EFFECTIVE UTILISATION OF WAREHOUSING FACILITIES BY THE FARMERS

A CASE STUDY OF VIZIANAGARAM DISTRICT

By

M V POOJA RANI

CHAUDARY CHARAN SINGH NATIONAL INSTITUTE OF AGRICULTURAL MARKETING

JAIPUR, RAJASTHAN – 302033

2019

EFFECTIVE UTILISATION OF WAREHOUSING FACILITIES BY THE FARMERS

A CASE STUDY OF VIZIANAGARAM DISTRICT

Report submitted in fulfilment of the requirement for

Research Internship Programme, CCS NIAM, Jaipur

By

M V POOJA RANI

B.Sc. Agriculture (ANGRAU)

CHAUDARY CHARAN SINGH NATIONAL INSTITUTE OF AGRICULTURAL MARKETING

JAIPUR, RAJASTHAN – 302033

2019

CERTIFICATE

This is to certify that the report entitled**, "EFFECTIVE UTILISATION WAREHOUSING FACILITIES BY THE FARMERS A CASE STUDY OF VIZIANAGARAM DISTRICT"** submitted in fulfilment of **Research Internship Programme** to **Chaudary Charan Singh National Institute of agricultural marketing, Jaipur, Rajasthan** is a record of bonafide research work carried out by Ms. M V POOJA RANI under my Supervision and guidance and that no part of the report has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes.

Place: Jaipur

Date:

Approved By

DIRECTOR GENERAL

ACKNOWLEDGEMENT

This research process would have never come to achievement without the help and encouragement I received from various individuals.

A special gratitude I gave to ***Dr. P Chandra Shekara,*** *Director General,* ***NIAM*** *for all his support, motivation, valuable suggestions and guidance.*

I feel immense pleasure in placing my deep sense of gratitude and sincere thanks to beloved **Dr.Suchi mathur***, Assistant Director, CCS National Institute of Agricultural Marketing, for her continued encouragement during the various stages of the research process. I feel extreme happiness to the opportunity conferred upon me to work under his guidance.*

I would express my heartfelt thanks to **Ms. Shika Verma,** *Training Consultant, CCS NIAM, who supports me a lot in all stages. Special thanks for her support and encouragement throughout my research.*

I am thankful to ***Dr. R K Mishra*** *Professor and HOD, Dept. of Agricultural Economics, OUAT, Bhubaneswar, who informed us about this golden opportunity. Special thanks for his support and encouragement.*

I would like to thankful to all the farmers, farmer producer organizations, bankers, warehouse in charge for providing the data under the survey without help I cannot complete my research.

Finally, I am thankful to my parents without whose mediation, this opportunity to further my life's goal could not have been realized.

M V Pooja Rani

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Farmers are the people who are better placed to adopt the usage of modern warehouses in their storage of produce because of the high benefits. Although the Government realized the magnitude of the problem and introduced some public modern warehousing facilities in Bobbili area of Vizianagaram District, its usage and adoption is so slow. This study was based on the data collected from the farmers, warehouses, farmer producer organisations and bankers. The objectives of the study are to find out to reasons of not keeping their produce in the warehouse. It was informed by farmers that there is no change in the price of the produce, Lack of modernised and low cost storing facility, Lack of awareness about the facility of warehouse receipt, more transportation charge, problem in getting loans from the banks, high rental charges by the warehouse etc. The data was analysed by using the Statistical Garrette's Ranking technique. This study shows that warehouses are mostly used by traders and civil supply corporations than by the individual farmers.

CHAPTER 1

1.1 INTRODUCTION

Agriculture is the lifeblood of the rural economy and hence the agricultural development will positively foster rural development. Development in agriculture could be brought about by commercialization of agriculture. Agriculture of Marketing is nothing but commercialization of agricultural produce. Better agricultural marketing facilities enable the farmers to think beyond subsistence, expand production, enhance productivity and thus bring in more revenue. Warehousing is one of the most significant aspects of agricultural marketing. This has bearing on the rural economy in general and the small farmers in particular. The significance of warehousing is both negative as well as positive.

Warehousing plays vital role in storing the produce, promoting agricultural marketing, rural banking and financing and ensuring food security in country. There are three public sector agencies are involved in building large scale storage and warehouse capacities in the country. These are the food corporation of India [FCI], central warehouse corporation [CWC] and state warehouse corporation [SWC].

1.2 Status warehouses in India

OWNERSHIP	NUMBER	CAPACITY (LMT)
CWC	433	99.06
SWC	1787	273.47

Source https://dfpd.gov.in/storage-intro.htm

1.3 Status of warehouses in Andhra Pradesh

Warehouses Ownership	Number	Capacity (MTs.)
CWC	53	634530

SWC	24	134781
PRIVATE	2	22000
IG godowns	30	492619
Total	109	1283930

Source: Andhra Pradesh State Warehousing Corporation, Vijayawada till month 31.53.2018

Research problem

Though the sector has always been given priority status, a remarkable change in the life of a peasant [especially small and marginal farmers] is yet to witness. Many reasons can be assigned for the ill development of Indian farmers, but the most which one can identify is farmer's inability to make use of time advantage of their produce. Most of the farmers grow the crop, harvest and sells quickly without waiting for the favourable market condition. Perhaps farmer knows that the prices of their produce goes up after a period, the urgency of a cash need had force them to sell the produce at unfortunate price. Lack of awareness about the pledge loan scheme and utilisation of the warehouse receipts is also among the reasons of farmers that they are not landing to warehouses.

Objectives of the study:

- To assess the utilisation pattern of warehouse facilities by the farmers.
- To understand the relationship between price discovery and storage.
- To study the effectiveness of public warehouse corporation vs private warehouses.

CHAPTER 2

Review of literature

The results of earlier studies on the subject are quite valuable for any research study, as they provide proper guidelines to enhance the quality of study.

Recent studies on **utilisation pattern of warehouses** : Saxena [2003] in his paper found that the storage makes possible to take advantage of the anticipated increase in prices. Processing units like flour mills/ rice mills demand wheat and rice throughout the year. For an efficient running of the mills and for economy as a whole adequate supply of raw material is needed. This required is only be met by good storage system. Storage can also create the immense job opportunities in different in different walks of life starting from labourers to transporters, traders, financers and a variety of government officials required closely to watch and monitor the various functions of marketing process. It is thus an instrument of vibrant economy in which a sizable part of population is involved in production, trading in which storage has a pivotal role to play in the growth and development of a country.

Studies on **warehouse receipt as an instrument** of credit: Pal and Wadha [2007] expressed that a well-developed warehouse system can provide focus for development of entire commodity chain, providing incentives for a part of different parties, including farmers, financers, traders, processors, public sector buyers, investors in storage capacity.

