpaljeetKaur and RajinderKaur (2014) analysed the Profitability Performance of Punjab State Warehousing Corporation. This study's objective is to find out the performance of Punjab State Warehousing Corporation. This study used secondary data and used ratio analysis. The PSWC has also shown inefficiency in the utilization of assets and owners' funds over the study period. This paper's results identified that the operating profit ratio was relatively better in the year 2002-03 as compared to other years of the study period. And it suggested the PSWC should utilize its assets more efficiently to earn a higher return on its assets.

Dr.Bartendu and Kr. Chaturvedi (2015) reveals that Agricultural Storage Infrastructure In India is to provide an insight into the issue of storage of food grains and scientific storage in the country, the losses which are occurring due to non-availability of proper covered storage. The paper uses secondary data like the FCI Report and the Comptroller and Auditor General of India report on storage management. Finally conclude Integration of the entire storage sector in India through MIS would go a long way in ensuring timely decisions are taken for optimum utilization of the existing facilities. The paper suggests recommendation is adequate manpower and supervision is required for scientific and safe storage in CAP storage.

Research gap

Food security is a major problem in the world. So agricultural warehousing is very important. After reviewing the literature it is found that most of the studies have been done by the Performance of warehouse. There is hardly any work on the impact of a warehouse facility on Economic status of farmers. Availability of warehousing is to reducing wastage of produced crops leading to more availability of food crops in the study area. This work will try to highlight the research gap with special reference to the warehousing facility in the Mysuru district.

The objective of the paper

1. To study the impact of agriculture warehousing facilities on farmers' income.

2. To study the agriculture credit system in the Mysore district.

The hypothesis of the study

1. Impact of agriculture warehouse facility improves the farmer's income.
2. Agriculture warehouse positive impact on agriculture credit of farmers

Primary study analysis

Table-1 the type of agricultural products stored in a warehouse

Name of the Taluks		Paddy	Other (Ragi)	Total
Hunsur	Count	64	0	64
	% within Taluk	100.0	0.0	100.0
Mysuru	Count	52	12	64
	% within Taluk	81.3	18.8	100.0
Periyapatna	Count	3	61	64
	% within Taluk	4.7	95.3	100.0
Nanjanagudu	Count	64	0	64
	% within Taluk	100.0	0.0	100.0
T Narasipura	Count	63	1	64
	% within Taluk	98.4	1.6	100.0
K.R Nagar	Count	64	0	64
	% within Taluk	100.0	0.0	100.0
Total	Count	310	74	384
	% within Taluk	80.7	19.3	100.0
Chi-Square Goodness of fit Value: 145.042, df: 01, Sig: 0.000***				
Chi-Square Association Value: 296.621, df: 05, Sig: 0.000***				

Source: Field Survey

Note: *** Denotes statistically significant at 1% level

Table-1 shows the type of agricultural products stored in the warehouse by respondents. 100 respondents in theHunsur, K.R. Nagar, and Nanjanagudu respondents produce Paddy and store Paddy in the warehouses. 98.4 of the T Narasipura respondents and 81.3 of the Mysuru respondents keep their produce in warehouses. 95.3 of the

Periyapatna respondents store ragi in the warehouses. It is clear from the table majority (80.7) of the respondent's store Paddy in the warehouses.The chi-square test has been used to analyse the type of agricultural produce store in a warehouse. The Chi-square goodness of fit value is 145,042, which is statistically significant at a 1 percent level and the chi-square for association value is 296.621 whichis also statistically significant at a 1 percent level. it implies that there is a Taluk-wise difference in the agriculture produce store in a warehouse among the respondents.

Table-2 at the time of storage of goods Price and After Storage goods Prices of Agricultural Produce.

