"STUDY OF INFRASTRUCTURAL FACILITIES AVAILABLE AT AGRICULTURAL PRODUCE MARKET COMMITTEES (APMCs) AND THEIR UTILIZATION IN MAHARASHTRA STATE."

BY

MS. ARCHANA VISHWANATH VIKHE

B.Sc.(Agri.)

Dissertation

Submitted to Marathwada Agricultural University

In partial fulfillment of requirement for

The degree of

Master of Science

(Agriculture)

In

AGRICULTURAL ECONOMICS

DEPARTMENT OF AGRICULTURAL ECONOMICS

AND STATISTICES

MARATHWADA AGRICULTURAL UNIVERSITY

PARBHANI. (431 402) (M. S) INDIA.

2003

DEDICATION

AFFECTIONATELY DEDICATED

TO

ARCHITECTS OF MY LIFE

MY BELOVED

PARENTS.

CANDIDATE'S DECLATAION

I hereby declare that the dissertation

Or part thereof has not been

Previously submitted by

Me for a degree or diploma to

Any University

Or

Institute.

Place : PARBHANI

(Ms. Vikhe Archana)

Date : 23 / 06 / 03

Reg. No. 59 M / 2001 A

Dr. K.D. Phuke
M. Sc. (Agri), Ph.D.
Associate Professor
Department of Agril. Economics & Statistics,
Marathwada Agricultural University,
Parbhani. 431 402 (M.S.)

CERTIFICATE - I

This is certify that **Ms. Vikhe Archana Vishwanath** has satisfactorily prosecuted her course of research for a period not less than four semesters and that the dissertion entitled, **"Study of infrastructural facilities available at Agricultural Produce Market Committees (APMCs) and their utilization in maharashtra State."** Submitted by her is the result of original research work and is of sufficiently high standard to warrant its presentation to the examination for the degree of **Master of Science (Agriculture) in Agricultural Economics**. I also certify that the dissertation or part of thereof has not been previously submitted by her for a degree of any University.

Place : PARBHANI.
Date : 23/ 06/2003

(Dr. K.D. Phuke)
Chairman and Research Guide

CERTIFICATE –II

This is to certify that the dissertation entitled, **"Study of infrastructural facilities available at Agricultural Produce Market Committees (APMCs) and their utilization in Maharashtra state."** Submitted by **Ms. Vikhe Archana Vishwanath** to the Marathwada Agricultural University, Parbhani in partial fulfillment of the requirement for the degree of **Master of Science (Agriculture)** in the subject of **Agricultural Economics** has been approved by the student's advisory committee after oral examination on collaboration with the External Examiner.

External Examiner

(Dr. K.D. Phuke)
Chairman and Research Guide

Members of Advisory Committee

(Dr. N.D. Pawar)

Head,
Department of Agricultural Economics,
and Statistics M.A.U. Parbhani.

(Dr. T.G. Satpute)

(Prof. P.R. Waghmare)

Associate Dean (P.G.)
College of Agriculture,
M.A.U., Parbhani.

(Dr. V.M. Bhale)

ACKNOWLEDGEMENT

Emotions are not be adequately expressed in words because the emotions are transformed into formality. My acknowledgements are many more than what I am expressing here.

I have immense pleasure in expressing my deepest sense of gratitude and indebtedness towards my research guide, Dr. K.D. Phuke, Associate Professor Department of Agricultural Economics And Statistics, College of Agriculture, Marathwada Agricultural University, Parbhai for his inspiring guidance, keen interest, constructive criticism and constant encouragement during the course of present investigation and finalization of manuscript of this dessertations.

I express my to the members of my advisory committee, Dr. N.D. Pawar, Head, Department of Agricultural Economics and Statistics, Dr. T.G. Satpute, Associate Professor, P.R. Waghmare, Associate Professor, Dr. V.M. Bhale, Associate Professor, Marathwada Agril. University, Parbhani. I am grateful to the Associate Dean and Principal, College of Agriculture, Marathwada Agricultural, University, Parbhani. for providing the facilities for prosecuting the investigation.

My deep stated gratitude to Dr. S.M. Singare, Associate Professor, Dr. J.N. Gulghule, Assistant Professor, Dr. Mod. Asmotoddin, Assitant Professor Dr. B.R. Pawar, field officers cost of cultivation scheme Dr. V.C. Kale, Associate Professor, Shri M.V. Kachave clerk and shri. Borade Lab. Attendent Department of Agricultural Economics and Statistics, Marathwada Agril. University, Parbhani. for their kind help.

I am thankful to intimate friends, Archana, Sapana, Rekha, Smita, Sujata, Varsha, Vidya, Pushpa, Sonali, Anita, Rajeshree, Pratibha, Ayodhya, Swarupa, Anjira, Sandeep, Maruti, Dhiraj, Kishor, Santosh, Balakrishna, Dhairyshil. Prashant, sanjay, Mauli, Laxmean, Dr. Khane.

I express my hearty thanks to the APMCs of Western Maharashtra and Marathawada regions for their co-operation.

I also offer my words of thanks to Mr. B.S. Kadam, G.N. Potdar, for help is typing the manuscript neatly.

Last but not the least no words are enough to express my sincere thanks to my family members by whose blessings I could achieve this goal.

Place : ***PARBHANI.***

Date : 23 / 06/ 2003

(Ms. A.V. Vikhe)

CONTENTS

LIST OF TABLES

LIST OF FIGURES

Introduction

Chapter I

INTRODUCTION

A well developed agricultural marketing system is considered as a pre-requisite for the development of Agriculture Sector. Infrastructural facilities available at Agricultural Produce Market Committees (APMCs) and their utilization is the very important. In Maharashtra Agriculture produce marketing Act was passed in 1963 and this act was implemented from 1967, onwards. The objectives of the act were, to safeguard the interest of farmers, help the farmers, to get better prices for their produce, avoid delay in payment and carryout marketing of farm produce in better ways.