Mahanta [2012] reported that, warehouse receipts can greatly facilitate the financing of agriculture as it could serve as highly credible collateral for agricultural credit. The importance of these receipts includes that they can provide surplus producing farmers with a market window which can help them to secure the best possible deal, by allowing them to deal directly with downstream buyers and financers, and overcome the asymmetric power relationship within the market chain. Farmers can overcome the constraints by

depositing their crops in warehouse that dries, cleans and grades them according to established standards, and holds them until they wish to sell. Warehouse receipts issued against the stock can be used by farmers to access the agricultural credit.

Bhat (2011) says that it is important that the products be readily available to be delivered to customers on demand. By warehousing a product close to the customers, delivery time can be reduced or off-the shelf supply can be achieved thereby improving customer's services. The faster, on time delivery can help increase sales. Many storage warehouses are centrally located in areas adjacent to key destinations and where transportation is accessible Bhatt (2007). Warehouses owned by big businesses are often large enough to accommodate a good number of consumers in the country of operation. This allows them to easily distribute the goods without having to ship from to country. Also, the development of internet has had a great influence on the system of warehousing .Inter based stores do not need any physical point of selling only require storage warehouse to gather all needed goods for the consumer.

There is also the technological environment organizational model by Tornatzky and Fleischer (1990) model framework which had internal and external factors that affect adoption of an innovation, in their analysis they conclude that diffusion of an innovation is influenced by three factors: Technology, Organizational and Environmental factors that the TOE framework identifies these factors that influence the process by which it adopts, implements and uses technological innovations. Studies by Tornatzky and Fleischer (1990); Rogers Thond (1999), Zulu Et al (2005) conclude that technological factors include both the existing such as traditional storage methods and technology in use and new technologies relevant to the firm; organizational factors as descriptive measures about the organizational such as scope, size and the amount of slack resources available internally and environmental factors as the area in which a firm conducts its business – its industry, competitors and dealings with the government. In this case if the farmers who frequently use the warehouse develop positive attitude, they would be more willing to adopt it than of they were suspicious of it or of the service providers.

Tanksale and Jha.(2014) developed, a mathematical model to optimize food grains storage and transport for public distribution system in India and the results of the study showed

that, improper planning and scheduling of the moment of food grains resulted in uplifted food grains, excess transportation cost and underutilisation of available storage capacity, which would in turn increased operational cost of FCI.

Javed et al.(2015) in their own study on the overview of grain drying and storage problems indicated that on farm storage was important in India as it stored the surplus of a short duration. They also revealed that the use of driers and scientific storage practices, if followed, can reduce the loss by about 6 % and this would save Rs.13500 million every year , and make available an additional 9 million tonnes of grain to feed the people.

According to the report if National Institute of Public Finance (2015) stated that the majority of respondents across the surveyed districts showed no shortage of warehousing facilities. Due to consequent years of bad yields, there was an excess supply of warehouses in most of the districts surveyed, driving rents down. In low productivity areas on other hand, there was a lack of warehouses mainly due to low necessity for storage. This was true of north 24 paragon's, where the banks reported that the warehousing capacity in rural areas was very small and the culture of warehousing was yet to really took off.

Adigal and Singh (2015) reported that the total turnover of CWC increased from Rs.849.25 cr. to 1528.19 cr. During 2013. During the year under report,2.03 Lakh MT constructed storage capacities was added. The average capacity utilisation was reduced to 86% from 93% achieved during 2012-13 mainly due to lower stock positions of FCI in view of short fall of procurement as well as liquidation of stocks through PDS and export.

Esther et al.(2014) in their study on the grain storage management in management in India revealed that even though the production of food grains was steadily increasing over the years, the post-harvest losses were constant at 10%. Out of this 6% was due to absence of proper storage facilities. In India, food grains were stored were stored using traditional structures by small farmers. Therefore there was a need for research to develop management guidelines for safe storage and drying to ensure quality management of stored grains.

CHAPTER 3

DESCRIPTION OF THE STUDY AREA

3.1 Study area

The present study was carried out in place Bobbili in vizianagaram district of Andhra Pradesh about the commodity Paddy/Black Gram. Bobbili is located at 18.5667°N 83.3667°E. It has an average elevation of 103 meters (337feet). Bobbili has a tropical climate. In winter there is much less rainfall than in summer. The climate there is classified as Aw by the Koppen-Geiger system. The average annual rainfall is 1184mm. The driest month is December, with 7mm of rainfall. With an average of 215mm, the most precipitation falls in September. The warmest month of the year is May, with an average temperature of the year. It is 21.9°C. The difference in the precipitation between the driest month and the wettest month is 208mm. During the year, the average temperatures vary by 9.6°C.

3.2 Details of the Bobbili

Census Parameter	**Census Data**
Total Population	56819
Total no. of houses	14584

Female population	28534
Male population	28285
Child population(0-6)	5693
Total literacy rate (%)	76.66
Male literacy rate(%)	83.74
Female literacy rate(%)	69.02
Female sex ratio	1009
Child sex ratio	931
Total families	31566
Scheduled caste	14502
Scheduled Tribe	3914
Illiterate	52196

3.3 Agricultural status of the Bobbili

The soils were strongly acidic to moderately alkaline in reaction, non-saline to critical for germination, low to high in organic carbon, low to medium in available nitrogen, low to high in available phosphorus and potassium and sufficient in available sulphur. Among the micronutrients, the soils were deficient to sufficient in zinc, sufficient in manganese and copper while, sufficient at surface and deficient to sufficient at subsurface in iron.

Source Available Nutrient Status and Fertility Capability Grouping of Soils of Bobbili Mandal, Vizianagaram District, Andhra Pradesh P. SOWJANYA, Received: 17.11.2015

Table 3.4 Land use pattern of the study area

Particulars	**Area(Ha)**
Gross cultivated area	11880
Net cultivated area	10642
Marginal area	85
Forest area	250
Orchids area	1350
Total area	13565

Table 3.5 Area, Production, Productivity of major crops in Bobbili area

Crop	Area (Ha)	Production (MT)	Productivity (MT/Ha)
Paddy (Kharif) Irrigated Un Irrigated	 6169 251	 34546.4 1405.6	 5.6 5.6
Paddy (Rabi)	340	1632	4.8
Black Gram	1850	1017	0.54

CHAPTER 4

Methodology

This chapter forms the background regarding the methodological aspects of addressing the research problem under consideration. It is imperative to give the details of investigation and methods adopted by investigator in finding out the fact or problems.