(In Rupees)

		At the time of storage Price per quintals (in Rupees)			After the storage Price per quintal			
Name of the Taluks		1500	1700	2500 &Above	2000	2000-3000	Above 3000	Total
Hunsur	Count	28	33	3	48	16	0	64
	% within Taluk	43.75	51.57	4.69	74.99	25	0	100
Mysuru	Count	28	20	16	42	18	4	64
	% within Taluk	43.75	31.25	25	65.62	28.12	6.25	100
Periyapatna	Count	56	8	0	0	48	16	64
	% within Taluk	87.5	12.5	0	0	75	25	100
Nanjanagudu	Count	25	32	7	54	10	0	64
	% within Taluk	39.06	50	10.94	84.37	15.62	0	100
T Narasipura	Count	28	36	0	43	21	0	64
	% within Taluk	43.75	56.25	0	67.18	32.81	0	100
K.R Nagar	Count	30	27	7	58	6	0	64
	% within Taluk	46.88	42.19	10.94	90.61	9.36	0	100
Total	Count	195	156	33	245	119	20	384
	% within Taluk	50.78	40.63	8.59	63.79	30.98	5.2	100
Chi-Square Goodness of fit Value: 111.703, df: 02, Sig: 0.000***					Chi-Square Goodness of fit Value: 198.703, df: 02, Sig: 0.000***			
Chi-Square Association Value: 74.785, df: 10, Sig: 0.000***					Chi-Square Association Value: 170.806, df: 10, Sig: 0.000***			

Source; Field Survey

Note: *** Denotes statistically significant at 1% level

Table-2 shows the different prices of the agriculture product at the time of storing it in the study area. In taluk wise, 87.5 percent in Periyapatna, 46.88 percent in K R Nagar, and 43.5 percent in Mysuru respondents say they get Rs 1500 per quintile at the time of storing in the price of agricultural goods in a warehouse. 56.25 T Narasipura and 51.57 of the Hunsur respondents get Rs 1700 per quintal. 10.94 percent in Hunsurand 23.44 of the Piriyapatna respondents get Rs 2600 per quintals before storing. 34.38 of the T Narasipura and 28.13 of the K.R Nagar respondents get 1500 price before storing. K R Nagar and Nanjangudu respondents get above 2500. The table clearly shows that the majority (50.78 percent) of the respondents say that the before storing price was 1500. The chi-square results have been used to analyse at the time of storage of goods price per quintal in the warehouse by the respondents. The chi-square goodness of fit value is 111.703 and the chi-square association value is 74.785. Both are statistically significant at a 1 percent level.

Table-2 shows the after-taking of agriculture goods in the warehouse price per quintal. 85.93 percent of the K.R.Nagar, 84.37 percent of Nanjanagudu, and 67.18 percent of the T Narasipura respondents get 2000 price per quintal.32.81percent of the T Narasipura and 15.62 percent of the Nanjanagudu respondents get 2000-3000 per Quintals. 25 percent of the Periyapatna respondents get above 3000 per quintal after store in a warehouse. The table clearly shows that the majority (63.79 percent) of the respondents say that the before storing price was 2000. The chi-square results have been used to analyse the after-taking of goods in the warehouse price per quintal by the respondents. The chi-square goodness of fit value is 198.703 and the chi-square association value is 170.806 both are statistically significant at a 1 percent level. It implies that there is a difference in the respondent's opinions about the storage price per quintal in the warehouse and after taking their goods price per quintal in the warehouse in the study area.

Table-3 Respondents' opinion about the getting higher prices after taking goods fromwarehouse.

Name of the Taluks		Yes	No	Total
Hunsur	Count	57	7	64
	% within Taluk	89.1	10.9	100.0
Mysuru	Count	63	1	64
	% within Taluk	98.4	1.6	100.0
Periyapatna	Count	64	0	64
	% within Taluk	100.0	0.0	100.0
Nanjanagudu	Count	64	0	64
	% within Taluk	100.0	0.0	100.0
T Narasipura	Count	64	0	64
	% within Taluk	100.0	0.0	100.0
K.R Nagar	Count	64	0	64
	% within Taluk	100.0	0.0	100.0
Total	Count	376	8	384
	% within Taluk	97.9	2.1	100.0
Chi-Square Goodness of fit Value: 352.667, df: 01, Sig: 0.000***				
Chi-Square Association Value: 30.128, df: 05, Sig: 0.000***				

Source: field survey

Note: *** Denotes statistically significant at 1% level

Table-3 shows the respondents' opinions about what they get the price after storing their products in warehouses. 100 respondents in Periyapatna, Nanjangudu, T Narasipura, KR Nagar, 98.4 of the respondents in Mysuru, and 89.1 of the respondents in Hunsur get good prices after storing their produce in warehouses. 10.9 percent of the respondents say they do not get a good price after storing the produce. The chi-square results for respondents' opinion about after storing the goods if they have got a good price for agriculture products. The chi-square value for the goodness of fit is 352.667 and the chi-square value for the association is 30.128. It is statistically significant at the 1 percent level. The respondent's opinion says that the majority (97.9 percent) of the respondents get a good price after taking goods from the warehouses.