Infrastructural facilities in APMCs is defined as facilities in the market yards, helps to carryout marketing of farm produce in a better ways and also helps to the farmers to get better prices for their produce.

The development of infrastructural facilities in the modern market yards has succeeded to the significant extent in ensuring smooth flow of agricultural produce from the producer to consumer. An inefficient agricultural marketing system has been a major impediment for the growth of marketable surplus and realization of remunerative prices by the farm producers. Several imperfections and distortions without necessary infrastructural facilities were prevailent in the traditional marketing system. Since regulation of markets and creation of infrastructural facilities are complementary to each other for development of agricultural produce markets, merely regulation of markets was not enough to attract the market users in reaping the benefits of orderly market conditions. Lack of the minimum infrastructural facilities had an adverse effect on the market users and simultaneously resulting in low operational efficency as well as giving on unhealt hy picture about the performance of the market in general.

Therefore, the need for developing a well-planned market yards with adequate market infrastructural facilities was felt necessary.

The construction of a market yard calls for substantial investment for which most of the regulated markets are not in a position to meet such huge requirement of funds. Not only that, most of them are not able to arrange even for margin money necessary for raising institutional finances. In view of these bottle-necks, a central sector scheme for providing financial assistance to regulated markets was launched during 1972-73. Another scheme for the development of basic infrastructural facilities in primary rural markets and other markets situated in backward areas was sanctioned during 1977-78. In addition to the above, a scheme for creation of rural godowns was also launched in 1979-80.

Similarly, a scheme for grading at producers level was also launched to enable the producers to reap the benefits of Quality Premium. These schemes acted as a catalyst and had a salutary effect on the State Government and enthused them for creating infrastructural facilities in the market yards out of their own financial resources. Besides, several states started massive market development programme with the financial help from other institutions including IDA. World Bank, Commercial Banks, NABARD etc.

There has been a gradual progress in the creation of orderly market conditions. Barring a few, most of the states and UTs have enacted Agricultural Produce Market Regulation Acts and 7068 markets have been brought under the preview of regulation by 31-3-1998. Most of these regulated markets have developed modern market yards with necessary infrastructural facilities. The Central Assistance Scheme enabled 3763 markets in creating infrastructural facilities, although subject to the indentified items provided under the schemes.

The infrastructural facilities cover a number of services provided to the farmers and other market users. However, there exist lot of variation with respect

to the different facilities provided by the APMCs, the extent to which they are provided and the usefulness of these facilities to the various market users. The performance of the market also influences the total marketing costs and the producer's share in the consumer rupee. Though, the individual performance of trader and other market users depend mainly on their skill, motivation and experience, the general working condition in the market provide the basis on which the trader operate. Therefore, the type and scale of service/facilities available in the APMCs have a strong bearing on their performance.

India is a developing country having vast potential in the agricultural sector. Thus, the regulated markets are established as per the provisions of the "Marketing of Agricultural Produce Acts" of the State Government. The regulation of markets generally introduces a system of competitive buying, helps in eradicating trading mal-practices, ensures the use of standardized weights and measures and involves a suitable machinery for the settlement of disputes arising between producer – sellers and buyers of agricultural produce in the market.

Regulated markets aim at the development of marketing structure to ensure remunerative prices to the producers and to narrow down the price spread between the producer and the consumer by equalizing the bargaining power of the parties to transactions. It also aims at reducing the non-functional margins of commission agents by removing mal-practices and illegitimate conventions prevailing in the markets which are detrimental to the interest of the agriculturists. For controlling the activities of regulated marketing, there is a market committee, it consists of representative of farmers, commission agents and government nominees. The complete management of the market rests with the market committee.

As a result of enactment of Regulated Markets Acts by various State Governments a number of regulated markets have been set up to fulfill the aspirations of Indian farmers who have marketable surplus. With the

establishment of regulated markets, many fraudulent practices prevailed in the unregulated markets have been overcome such as; forced sale, market charges are clearly defined and specified, undesirable activities are brought under control, correct weighting is ensured. Reliable and up-to-date market news is made available, suitable arrangement for the settlement of disputes are provided. Open auction method is strictly followed. Other amenities like sheds for the sale of produce, rest houses, parking place, grading, warehousing etc. is provided. Therefore, these markets have become an important institutional frame work of rural development in India.

However, the performance of these regulated markets is considered by many administrators and academicians to be most unsatisfactory. Though, the regulation of markets have brought certain benefits to the farmers, they have not achieved their objectives to the desired extent.

Many a times it is said that the infrastructural facilities are not matching with the requirement or misused. There are some problems with the regulated markets causing no speedy and adequate development in the market yards which affects the efficiency also. It was felt necessary to study these problems and suggest some solutions for the benefits of the producer farmers. Keeping this view in mind the present study was undertaken with the following objectives.

Objectives :

1. To identity the infrastructural facilities created/provided by the selected Agricultural Produce Market Committees.
2. To study the adequacy of infrastructural facilities.
3. To study the utilization of infrastructural facilities by the various market users.