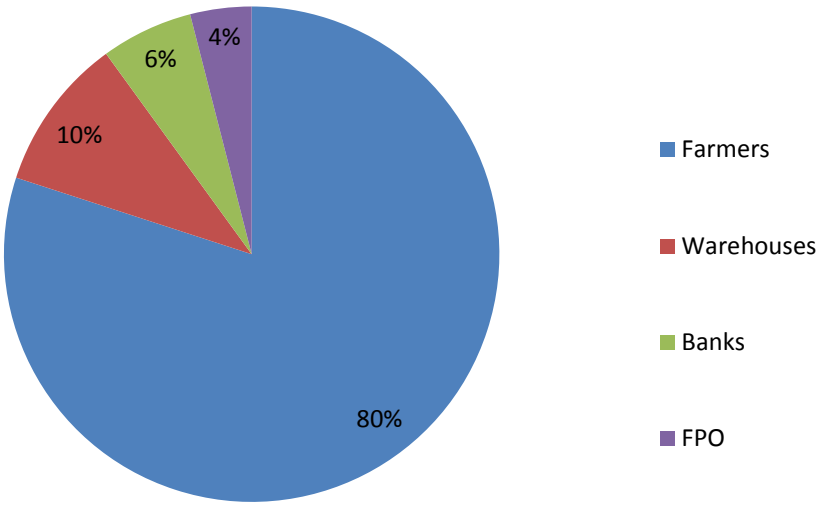
4.1 Sampling size

It includes the collection of data from 40 farmers, 5 warehouses [FCI,SWC,PRIVATE], 3banks (from Karur vyshya bank, oriental Bank of commerce, Bank of Baroda) and 2 farmer producer organisations.

4.1.1 Table Sample size

Particulars	Number
Farmers (Small and Marginal)	40
Warehouses (executives/Managers)	5
Banks	3
Farmer producer organisations	2

Fig 4.1.1.1 Graphical representation of sample size in percentages



The data collected for the commodities Paddy and Black Gram from the farmers who were storing in the warehouse and for Jaggery from farmers who storing their produce in the cold storage.

4.2 Collection of data:

PRIMARY DATA*:* The data used in the study to fulfil specified objectives are collected from the specified farmers through personal interview, structured questionnaire, and focussed group discussion from farmers, FPO and from banks with the help of pretested schedules. The data on family composition, land holding, asset structure of sample farmers, storage of produce in warehouse, bank loans advances against warehouse receipts are needed to be collect.

SECONDARY DATA: Secondary data relevant to the study were collected from the Agricultural department, warehousing records and from relevant statistical websites.

Chapter 5

Results and discussion

5.1 Statistical Tool (Henry Garrett's ranking technique):

This technique is used to evaluate the most significant factor which influences the respondent. As per this method, respondents have been asked to assign ranks for all factors and the outcomes of such ranking have been converted into score value with the help of the following formula:

Per cent position = 100 (Rij – 0.5) / Nj

Where, Rij = Rank given for the ith variable by jth respondents

Nj = Number of variables ranked by jth respondents

With the help of Garrett's Table, the per cent position estimated is converted into scores. Then for each factor, the scores of each individual are added and then total value of scores and mean values of score is calculated. The factors having highest mean value is considered to be the most important factor.

In the study, the respondents were asked to rank from 1 to 7 for the problems they may face for the direct linkage of warehouse and farmers. Also they have been asked for the factors that have to be established for the successful launch of farmers in the warehouse. These scores were manipulated mathematically and each factor has been assigned a rank based on its importance and influence over the farmers.

Table 5.2 Comparison between profits received by the farmers in existing system and direct linkage to warehouse

Commodity	Particulars	Existing System(Rs./Kg)	Direct Linkage Rs./Kg)	Increased profit (Rs./Kg)	Total increased profit (Rs./ac)

Paddy	Sale price (Rs/Kg)	17.5	19.7	2.2	**3427.2**
	Transportation cost (Field to PU) (Rs./kg)	0	0.66	-0.66	
	Processing cost (Rs./kg)	0	0	0	
	Cost of cultivation	6.6	6.6	**0**	
	Storage cost		**0.01**	**-0.01**	
	Total	**10.9**	**12.43**	**1.53**	
Black gram	Sale price (Rs/Kg)	43.3	46.2	2.9	**818**
	Transportation cost (Field to PU) (Rs./kg)	0	1.87	-1.87	
	Processing cost (Rs./kg)	15	15	0	
	Storage cost		0.0075	-0.0075	
	Cost of cultivation	2	2	0	
	Total	**26.3**	**27.32**	**1.02**	

Table 5.3 Comparison between profits received by the farmers in the current and direct linkage to cold storage

Commodity	Particulars	Existing System(Rs./Kg)	Direct Linkage Rs./Kg)	Increased profit (Rs./Kg)	**Total increased profit (Rs./ac)**
Jaggery	Sale price (Rs/Kg)	40	44.4	4.4	**8750**
	Transportation cost (Field to PU) (Rs./kg)	0	0.5	-0.5	

	Processing cost (Rs./kg)	6.4	6.4	0	
	Cost of cultivation	10	10	0	
	Storage costs		1.4	-1.4	
	Total	**23.6**	**26.1**	**2.5**	

From the above table, it was found that when the producer sells his produce through the current marketing channel, the price received for the produce is Rs17.5 kg of paddy. And if the farmer intends to sell his produce after storing at warehouse he will get Rs.19.7 per kg of produce. But in case of the current marketing channel, the farmers need not pay for the transportation cost and warehouse rent. If the proposed system is implemented the farmers need to bear an additional transportation cost of Rs.0.66 per kg of the produce and warehouse rent as 0.01Rs/Kg. Despite the inclusion of transportation cost, warehouse rent the farmers will get an additional profit of Rs.1.53 per kg of paddy. Finally, the farmer will have an additional profit of Rs.3427.2 per acre for paddy Similarly, the farmer can earn Rs. 818 per acre of black gram crop. Similarly in case of processed good like Jaggery currently the farmer is getting Rs.40/kg. But after storing in cold storage he need to bear the transportation cost, cold storage rent. Even though the farmer is getting profit of 8750.

Marketable surplus of paddy:

The farmer consumes 640Kgs of 2240Kgs of paddy produced per acre, the marketable surplus of the farmer after keeping the remaining produce in warehouse is 2448 as the profit of paddy is 1.53Rs/Kg.

Marketable surplus of Black Gram:

The farmers consumes 60Kgs of 800Kgs of black gram produced per acre, the marketable surplus of farmer after keeping in warehouse is 754.8 as the profit of black gram 1.02Rs/Kg.

Marketable surplus of Jaggery:

The farmers consumes 20Kgs of 3500Kgs of jaggery produced per acre, the marketable surplus of farmer after keeping in cold storage is 8700 as the profit of jaggery is 2.5Rs/Kg.

5.4.Challenges faced by the farmers:

The farmers were asked to list down the problems in the proposed system of utilisation of the warehousing facilities by farmers and each of the problem statement was ranked from 1 to 7 based on the importance of each factor by the farmers itself. Garrett's Ranking Technique was employed to analyse the ranked data and is presented as follows.