Table-4 Respondents' opinions about income increase after storing the goods in a warehouse

Name of the Taluks		Yes	NO	Total
Hunsur	Count	57	7	64
	% within Taluk	89.1	10.9	100.0
Mysuru	Count	60	4	64
	% within Taluk	93.8	6.3	100.0
Periyapatna	Count	62	2	64
	% within Taluk	96.9	3.1	100.0
Nanjanagudu	Count	59	5	64
	% within Taluk	92.2	7.8	100.0
T Narasipura	Count	63	1	64
	% within Taluk	98.4	1.6	100.0
K.R Nagar	Count	58	6	64
	% within Taluk	90.6	9.4	100.0
Total	Count	359	25	384
	% within Taluk	93.5	6.5	100.0
Chi-Square Goodness of fit Value: 290.510, df: 01, Sig: 0.000***				
Chi-Square Association Value: 8.888, df: 05, Sig: 0.001***				

Source: Field Survey

Note: *** Denotes statistically significant at 1% level

Table-4 presents the respondent's opinions about their income after storing their produce in warehouses. 100 of respondents in all taluks opinion says income increased after storing their produce in the warehouses. The reason for increasing the income after storing is the majority of the farmers sell their product in a harvesting season for that reason, they get less price to their product but who are storing in the warehouses they are selling their product in non-harvesting season for that reason farmers were storing in the warehouses get good prices compared to farmers selling their product in a harvesting season. The chi-square results for the goodness of fit are 290.510. It is statistically significant at 1 percent level and results for association is 8.888 it is statistically significant. It implies that there is a

difference in the respondent's opinion about after storing the goods they get a higher income.

Table-5 Respondents' opinions about Source of Finance

Name of the Taluks		Bank	Intermediate	not borrowed	Total
Hunsur	Count	35	15	14	64
	% within Taluk	54.7	23.4	21.9	100
Mysuru	Count	27	10	27	64
	% within Taluk	42.2	15.6	42.2	100
Periyapatna	Count	30	25	9	64
	% within Taluk	46.9	39.1	14.1	100
Nanjanagudu	Count	41	15	8	64
	% within Taluk	64.1	23.4	12.5	100
T Narasipura	Count	22	18	24	64
	% within Taluk	34.4	28.1	37.5	100
K.R Nagar	Count	28	19	17	64
	% within Taluk	43.8	29.7	26.6	100
Total	Count	183	102	99	384
	% within Taluk	47.7	26.6	25.8	100
Chi-Square Goodness of fit Value:35.484, df:052, Sig: 0.000***					
Chi-Square Association Value: 32.947, df 10: , Sig: 0.000***					

Source: Field Survey

Note: *** Denotes statistically significant at 1% level

Table-5 presents the respondent's opinion about which is the good source for borrowing money for their agricultural purpose. 100 respondents in the T Narasipura and Mysuru, 90.90 respondents in the Hunsur, and 92.85 of the K.R Nagar respondents say that a bank is the best source for borrowing money comapare to Intermediates. 11.77 of the Periya patna respondents and 10.10 of the Hunsur respondents say intermediaries are the best source to borrow money for agriculture purposes. The majority (92.92)of the respondents opined that a bank is the best source to borrow money. The chi-square result has been used to analyse the respondent's opinion on source-wise finance borrowing by the farmers. the chi-square value for the goodness of fit is 32.947 and the chi-square value for

the association is 35.484. It is statistically significant at the 1 percent level. It implies that there is a difference in the source-wise borrowing by the respondents.

CONCLUSIONS

Agriculture warehousing in India is very important in the field of marketing or logistics. The study result shows the storage facility helps store agricultural products in their area. Storage agriculture products farmers get receipts it help them tothe credit from banks that also help farmers. Study says the storage helps to farmers to high price their products, when increasing the price automatically income also increases so finally improve the economic status of farmers. This will remove the poverty and control the food security in the country.This improvement in storage capacity will aid in enhancing country's ability to meet its food security objectives.

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