Utility and scope of the study :

Infrastructural facilities are the life blood of agricultural marketing. These are essential for orderly marketing of agricultural produce. It is expected that the necessary infrastructural in the market will be provided by the Agricultural Produce Market Committees (APMCs) for the benefits of the producer-sellers. The present study is a efforts made towards the inventory of infrastructural facilities in the selected agricultural markets of Marathwada and Western Maharashtra regions. This study is useful to known the position of these facilities available and compare and reason out the absence. Present study is useful the policy makers and administrators involved in agricultural marketing. It is also useful to the farmer-sellers and leaders related to agricultural marketing. Further such studies are useful to the students, researchers etc.

Review of Literature

Chapter II

REVIEW OF LITERATURE

It is always worthwhile to study the work done on the various aspects of the research problem by different research workers. Past research work carried out previously provides a sound footing to the problems. It also helps to have a clear idea regarding the concept used, methods employed, analysis and interpretation of data collected etc. The review of such literature is useful in approaching the problem in a reight direction. The work done related to the market infrastructure by differerent research workers in presented into following four heads i.e.

1) Impact of market infrastructural facilities.
2) Problems of seller – producers related to market infrastructure.
3) Constraints in market infrastructure.
4) General.

2.1 Impact of market infrastructural facilities :

Phuke and Hedgire (1986) studied the marketing cost, processing cost and opinion expressed about the marketing facilities by farmers commission agrnts. They reported that the average price received for tur was Rs.507.70 per quintal. Large numbner of farmers get information from the persons who either sold their produce or visited the market. The proportion of these two sources was 88.50 and 55.17 per cent, respectively. About one third of the farmers personally visit the market before the sale and which almost equal number listen radio for this purpose. There was a definite practice of taking farm produce for sale with specific commission agents. The per quintal cost of processing was highest in gram (Rs.23.07) followed by udid (Rs.22.91) tur (Rs.16.92) and mung (Rs.15.32). 92.15 per cent farmers expressed that the village sale was reduced considerably.

About 77 per cent farmers expressed that open auction method was not properly executed as expected. 78 per cent farmers felt about the inadequate loading facility. Weighment should not be delayed and payment may be made immediately after the weighment. Infrastructural facilities at market such as drinking water, canteen, urinals lavatory, police station etc. should also be provided.

Vigneshwara (1988) reported that provision of better storage facilities in the markets can minimize the wastes and thereby the grower can get a better prices for banana. Better transport facilities and roads also reduce the losses.

Rasane and Gore (1992) identified the constraints in marketing of flower in Nashik district of Maharashtra. It was concluded that per day disposal of selected flower was small due to lack of efficient transportation. It was mainly sold in local market resulted in lowering the income of flower growers. The flower like rose which was supplied to Mumbai market has to be sold only through commission agent. Hence depending on middle man, increased lack of bank finance, no proper storage, non availability of another market source processing in forced sale and hence, lowering the income of farmers.

Archana et al. (1995) studied costs and margins over time in the marketing of gur as a case study of regulated markets of districts Muzaffarnagar, Western U.P. Study was related to the marketing costs, marketing margins and price spread for gur over the period 1980/81 to 1991/92 in regulated markets in Muzaffarnagar district Uttar Pradesh. Measures were suggested for reducing marketing costs and margins. Marketing costs and margins are seems to be directly related to the length of the marketing channel and to various market infrastructural facilities such as transport, storage facilities and finance. Regulatory measures have

not had a significant impact on the overall marketing pattern, but have had a clear impact on reducing the margins of the market intermediaries.

Atibudhi (1998) studied an operational and organizational structure of regulated markets in Orissa and analysed impact of market regulation on the farmers. He pointed out that the infrastructural development was not adequate and the entire state had not been covered under market regulation scheme. Agricultural marketing was one of the unorganized and under managed sector in the State.

Anonymous (1999) Govt. of India published a report on the infrastructural facilities provided by APMCs and their utilization and found that many of the APMCs surveyed did not provided the facilities even those are necessary like drinking water, storage godowns, cold storage, banks and post offices, farmers rest house, bathroom, canteen etc. In some of the markets the facilities are created but are not being used. In few market yards, good infrastructural facilities are created.

Basu (2000) attempted to examine empirically whether potato market in West Bengal is efficient or not. The sample consists of 136 farmers from eight villages, four each from cold storage concentration zone and non-concentration zone in Aranibagh block of Hooghly district. The factors namely non-institutional credit, inter-linked credit, distress sale, nature of buying agency, time of sale and cold storage facilities were incorporated in studying the efficiency of potato market. It was observed that the farmers in the village, where the availability of cold storage facilities are abundance, are getting higher prices for potato as compared to the non-availability of cold storage facilities. The pre-dominance of non-institutional credit influenced the price formation, specially money lenders offer lower prices to the farmers.

Pagire et al. (2000) studied the progress and performance of Rahuri Agricultural produce market committee in Ahmednagar district. The study revealed that the market provided all essential amenities to farmers and traders. Besides this, the market has spacious auction platform, sale hall and cattle shed. There were 41 commodities regulated in the market. Recently it has come up as a major onion market in the district. The study further observed that the market is earning good profits since 1995-96. The market has planned the development works worth Rs.1.08 corers. The study concluded that the Rahuri APMC is successful in fulfilling the aspirations both of agriculturists and traders and progressing steadily and fastly with on eye on future development.

Rai et al. (2000) studied the infrastructural development, physical and financial performance, administrative set up, amenities available in regulated market of Haryana. The study concluded that over the years not only the number of regulated markets has increased but also the infrastructural facilities required for orderly marketing of agricultural produce have grown at much faster rate. Over the year s, with increased arrivals, the income of market committees have also increased significantly which is being ploughed back for further expansion of infrastructural facilities. Regarding administrative set up, the number of staff members and the categories over the year has increased as per their requirement with increased market arrivals.