Table 5.4.1: Preferences and ranking of problems alleged by the farmers

S No	Particulars	1st	2nd	3rd	4th	5th	6th	7th
1	Same price all over the year	18	10	2	0	0	0	0
2	To clear off the debts quickly	6	8	5	5	6	0	0
3	Lack of awareness	2	6	6	2	10	4	0
4	Lack of proper storage facilities	0	5	8	11	2	2	2
5	Problem of getting loans	1	1	1	4	7	9	7
6	Transportation cost	0	2	8	6	4	7	3
7	More costs charged by the warehouses	1	0	0	2	1	8	18

The table shows the preference and ranking of problems anticipated by the respondents about the utilisation of warehouse facilities by the farmers. Among the 30 farmers, same price all over the year was ranked as first by 18 respondent, second ranked by 10 respondents. Similarly, to clear the debts was ranked as first by 6 respondents, second ranked by 8 respondents. In the same way all respondents gave ranking to their problems facing. The Garrett's ranks were calculated by using appropriate Garrett's Ranking formula. The based on the Garrett's ranks, the Garrett's value was calculated. The Garrett's tables and scores of problem listed in above table, and multiplied to records scores in table 2, finally by adding each row, the total Garrett's score were obtained

Per cent position = 100 (Rij – 0.5) / Nj

Where, Rij = Rank given for the ith variable by jth respondents

Nj = Number of variable ranked by jth respondents

Table 5.4.2 Percent Position and Garrett's Value

S. No.	100 (Rij- 0.5) Nj	Percent position	Garrett's score
1	100 (1-0.5)/ 7	7.14	79
2	100 (2-0.5)/ 7	21.43	66
3	100 (3-0.5)/ 7	35.71	57
4	100 (4-0.5)/ 7	50.00	50
5	100 (5-0.5)/ 7	64.29	43
6	100 (6-0.5)/ 7	78.57	35
7	100 (7-0.5)/ 7	92.86	21

Table 5.4.3 Calculation of Garrett's score and Ranking for the problems listed by the farmers for warehouses

Particulars	Garrett's score							Average	Rank
	1	2	3	4	5	6	7		
Same price all over the year	1422	660	114	0	0	0	0	74.65	**1**
To clear off the debts quickly	474	528	285	250	258	0	0	58.05	**2**
Lack of awareness	158	396	342	100	430	140	0	48.65	**5**
Transportation cost	0	330	456	550	86	70	42	54.65	**3**
Problem of getting loans from banks	79	66	57	200	301	315	147	38	**6**
Lack of proper storage facilities	0	132	456	300	172	245	63	51.1	**4**

More costs charged by the warehouses	79	0	0	100	43	280	378	25.9	**7**

From the above table, the most important problem that the farmers expect to arise from "utilisation of warehousing facilities by farmers" is price of the produce is not changing it will be same all over the year. Another major factor is farmers want to clear off their debts soon after selling the harvested produce. They are assuming that they won't get money in between the period of storage apart from that they would not have any idea about the warehouse receipts to utilise the credit facility to clear off their debts, needs. But, the farmers tend to get more profit if they are willing to sell their produce after bringing at favourable market price. So, the farmers had to be made aware of the market information.

Following these factors, the farmers have to abide the transportation cost from the field to the warehouses in the proposed system. But in case of the existing channel, the commission agents or the cooperative societies themselves take the produce from the field to the processing unit. So, farmers find it difficult to bare the transportation cost. In some areas even the farmers are willing to keep produce in the warehouses but they are not having proper infrastrural storage facilities that is low capacity godowns are maintained which are not sufficient to store maximum produce of that area. The others problems alleged by the farmers are problem of getting loans and more costs charged by warehouses.

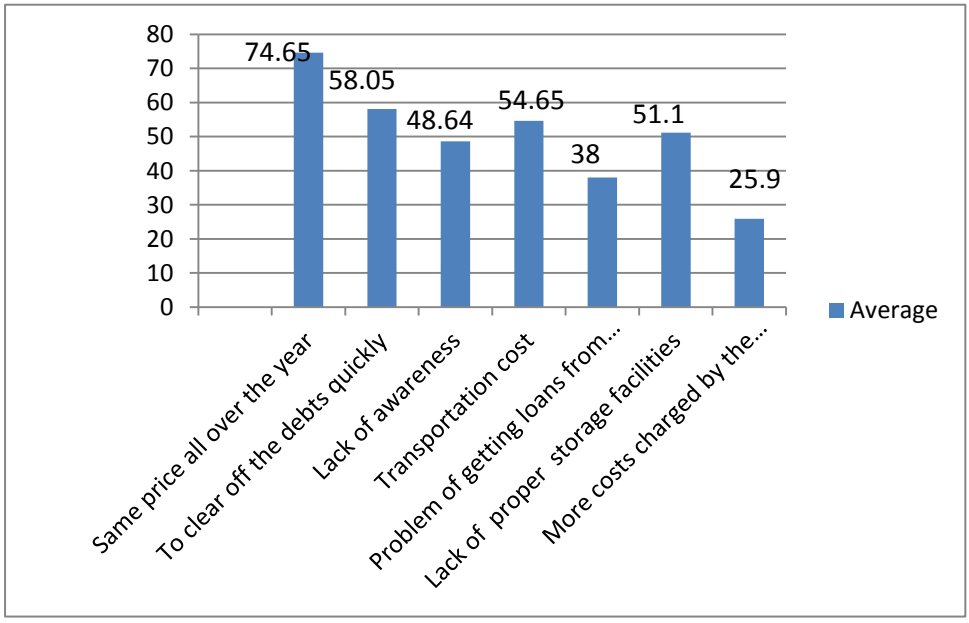


Fig 5.3.4: Average Garrett's scores of problems expected to arise in the process of linking farmers to warehouse

5.4 suggestions by the farmers to the government for using warehousing facilities

- ✓ Government must include the awareness among the people about the warehouses
- ✓ Price variation must be there.
- ✓ Implementing the proper infrastructural facilities.
- ✓ Increase in the number of warehouses.
- ✓ loans procedure should be simple.

CHAPTER 6

SUMMARY AND CONCLUSIONS

The study shows that, the cost of paddy Rs.17.5/Kg. And if the farmers are using warehouse facilities it will cost Rs.19.7per kg of Paddy. This will get Rs.2.2 per kg of Paddy for the government. Ultimately, the farmer will get profit Rs.3427.2.2per acre.. The major cause for this profit is the farmer catch the increased market value by using the warehouses. Similarly, black gram farmers will profit by Rs.1.02 per kg of the produce

It was found that when the producer sells his produce through the current marketing channel, the price received for the produce is Rs.17.5 kg of paddy. And if the farmer intends to sell his produce after storing at warehouse he will get Rs.19.7 per kg of produce. But in case of the current marketing channel, the farmers need not pay for the transportation cost and warehouse rent and if the proposed system is implemented the farmers need to bear an additional transportation cost of Rs.0.66 per kg and storage cost of 0.01Rs/Kg of the produce. Despite the inclusion of transportation cost, storage cost the farmers will get an additional profit of Rs.1.53 per kg of paddy. Finally, the farmer will have an additional profit of Rs.3427.2.2 per acre for paddy and his profit in marketable surplus is Rs.2448 per acre. Similarly, the farmer can earn Rs.818 per acre of black gram crops and his profit in marketable surplus is Rs.754.8 per acre. In case of processed good like Jaggery currently the farmer is getting Rs.40/kg. But after storing in cold storage he bears that transportation cost and storage cost even though the farmer is getting profit of Rs.2.5/Kg. So the profit per acre is Rs.8750 and his profit in marketable surplus is 8700/Kg.

The employment of Henry Garrett's Ranking technique to analyse the rankings given by the farmers to the problems listed by themselves implies that the most important problem that the farmers expect to arise from "utilisation of warehousing facilities by farmers" is price for the produce is not changing it will be same all over the year. Another major factor is farmers want to clear off their debts soon after selling the harvested produce. They are assuming that they won't get money in between the period of storage apart from that they would not have any idea about the warehouse receipts to utilise the credit facility to clear off their debts, needs. But, the farmers tend to get more profit if they are willing to sell their produce after bringing at favourable market price. So, the farmers had to be made aware of the market information.

Following these factors, the farmers have to abide the transportation cost from the field to the warehouses in the proposed system. But in case of the existing channel, the commission agents or the cooperative societies themselves take the produce from the field to the processing unit. So, farmers find it difficult to bare the transportation cost. In some areas even the farmers are willing to keep produce in the warehouses but they are not having proper infrastructural facilities that is low capacity godowns are maintained which are not sufficient to store maximum produce of that area. The others problems alleged by the farmers are problem of getting loans and more costs charged by the warehouses.

A part from that suggestions by the farmers to the government in using warehousing facilities Government must include the awareness among the people about the warehouses, Price fluctuation must be, Implementing the proper storage facilities, Increase in the number of warehouses, loans procedure should be simple. An inadequate storage godown nearby village restricts the storage of produce by farmers. Hence, storage facilities must be established upon assessing the requirements.

6.1 Policy Suggestions:

1) The farmers presume that if they sell their produce at one go, they will earn the profit at a time and they are not clear about the alternative channels. In this regard more awareness camps may be organized to make them aware about the benefits of using the services of warehouse. Most of the farmers are not aware about the services offered by warehouses and the benefits of.
2) The public warehouses should offer incentives for adoption of the usage of the modern warehouses so as to encourage farmers to adopt the usage of the facilities.
3) These incentives can be in the farm of the earning points for promotions depending on the frequency and volume of farmer produce, discounts on the bills or allocation of free space for temporary storage in the farm produce for farmers who consistently use the warehouses.
4) The warehouses may offer the loan facility to the farmer to encourage the services of warehouses facilities.

CHAPTER 7

ANNEXURE

Garrett's ranking table

Percentage	Score	Percentage	Score	Percentage	Score
0.09	99	20.93	66	80.61	33
0.2	98	22.32	65	81.99	32
0.32	97	23.88	64	83.31	31
0.45	96	25.48	63	84.56	30
0.61	95	27.15	62	85.75	29
0.78	94	28.86	61	86.89	28
0.97	93	30.61	60	87.96	27
1.18	92	32.42	59	88.97	26
1.42	91	34.25	58	89.94	25
1.68	90	36.15	57	90.83	24
1.96	89	38.06	56	91.67	23
2.28	88	40.01	55	92.45	22
2.63	87	41.97	54	93.19	21
3.01	86	43.97	53	93.86	20
3.43	85	45.97	52	94.49	19
3.89	84	47.98	51	95.08	18
4.38	83	50	50	95.62	17
4.92	82	52.02	49	96.11	16
5.51	81	54.03	48	96.57	15
6.14	80	56.03	47	96.99	14
6.81	79	58.03	46	97.37	13
7.55	78	59.99	45	98.72	12
8.33	77	61.94	44	98.04	11
9.17	76	63.85	43	98.32	10
10.16	75	65.75	42	98.58	9
11.03	74	67.48	41	99.82	8

12.04	73	69.39	40	99.30	7
13.11	72	71.14	39	99.22	6
14.25	71	72.85	38	99.39	5
15.44	70	74.52	37	99.55	4
18.69	69	76.12	36	99.68	3
18.01	68	77.68	35	99.80	2
19.39	67	79.12	34	99.91	1
				100	0

E.Garrett's statistics in Psychology and Education, Feffer and Simans Private Limited, 21969, p.329.

Questionnaire to warehouse

Name of the in charge:

Contact number: distance from village:

1. What is the total storage capacity of the warehouse?
2. What are the crops that are being received?
3. List of locations from where the crops are being procured?
4. What is the total quantity of each commodity stored?
5. At what price do you procure from farmers?
6. How is the price fixed?
7. What is the duration of storage of each commodity?
8. What is the storage cost charged for each commodity [Rs./Tonnes]?
9. What is the mode of transportation?
10. What is the transportation cost charged?
11. Who are all the intermediaries involved in the procurement process?
12. What is the price of commodity for each intermediary?
13. Details of loss in quality and quantity of produce during procurement?
14. Do you provide any pest and disease control facility?

15. How you pay responsibility towards the loss of produce? With what you compensate with that loss?
16. When was the warehouse established?
17. If the warehouse was private, who are the shareholders and their contribution?
18. How the farmers prioritise the public and private ware houses?

Questionnaire to farmer

General particulars:

1] Name of the farmer: Age: contact no:

2] Address:

3]Educational qualification:

a] Below matric b]Matric c]Graduate d]Others

4] Annual household income [in Rs]:

a] Below 1.5 lakh b]1.5-3 lakh c]3-5 lakh d]Above 5 lakh

5] Land Resources:

S No	Land	Area[ac]			
		Owned	Leased	Leased out	Total operated area

6] Farming experience[in years]:

7] Total no. of members in their family:

8] Particulars for agriculture allied activities:

Particulars	numbers	Total production	Total cost	Value of output	Net income
Poultry					
Dairy					
Goat					

9]Crop details:

Name of the crop: season: mode of marketing:

To whom do you sell your produce?

Particulars	
Area cultivated	
Total production	
Total cost of cultivation	
Price received for the produce[Rs./quintal]	
Transaction cost incurred by farmer	
Actual market price of the	

produce[Rs./qntl]	
MSP of crop as announced[Rs./qntl]	
Gross revenue received from the crop	
Net revenue from the crop	

10] where you are storing the produce?