Balaji et al. (2001) reported that low marketed surplus was found as the most important constraints in marketing of groundnut. Other constraints were collusion among the traders. Malpractices in weighment, inadequate storage facilities and late payment by traders, utilization of existing warehouses in the study area by the farmers dissemination of market information to the farmers, payment based on quality and timely

payment are some of the measures which would help not only to improve the efficiency of marketing of groundnut but also increase the production of groundnut in the study area.

Shamsul Alam and Alam (2002) emphasized to have more well integrated markets, priority attention to develop transport and communication system etc.

Tarit Kumar Data (2002) studied the problems of infrastructure in the Agriculture markets and village of Sundarban in West Bengal. He stated that most of the facilities are not available in most of the wholesale markets which are required in the agriculture transaction process. Needless to say, the ultimate sufferers are the farm-producers. The growers are deprived of reasonable /remunerative or prevailing, price for their produce in the absence of dissemination of marketing information among the producers absences of the mechanical or electronic weighing machine. Various malpractices are adopted during the time of weighing the produce sold by the farmers. All these factors contribute to make the Sundarban agri-marketing system inefficient.

From the above it is noted that lack of market infrastructural facilities affect the sellers adversely and need attention to provide such facilities in the agricultural markets.

2.2 Problem of seller – farmers related to market in-frasturcture .

Nagraj and Chandrakant (1985) studied marketing of few fruits and vegetables. They observed the following problems during their study. The problems were majority of the growers forced to sale the vegetables because of their immediate cash requirements. About 90 per cent farmers feel that the intermediaries do not accept the producer's graded vegetables. The other problems were also noted such as lack of storage, undue delay in

cash from the intermediaries, high rate of commsion, improper weighing, wide fluctuation in price and unloading charges.

Vigneshwara (1986) in his study dynamics of fruit and vegetables market in India stated the problem of marketing of fruits and vegetables as I) Fluctuation in prices ii) Excessive involvement of the intermediaries iii) Transport and storage iv) Absence of grading and standardization v) Other problems such as absence of financial facilities non- availability of efficient marketing information, lack of packing and non-existence of organization among farmers.

Pawar *et al.* (1987) studied the effect of imperfection of marketing system of fruits, vegetables and milk. They observed problems faced by farmers. 1) Like profit margins of intermediaries was very high. So producers get less than 50 per cent of consumer s price. 2) Lack of facilities such as storage, grading, transportation and processing of produces and no facility of market intelligence service. 3) There was no any co-operative organization to encourage the competitive condition in the fruit and vegetable markets.

Subhanarsaiah and Mohan (1987) studied the marketing problems of citrus fruit growers in Andhra Pradesh. According to them, main problems were lack of storage and warehousing facilities, absence of co-operative and regulated markets and high fluctuations in prices. In additions to the above mentioned problems, growers were facing the high changes of loading and unloading, lack of proper grading facilities, no control over wastage due to improper handling and weighment and delays in cash disbursement from intermediaries.

Thakur *et al.* (1988) examined efficiency and weakness of regulated markets. They highlighted the weakness and efficiency as well as remedies for improving the fuctioning of regulated markets, with

reference to Himachal Pradesh and Gujrat States. Regulated markets in Himachal Pradesh were found to be much more developed than in Gujrat. In many cases the regulated markets exist only on paper, as the act has not been implemented in practice. Various marketing problems were found by farmers due to lack of sufficient facilities in the markets, delays in auctioning and unloading of trucks for several days, delayed payment, deductions made on the pretext of spoilage, low grade, defective packaging etc. and the charging of unauthorized market charges and a high rate of commission for both buyers and sellers.

Thomas and Mukundan (1989) studied the marketing of pineapple in Trichur district of Kerala and indicated the problems viz., lack of proper storage facilities, fluctuation in prices, lack of proper fruit processing units and problems in timely availability of market news and information.

The above reviews clears the facts that though the regulated markets were working in favour of farmers, certain anomalies do persist in the markets viz., delay in payment, inadequate storage facilities, lack of grading, inadequate infrastructure etc. Seasonal fluctuation in the prices of agricultural commodities is the major problems for farmers. It was suggested to widen the sphere of working of regulated market in providing inputs to farmers, providing pledge finance, strengthening market intelligence etc.

Renuka and Ali (1991) studied problems in marketing of agricultural products at market yards in Andhra Pradesh. The study observed that most of the farmers had to sale their output immediately after harvesting either due to lack of storage facilities to meet present consumption or to clear off the loans. The study revealed that there were wide ranges of problems viz., lack of proper crop accounts maintained by the farmers, no

knowledge of the sale management, inadequate infrastructural facilities at the market yard and lack of unity among the farmers.

Khan (1992) studied how to save grower against losses of perishables ? The marketing of perishables, especially fruits and vegetables in Pakistan in based largely upon countries old customs. Losses from the producer to the consumer may be as high as 50 per cent. Any measure taken for increasing production will be self-defeating unless growers are assured of suitable returns and outlets for their marketable surplus. He reported that development of transport, storage and processing facilities widens that market for farm products. Problems related to agricultural in the deduction of farm returns from vegetables,area post harvest losses, lack of localized markets, lack of infrastructure and weak market intelligence. Estimating future prices is not easy because they are influenced and determined by many factors. If farmers are accurate in their predictions, they can adjust production in line with prices to reap the highest profits.

Chhitara *et al.* (1998) studied the problems and prospects of agricultural market in Haryana. They observed that the market structure was not flexible to face the problems of arrivals. They suggested that there is an urgent need to create a market structure which is flexible enough to handle changing supply and demand for a variety of farm commodities. Polices and actions need to be based on empirical evidence rather than on administrative hunches. They further suggested that marketing facilities should be made available to the farmers within a radius of 5 km.

Radha and Eswar Prasad (2001) pointed out that storage facility was the main problem expressed by 95 per cent of the sampled farmers followed by availability of credit (74 per cent) and infrastructure facilities (72 per cent).

Phuke and Patil (2002) studied the marketing of chilli in Dharmabad market of Marathwada region and reported the need to establish a agricultural market information system so as to enable the producer seller to take efficient marketing decisions for getting better prices.

2.3 Constraints in market infrastructure :

Agrawal (1981) worked on problems of agricultural marketing in India. He reported that, there are many defects in present system of marketing. The main defects recorded in agricultural marketing were I) forced sale of products ii) large number of middlemen iii) unregulated market and malpractices in markets iv) lack of proper storage facilities v) lack of proper grading and standardization. Vi) Transportation bottlenecks.

Kapse (1990) in his study on constraints in the marketing of ber in Solapur district the common constraints enlightened were high changes on labour and high expenses on grading packaging, non-availability of vehicles in time for transportation, high cost of marketing changes, unawareness of market rates for different quality of fruits, deceiving nature of middlemen, too high commission and payment were not in time, unhealthy auctions etc.

Nawadkar *et al.* (1992) observed that there was an increasely trend in respect of the average price of all the cereals during the period from 1983 to 1990 excepting the average price of wheat and jowar. They stated that the existing infrastructure facilities such as godwons, cold storage, space in the market yard, supervision over arhatiyas, commission agents and traders seems to be inadequate for promoting the arrival of the agricultural commodities.

Singh and Singh (1992) observed that newly constructed yard has not been fully in operation even after many year's of its completion, due to

instable location and inconvenient point for sale of produce and at the same time, purchase domestic and farm needs. Further, they studied the factor limiting free flow of arrivals into regulated market yard. Improvements such as large scale whole sale market, storage, processing units etc. were suggested.

Lehale (1993) studied marketing of vegetables and observed problems faced by farmers. Remunerative prices were received, but non – availability of cold storage facility was the constraints opined by 43 percent farmers while 84 per cent farmers expressed high rate of commission. Majority of farmers have expressed that weighing and auction was not done properly. Absence of proper transport facility was also a problem expressed by 56 per cent farmers.

Bansal (1994) reported that India produces nearly 100 million tonnes of fruits and vegetables, 18 per cent of the gross value of agricultural output. However, approximately one per cent of this is exported. He discussed the constraints in increasing exports. This include poor post harvest management, inadequate storage facilities, inadequate market information services, low level of productivity and fragmented holdings. There is a good prospects for increasing export fruits and vegetables under the new agricultural policy.

Suryawanshi (2000) studied the marketing of vegetables and found out the constraints of vegetable growers in Latur district. The study revealed that about 92 per cent farmers expressed remunerative prices were not received and about 88 per cent said high rate of commission and 96 per cent expressed weighing are improper. 70 per cent expressed losses during transportation. Further it was also pointed out that transportation facilities are not proper.

2.4 General :

Ojha *et al.* (1982) studied role of middlemen in agricultural marketing. The study revealed that in-spite of number of inherent defects; the farmers were selling their produce through the traditional channel of commission agents and at the same time, it further revealed that a majority of the respondents did not prefer to sale their produce through their commission agents. Majority of the respondents expressed that, agents were not providing adequate physical and financial facilities to the farmers. They complained that the commission agents were providing loan and advances only to forward castes and rich farmers. A considerable percentage of the respondents expressed that the services rendered by the commission agents were not essential and hence they can be eliminated from the chain of distribution.

Biradar and Kasar (1983) reported that banana producers get quite a low share in consumer s'price. They suggested to strengthen it by way of developing a suitable market infrastructure in respect of cold storage facilities. Quick transportation, adoption of open auction sale and establishment of processing plant for manufacturing byproducts in the producing area. The railway authority can extend co-operation in transportation of banana produce to distant market in the country by arranging the supply of requisite number of specially designed wagons at reasonable freight.

Krishna and Rao (1983) conducted a study on marketing of agriculture produce in Bihar shariff a case study. In Bihar Shariff there is only one regulated market place dealing with all agricultural commodities, which performs both collection and distribution function for all commodities and operates throughout the year. Market charges before regulation were higher than those after prescribing the rules. Commission charges formed more than 90 per cent of the total market charges. In-spite

of the best working of this market, there seems to be inadequacy of facilities such as banking and P and T facilities, and lack of space hinders possible expansion. In order to encourage the cultivators to boost production, a good marketing system is essential. There is a need for establishing such market in other important central places so that farmers need not travel from a far to sale their produce. Proper infrastructural facilities must be provided to enable farmers to transport their produce to these markets and benefits from them.

Lodo. (1991) examined the role of rural periodic market in the overall socio-economic development process in North Malakisi Location, Bungoma District, Kenya. Data of seven periodic markets were

collected where a total of 252 traders and consumers were interviewed. The article analysed the spatial and temporal distribution of rural periodic markets in the area. Secondly, it discussed the types of traders and consumers visiting the markets, their visiting parents, modes of transport and destinations. It was seen that periodic rural markets are becoming increasingly important for socio-economic development and that this a result of improved infrastrural facilities.

Singh(1993) outlined the future role for regulated markets in India which would contribute to socio-economic development. What is urgently needed is not only for regulated markets to perform various functions related to marketing of agricultural produce, but also to assist producers in production markets, he reported. Some of the ways in which regulated markets can play an important role are in the provision of pledge loans, supply of seed, agricultural implements and fertilizers, provision of transport facilities, marketing extension services and strengthening of market intelligence activities.