11] At what distance that warehouse is located from you?

12] Is storing of your produce is advantage to you?

13] what is the market value at the time of your storage?

14] which warehouse is useful either public or private? And why?

15] Details about the quantity of storage?

16] Is warehouse receipt is useful to you?

17] Is there any problem of getting loans even though you are having a warehouse receipt?

18] Do you want to proceed to use these warehouses in future too?, if no reason.

19] Are you keeping entire produce for storage or you will store part of it for your consumption purpose?

20] what is the cost involved for storing the bag per day?

21] which commodity is storing more?

22] Is there any middle man involved in supply channel?

Questionnaire to bank

- Name if the Bank: Location:

- Do you provide loans to farmers based on warehouse receipt? If, yes how many farmers you had provided the loans?
- Conditions for obtaining the loan by the farmer?
- Is there any difference between amount of loans providing for public and private warehouse? If, Yes say details.
- At what interest rate do you give loans for public and private warehouse?
- Tenor of loan against warehouse receipt for both public and private warehouse?
- For which commodity they are providing loans?
- How much worth were made to farmers against warehouse receipts?
- Do you provide loans for consumption purpose apart from the loans getting through warehouse receipt?
- The problems they are facing in giving and recovering the loans?
- If the farmer is unable to pay loan in a given period what measures you are going to take?
- What is the maximum and minimum level of loan amount?
- Is there any phase disbursement process in processing the loans or you provide loan at once?
- What are all documents/requirements needed apart from warehouse receipt?

Questionnaire to Farmer Producer Organisations

- ✓ Name of the FPO: Location:
- ✓ Number of members in your organisation:
- ✓ What are the commodities they are producing?
- ✓ Where you are storing your commodity?
- ✓ What are all the inputs you bought?
- ✓ At what distance that warehouse is located from your organisation?
- ✓ Is storing of your produce is advantage to you?
- ✓ what is the market value at the time of your storage?
- ✓ which warehouse is useful either public or private? And why?
- ✓ Details about the quantity of storage?

- ✓ Is warehouse receipt is useful to you?
- ✓ Is there any problem of getting loans even though you are having a warehouse receipt?
- ✓ Do you want to proceed to use these warehouses in future too?, if no reason.
- ✓ Are you keeping entire produce for storage or you will store part of it for your consumption purpose?
- ✓ what is the cost involved for storing the bag per day?
- ✓ which commodity is storing more?
- ✓ Is there any middle man involved in supply channel?
- ✓ What is the transportation charge?

Generated Date:28-Jan-2019

Andhra Pradesh State Civil Supplies Corporation Ltd.

TRUCK SHEET

-: Transport Agency Copy :-

Date: 07/Jan/2019 **No:PTR1020614151800280**

From:

Parvathipuram PACS Procurement Center,
Center Code: 102061415,
Parvathipuram Mandal.

To:

Sri Vijaya Sankara Mini MRM.,
Krishnapalli,
Code: 202061421,
Parvathipuram Mandal.

Vehicle No	No.of Bags	Net Weight(Qtls)	No.of Farmers
AP05TT6300	433	173.2	4

List of Farmers and Quantity:-

S.No.	Farmer Name	Aadhaar ID	Grade	No.of Bags(40 Kg)	Net Weight (Quintal)
1	CHINNAMMALU BUGATHA	XX4588	COMMON -NON-PREFERRED	156	62.4
2	CHINNAMMI AGINENDRAU	XX9811	COMMON -NON-PREFERRED	147	58.8
3	ESWARA RAO CHEVITI	XX6103	COMMON -NON-PREFERRED	62	24.8
4	Jamminaidu Gavara	XX9636	COMMON -NON-PREFERRED	68	27.2
TOTAL				433	173.2

310

Generated Date:28-Jan-2019

Andhra Pradesh State Civil Supplies Corporation Ltd.

TRUCK SHEET

-: Miller Copy :-

Date: 07/Jan/2019 **No:PTR1020614151800280**

From:

Parvathipuram PACS Procurement Center,
Center Code: 102061415,
Parvathipuram Mandal.

To:

Sri Vijaya Sankara Mini MRM.,
Krishnapalli,
Code: 202061421,
Parvathipuram Mandal.

Vehicle No	No.of Bags	Net Weight(Qtls)	No.of Farmers
AP05TT6300	433	173.2	4

List of Farmers and Quantity:-

S.No.	Farmer Name	Aadhaar ID	Grade	No.of Bags(40 Kg)	Net Weight (Quintal)
1	CHINNAMMALU BUGATHA	XX4588	COMMON -NON-PREFERRED	156	62.4
2	CHINNAMMI AGINENDRAU	XX9811	COMMON -NON-PREFERRED	147	58.8
3	ESWARA RAO CHEVITI	XX6103	COMMON -NON-PREFERRED	62	24.8
4	Jamminaidu Gavara	XX9636	COMMON -NON-PREFERRED	68	27.2
TOTAL				433	173.2

REDMI NOTE 5 PRO
MI DUAL CAMERA

The Fair Average Quality(FAQ) Parameters of the Paddy :

S.No.	Farmer Name	*FAQ Parameters (Upto Max %)					
		1 (1%)	2 (1%)	3 (3%)	4 (5%)	5 (6%)	6 (17%)
1	CHINNAMMALU BUGATHA	1	1	1	2	3	12.3
2	CHINNAMMI AGINENDRAU	1	1	2	3	4	12.3
3	ESWARA RAO CHEVITI	1	1	2	3	4	12.3
4	Jamminaidu Gavara	1	1	2	3	4	12.3

**FAQ Parameters :*

1. *Inorganic Foreign Matter*
2. *Organic Foreign Matter*
3. *Immature, Shrunken and Shrivelled Grains*
4. *Damaged, discoloured, Sprouted and Weevilled Grains*
5. *Admixture of Lower Class*
6. *Moisture Content*

Acknowledgement

I have verified the Quantity of Paddy and its Quality is within the limits of Fair Average Quality(FAQ) as mentioned above. Hence, I Acknowledge the receipt of **433** Bags of paddy with Net Weight **173.2** Quintals (**Common-Non-Preferred** variety of paddy **173.2** Quintals).