Kamatgikar (1994) studied the marketing of banana in South Indian markets and recoded the need of improving the road conditions for better and quick transport of banana fruits so as to catch better prices in distant markets.

Pokale (1994) studied the Parbhani Regulated Market (APMC). He concluded that there was a good scope to improve the facilities and amenities in the market. Dissemination and publicity and market information meet to be strengthen. He suggested that the amenities and facilities may be increased in number and quality. A godowns, canteen and rest house facility may be provided in the market yard and also suggested to improve the communication of market information and publicity, system.

Barman and Deka (1995) studied the role of marketing institutions in market regulation in Assam and observed that the rural marketing system in Assam is still traditional. Farmers generally sale their product

at the village hatts ignoring the existance of regulated markets. Primary rural markets are mostly administered by local bodies or village panchayats. No infrastructural facilities, such as grading, storage, godowns, marketing sheds etc. have been provided. The geographical coverage of market regulation in Assam is very poor. The marketing board , an agency of the State Government has not made any effective steps for the market regulation in Assam, they reported.

Prakash and Srivastava (1995) conducted a study in Uttar Pradesh to investigate the inter and intra year variations in market arrivals and wholesale prices of field peas and to examine the causes of variation and the relationship between market arrivals and prices. The study revealed that about 60 per cent of total arrivals reached to markets in the months of

March to June when prices were low. The study thus highlighted the urgent need to create more storage facilities.

Prasad and Kumar (1996) studied the role of State in agricultural marketing. The study traces the efforts made by the State in improving the agricultural marketing system in India,since 1897. It was reported that an apex body was established during 1960 in many States. The State has also undertaken various market development programmes such as establishment and construction of well laid out market yards, open auction platform, sales standardization of weights and measures, dissemination of market intelligence, creation of adequate storage facilities and basic amenities. There have been regional difference in the performance of regulated markets. The study suggested the need to intensify the role of the State in regulating agricultural markets, particularly for developing rural markets where the majority farmers bring their produce for sale.

Sukhpal Singh (1996) conducted study on infrastructure and agro processing development in Gujarat. He looked at infrastructure in terms of banks, roads, electricity and communication only since they were to look at the role of infrastructure in agricultural improvement, they include more tangible and traditional aspects of infrastructure. However, it is important to note that marketing infrastructure which include regulated markets, marketing agencies and organization and storage facilities for produce among other things has also an important role to play especially in agro-industrial development.

(2) Jain (1998) studied the structure and market functions performed by the Raipur regulated market in Madhya Pradesh. In the Raipur regulated market committee, he observed that the farmers constituted 56 per cent of the total representation and the representative of farmers always had the interest of the producers. Marketing efficiency measured in terms of better

prices of the producers, lower marketing charges and adequate availability of market amenities were found to be relatively better in the regulated market.

Singh *et al.* (1998) studied the organization, structure, function and performance of the primary agricultural regulated market, Krishi Utpadan Mandi Committee, Dohavighat of Mau District in Uttar Pradesh. The study revealed that the objectives of the regulated market are not practiced. All the shortcomings and malpractices in functioning of the market needs to be removed with a view to improve its efficiency. Provision should be made at a higher level of review the act, rules and bylaws of the market committee to meet the need based emerging requirements. It is clear from the above reviews that, Agricultural Produce Market Committees are the regulated markets where maximum representation is given to the farmers and administrated by 'ocal bodies. A market committee undertaker various development programmes and provides the necessary amenities in the market. Some times certain malpractices were also observed but these are merely operational bottlenecks rather than structural defects.

Tiwari (1998) studied the flower cultivation in Marathwada region and reported that a good market for flowers may be established having cold storage facility in Marathwada region.

Thippian and Deshpande (1998) studied market infrastructure, prices, term of trade in Karnataka. They examined the availability of marketing infrastructure in Karnataka section look at Agricultural marketing regulations and facilities (number of markets and their turnover) agricultural prices and terms of trade between agricultural and non-agricultural sectors. It is concluded that if the process of liberalization is to succeed marketing infrastructure must be improved.

⑥ Narasaiah (2001) studied Rythu Bazars in Andhra Pradesh. The sites identified for Rythu Bazars are transferred to the local Agriculture Market Committees which will provide all amenities like drinking water, lighting, toilets and required number of structures. The commissioner and director of marketing will finalise the type of design for these structures so that all Rythu Bazars would look a like, even the colour of the structure should be the same all over the State, he suggested some producers may left over at the end of the day and, therefore, it need to be protected in a safe place during the night. The Rythu Bazars shall provide safety rooms including cold storage facilities to the growers for keeping their stocks safely further he argued.

⑦ Jeyarahtnam (2002) studied the farmers market in Tamilnadu. The Goverment started Uzahavar Sandhais (farmers market) in 102 places in the state. The salient features the Uzahavar Sandhais in Tamilnadu as follow:I)Approximately 200 shops are built in each market centre, ii) The shops are rent free and weighing machines are provided to the farmers free of cost, iii) Prices are fixed by the officers based on wholesale and retail prices, iv) Branches of banks ,cold storage facilities and provision for garbage disposal are provided in the farmers market, v) Free transportation of vegetable from nearby village to the farmer's market through state run buses is extended.

⑧ Senam Raju (2002) reported apprehensions of farmers on working of Regulated Agricultural Markets. As a result of the enactment of Regulated Markets Acts by various State Governments, a number of regulated markets have been set up to fulfill the aspirations of Indian farmers who have marketable surplus.With the establishment of regulated markets, many fraudulent practices prevailed in the unregulated markets have been overcome, such as forced sale, market charges are clearly

defined and specified, undesirable activities are brought under control, correct weighing is ensured. Feliable and up-to-date market news is made available, suitable arrangement for the settlement of disputes are provided, open auction method is strictly followed. Other amenities like sheds for the sale of produce, rest house, parking place, grading, warehousing etc. is provided.

Hajarika and Sarma (2001) reported the need for strengthening the input delivery system, existing marketing infrastructure and functioning of institutional agencies including credit needs.

Khunt *et al.* (2001) reported that there exist lot of scope to increase profitability of mango orchards by reducing the spoilage losses by providing proper packing and handling technology as well as cold storage facility and needs proper and planned interventions of the government to safeguard the interest of the mango grower.

Reddy (2001) in his presidential address reported that there are two major areas which are constraining the upward movement of output towards its potential for India. These relate to agricultural sector and physical infrastructure. Inadequate finance and outdated as well as inappropriate institutional frame work are the twin problems and, of the two institutional reforms are needed immediately requiring changes in mindset and redefining role of the government.

Patil *et al.*(2003) emphasized the need to develop basic infrastructure facilities like cold storage structure chain in mango producing area. Charted air cargoes etc. should be provided on priority basis during mango season.

Phuke and Patil (2003) concluded that personal information source of market information is still a major source. Agricultural marketing information is not at all displayed on TV , Newspaper, radio the mass

media covered the market information but is inadequate and obsolete. It is suggested that the AMIS may be telecasted on TV by starting a new channel. Data Analysis and Interpretation Centre (DAIC) may be established along with the budgetary provisions.

Phuke and Pawar (2003) emphasised to developed the infrastructure facilities along with perfection of manual on recommended packages of production and export practices in printed form which are to be distributed to the extension organizations, farmers organizations and leading banana growers. Further they have also suggested construction of cold storage, pre-cooling facilities, market intelligence and marketing information system to disseminate marketing information to the growers quickly and accurately so as to take efficient marketing decisions.

Methodology

Chapter III

METHODOLOGY

This chapter deals with the methodological issues involved in the completion of study. It is, therefore, designed to express in brief, the plan of investigation with the special reference to selection of the area, location of the study, selection of sample, design of schedule, collection of data and statistical analysis of data

1. Selection of markets :

The study covered the Western Maharashtra and Marathwada regions wherever, the regulated markets are in operation.

In order to have wide coverage, all the regulated markets i.e. Agricultural Produce Market Committees (APMCs) located in Western Maharashtra and Marathwada were Selected and classified into three categories on the basis of their annual income. The markets having annual income less than Rs.40 lakh was treated as small market, the markets having an annual income more than Rs.40 lakh, but less than Rs. 2 crore as medium market; whereas, markets with annual income Rs.2 crore and above were categorized as big markets. Two markets of each category form Marathwada and western Maharashtra region were selected randomly making the total markets selected as 12.

APMCs selected for study.

Sr.No.	Name of the APMCs	
	Marathwada	Size of market
1.	Gangakhed	Small
2.	Sailu	Small
3.	Parbhani	Medium
4.	Hingoli	Medium
5.	Jalna	Large
6.	Latur	Large
	Western Maharashtra	
1.	Sangamner	Small
2.	Kopargaon	Small
3.	Nagar	Medium
4.	Sangli	Medium
5.	Nashik	Large
6.	Pune	Large

2. Design of schedule :

The data regarding infrastructural facilities available at APMCs and their utilization was collected with help of specially designed and pre-tested schedules. The managers were interviewed in the markets.

The schedules were designed in such a way that the required information could be collected. It consisted of the items like establishment year, jurisdiction, type of market, annual turnover, gross and net annual income, expenditure on salaries, maintenance, expenditure on building, persons employed and specifically the data of nine categories of the infrastructural facilities considered for the present study.

3. Collection of data :

The primary data regarding the general information of selected APMCs, details of the main market area, farmers and traders facilities, administrative facilities, parking and traffic facilities, sanitary and hygienic facilities, State level information on markets etc. was collected from the records and personnel of selected APMCs. The data were pertained to the year 2001-2002.

An integrated approach was adopted in the present study and various groups of infrastructural facilities provided by the APMCs were divided into following nine categories :

i) Trading facilities like common auction hall (covered), open auction platforms, common drying yards etc.

ii) Ancillary trading facilities like storage godowns, cold storage, weighing equipments, grading etc.

iii) Administrative facilities like banks, post office, police and security posts etc.

iv) Farmer's facilities like rest houses, dormitory accommodation, agricultural input shops.

v) Common facilities like Bath-rooms, toilets, urinals, tea shops etc.

vi) Drinking water and other water facilities like open-wells/tube-wells, municipal water supply, electric pump sets etc.

vii) Parking traffic facilities like area for loading unloading and parking, internal roads, boundary walls etc.

viii) Publicity and communication like rate display boards, public address system etc.

ix) Garbage disposal methods and drainage system.

Along with the availability and non-availability of type of infrastructural facilities and its reasonings of non-use were also recorded. The facilities were recorded mostly in numbers i.e present or absent.

5. Analysis of data :

Data collected were scruitinised, tabulated and analysed by using simple statistical method consisting of averages, percentages, ratios etc. to draw the valid conclusions. The per cent utilization of facility was worked out on the basis of its total numbers present.

Results and Discussion

Chapter-IV

Results and discussion

In this chapter, the results of the present study entitled "Study of infrastructural facilities available at Agricultural Produce Market Committees (APMCs) and their utilization in Maharastra State" are presented and discussed as per the objectives of the study.