Signature/Thumb impression of Truck Driver or Contractor

Digitally signed by me

BODDU BHASKARA RAO

Date:09-Jan-2019

Page 2 of 2

The Fair Average Quality(FAQ) Parameters of the Paddy :

S.No.	Farmer Name	*FAQ Parameters (Upto Max %)					
		1 (1%)	2 (1%)	3 (3%)	4 (5%)	5 (6%)	6 (17%)
1	CHINNAMMALU BUGATHA	1	1	1	2	3	12.3
2	CHINNAMMI AGINENDRAU	1	1	2	3	4	12.3
3	ESWARA RAO CHEVITI	1	1	2	3	4	12.3
4	Jamminaidu Gavara	1	1	2	3	4	12.3

**FAQ Parameters :*

1. *Inorganic Foreign Matter*
2. *Organic Foreign Matter*
3. *Immature, Shrunken and Shrivelled Grains*
4. *Damaged, discoloured, Sprouted and Weevilled Grains*
5. *Admixture of Lower Class*
6. *Moisture Content*

Acknowledgement

I have verified the Quantity of Paddy and its Quality is within the limits of Fair Average Quality(FAQ) as mentioned above. Hence, I Acknowledge the receipt of **433** Bags of paddy with Net Weight **173.2** Quintals (**Common-Non-Preferred** variety of paddy **173.2** Quintals).

Signature/Thumb impression of Truck Driver or Contractor

Digitally signed by me

BODDU BHASKARA RAO

Date:09-Jan-2019

Page 2 of 2

REDMI NOTE 5 PRO
MI DUAL CAMERA

CHAPTER 8

LITERATURE CITED

Saxena H.K. 2003 "Economics of storage of wheat in East Utter Pradesh" published by *Northern Book Center*, New Delhi. ISBN 81-7211-136-3

Pal and Wadhwa 2007 Commodity price volatility and special safeguard mechanics. *Economics and political weekly.* 42(5):417-27

Mahanta, D, 2012. Review of warehouse receipt. As An Instrument For Financing India *International journal of Scientific and Technology* Research. 1(9):2277-8616.

Tanksale, A and Jha, J.K 2010. Developing a mathematical model to optimize food grains storage and transport for public distribution system in India. *Applied soft computing*. 1-10.

Javed Ali, Aaushi Sharma, and poonam Rani. 2015. Overview of grain Drying and storage problems in India Journal of Traditional Knowledge. 8(2):225-229

Adigal V S Shradda Singh 2015. Agricultural Marketing vis-à-vis warehousing facility. *The business & Management Review*, Volume 5(4):43-50.

Esther Magdalene Sharon, M., Kavitha Abhirami, C.V and Algusundaram, K .2014. Grain Storage Management in India. *Journal of postharvest Technology*. 02(01):012-024

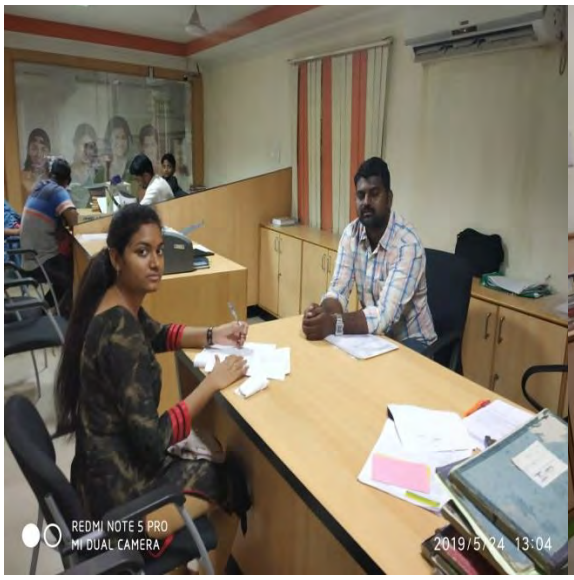
SOURCE https://en.m.wikipedia.org/wiki/Bobbili

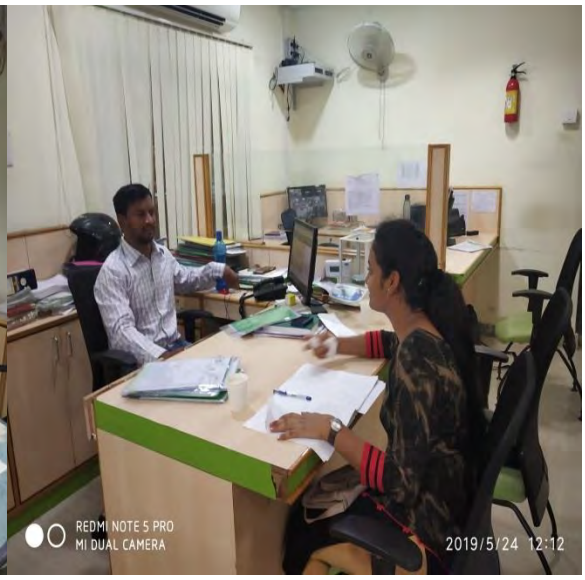
SOURCE https://en-climate-data-org.cdn.ampproject.org/v/s/en.climate-data.org/asia/india/andhra-pradesh/Bobbili-1012571/?amp-gsa=1&amp=true&usqp=mq331AQA#referrer=https%3A%2F%2F

Source: https://www.census2011.co.in/data/town/802944-bobbili-andhra-pradesh.html%3A%2F%2Fwww.google.com&amp-tf=From%20%251%24s

CHAPTER-9

PHOTOS





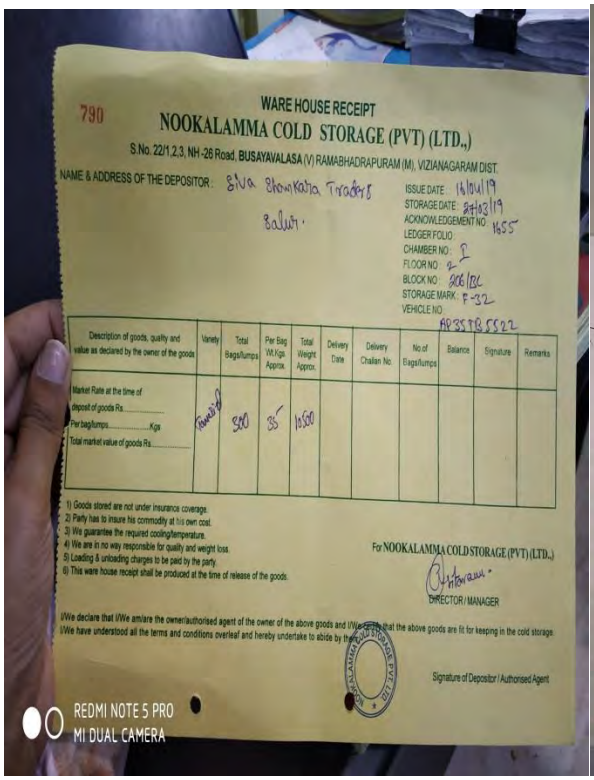
Interviewing the bankers

VISIT TO WAREHOUSES

WAREHOUSES WITH STORED GRAINS

Visit to Cold Storage

COLD STORAGE WITH JAGGERY



WARE HOUSE RECEIPT

790

NOOKALAMMA COLD STORAGE (PVT) (LTD.,)

S.No. 22/1,2,3, NH-26 Road, BUSAYAVALASA (V) RAMABHADRAPURAM (M), VIZIANAGARAM DIST.

NAME & ADDRESS OF THE DEPOSITOR : Siva Shankara Traders Balur.

ISSUE DATE : 16/04/19
STORAGE DATE : 24/03/19
ACKNOWLEDGEMENT NO. 1655
LEDGER FOLIO :
CHAMBER NO. : 2
FLOOR NO : 2
BLOCK NO : 506/BC
STORAGE MARK : T-32
VEHICLE NO AP35TB5522

Description of goods, quality and value as declared by the owner of the goods	Variety	Total Bags/lumps	Per Bag W.Kgs Approx.	Total Weight Approx.	Delivery Date	Delivery Challan No.	No.of Bags/lumps	Balance	Signature	Remarks
Market Rate at the time of deposit of goods Rs..... Per bag/lumps.....Kgs Total market value of goods Rs.....	Tandal	500	35	17500						

1) Goods stored are not under insurance coverage.
2) Party has to insure his commodity at his own cost.
3) We guarantee the required cooling/temperature.
4) We are in no way responsible for quality and weight loss.
5) Loading & unloading charges to be paid by the party.
6) This ware house receipt shall be produced at the time of release of the goods.

For NOOKALAMMA COLD STORAGE (PVT) (LTD.,)

DIRECTOR / MANAGER

I/We declare that I/We am/are the owner/authorised agent of the owner of the above goods and I/We certify that the above goods are fit for keeping in the cold storage. I/We have understood all the terms and conditions overleaf and hereby undertake to abide by the

Signature of Depositor / Authorised Agent

REDMI NOTE 5 PRO
MI DUAL CAMERA

Staragri

Star Agriwarehousing and Collateral Management Limited

A 601-604, Bonanza Building, Sahar Plaza Complex, Near J.B. Nagar Metro Station, J.B. Nagar, Andheri (East), Mumbai – 400 059

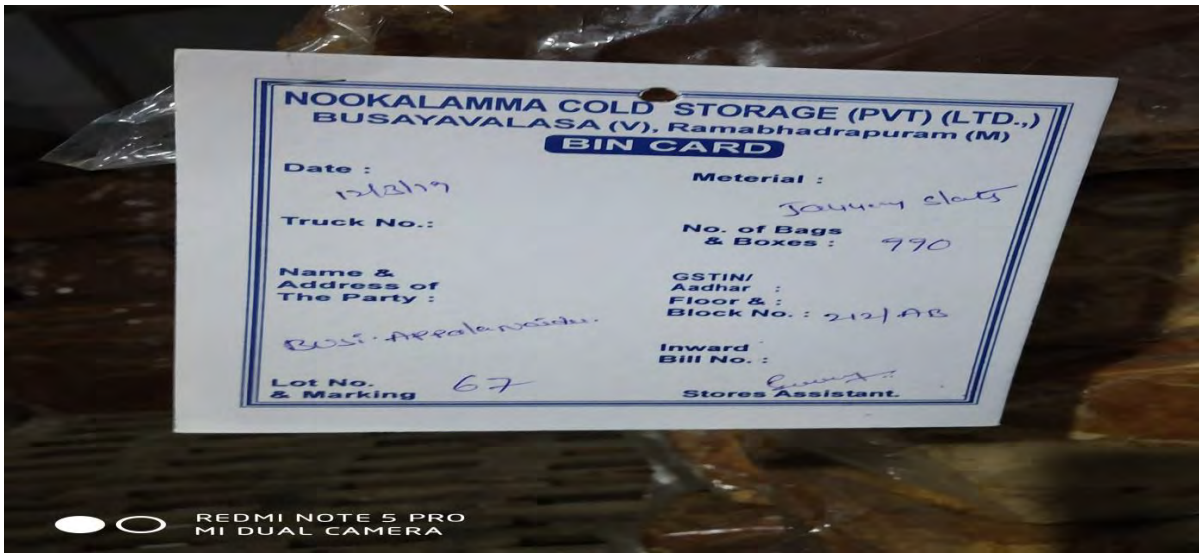
STORAGE RECEIPT(SR)

SR No.	SR-1911182	Date of Issue	27-Mar-2019	Base Receipt No.	155
DS No.	IN-A157066	Date of Deposit	26-Mar-2019	Staragri Branch Name	RAJAHMUNDRY
Warehouse Name	Sri Narayana Cold Storage				
Warehouse Address	Mutcherlavalasa, Ramabhadrapuram (M), Vizianagaram Dist. AP				
Depositor Name	B Thirupathi				
Depositor Address	Ramamandhiram street ,rejeru uttaravalli ,ANDHRA PRADESH - 535124				
Commodity	Variety	No. of Units	Net Weight	Grade	
JAGGERY	STD	192	3.440 MT	Average	
Validity			From 27-Mar-2019	To 26-Dec-2019	
Market Rate of Commodity(₹)		30000.000 /MT	Value of Commodity(₹)	103200.000	
Value of Commodity(in words)	One Lakhs Three Thousand Two Hundred Rupees Only				
Hologram No	387924				
Insurance Declaration	Insurance managed by Bank , BANK OF BARODA				
Policy Type	Policy No.		Valid From	Valid To	Sum Insured
Fire					
Burglary					
Lien Details					
Date	Name of lender				
27-Mar-2019	BANK OF BARODA -BOBBILI				
			Signature & Stamp of authorised signatory		
Withdrawn History	The goods mentioned below are hereby released for delivery from warehouse The unreleased balance is subjected to lien for unpaid charges and borrowing from lending				
Date	Released Weight	Released No of Bags	Balance Weight	Balance No of Bags	Signature & Stamp of Warehouse manager

Note: The document is NOT valid without a Hologram of Staragri affixed over it & the serial number in the hologram should match with the hologram number Printed

REDMI NOTE 5 PRO
MI DUAL CAMERA

WAREHOUSE RECEIPTS



NOOKALAMMA COLD STORAGE (PVT) (LTD.,)
BUSAYAVALASA (V), Ramabhadrapuram (M)

BIN CARD

Date : 12/2/19

Meterial : Jaggery slots

Truck No.:

No. of Bags & Boxes : 990

Name & Address of The Party : Bos. Appalanaidu.

GSTIN/ Aadhar :
Floor & :
Block No. : 212/AB

Inward Bill No. :

Lot No. & Marking 67

Stores Assistant.

REDMI NOTE 5 PRO
MI DUAL CAMERA

TAG OF STORED PRODUCT JAGGERY

Interviewing the farmers