4.1 Economic profile of APMCs

The economic profile of Agricultural Markets (APMCs) was studied separately for Marathwada and western Maharashtra region of the selected markets. Table 4.1 indicated that in Marathwada region the APMCs were started earlier than Western Maharashtra region. The average area covered under market yards was higher in Western Maharashtra region, whereas, number of villages covered per APMCs in Marathwada was more than Western Maharashtra. The gross annual income, total expenditure, net income per year, annual turnover was higher in Western Maharashtra than Marathwada. Similarly number of employees in the APMCs, average expenditure on staff salary and on maintenance of buildings were also higher in Western Maharashtra. From the above facts it can be concluded that economic profile of APMCs in Western Maharashtra was better than Marathawada region.

4.2 Trading facilities

Out of the different infrastructural facilities trading facilities like common auction halls (covered), common open auction platforms, common drying yards, trader modules etc. were studied. From table 4.2 (a) it is seen that in Marathwada region small and medium Agricultural markets do not possess common auction halls and on an

Table 4.1 Economic profile of Agricultural markets

Regions / Markets	Av. Age Of APMC	Av. Area (ha)	Av. No. of Village covered	Av. Gross Inocme/Year (Rs.in thousand)	Av. Total Expenditure/ Year (Rs. in Thousand)	Av. Total net income/ year (Rs.in thousand)	Av. Total Annual turn Over (Rs.in thousand)	Av. No. of employees	Av. Expenditure On staff Salary (Rs. in thousand)	Expenditure on maintenance on buildings ets (Rs. in thousand)
Marathwada										
Small	64	20.66	133	2701	2286	415	65472	20	13.30	742
Medium	67	11.71	163	5776	4452	1324	164601	45	2738	2127
Large	53	39	155	25949	21550	4399	2500000	58	2797	10050
Total	184	71.37	452	34426	28288	6138	2730073	124	5548	12919
Average	61	23.79	150	11976	9429	2046	910024	41	1849.43	4306
Western Maharashtra										
Small	48	9.8	125	3500	3175	325	350000	22	1900	750
Medium	50	24.4	127	19776.5	30537	-10760.5	1977675	76	5700	3400
Large	49	57.6	62	83758	65566	18191	6218119	265	23291	17732
Total	147	91.8	315	107033.5	99278	7755.5	17091588	364	30891	21882
Average	49	30.6	105	85678.16	35677.83	2585.16	8545794	121	10297	7294

Table 4.2 Trading facilities

Table 4.2(a) : Common Auction Halls covered

Regions/ Markets	Av. Number	Av. Area Sq.ft.	Adequecy
Marathwada			
Small	-	-	-
Medium	-	-	-
Large	1.5	15000	Yes
Total	3.00	30000	
Average	0.5	5000	
Western Maharashtra			
Small	2.5	1000	Yes
Medium	2.00	4800	Yes
Large	452	103800	Yes
Total	913.00	219200	
Average	152.16	36533.3	

	Marathwada	Western Maharashtra
Markets with facility:	33.33%	66.67%
Facility being utilized:	100%	100%

Table 4.2(b) : Common Open Auction platfo m

Regions/ Markets	Av. Number	Av. Area Sq.ft.	Adequecy
Marathwada			
Small	-	-	-
Medium	4.5	22000	Yes
Large	1.5	12600	Yes
Total	12.00	69200	
Average	2.0	11533.3	
Western Maharashtra			
Small	3.00	13000	Yes
Medium	1.5	15000	Yes
Large	1.00	16000	Yes
Total	21	88000	
Average	3.5	14666.66	

	Marathwada	Western Maharashtra
Markets with facility:	66.67%	100%
Facility being utilized:	75%	100%

Fig. 1 Agricultural Produce Market Committee (APMC), Parbhani.

Fig. 2 Open auction of sale of produce.

T. 4434

Fig. 4 Gross income of selected APMCs in Marathwada Region.

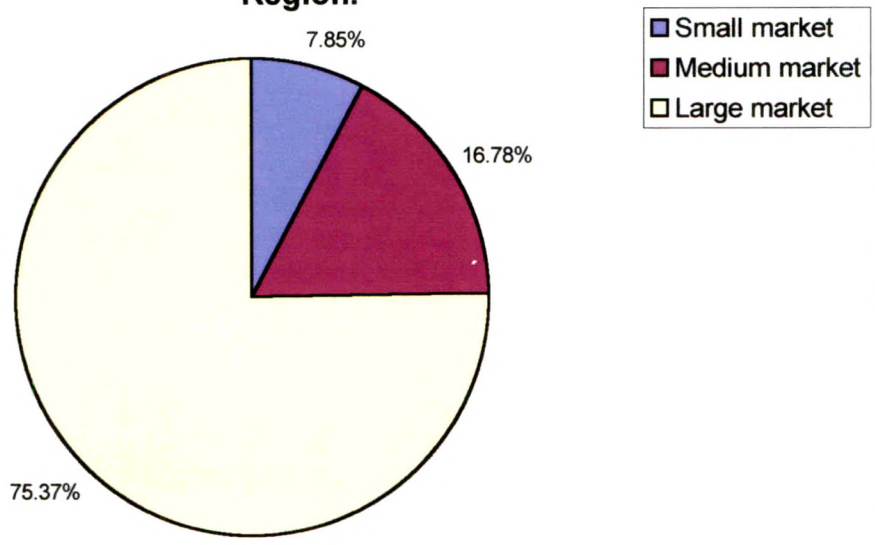


Fig. 6 Gross income of selected APMCs in Western Maharashtra Region.

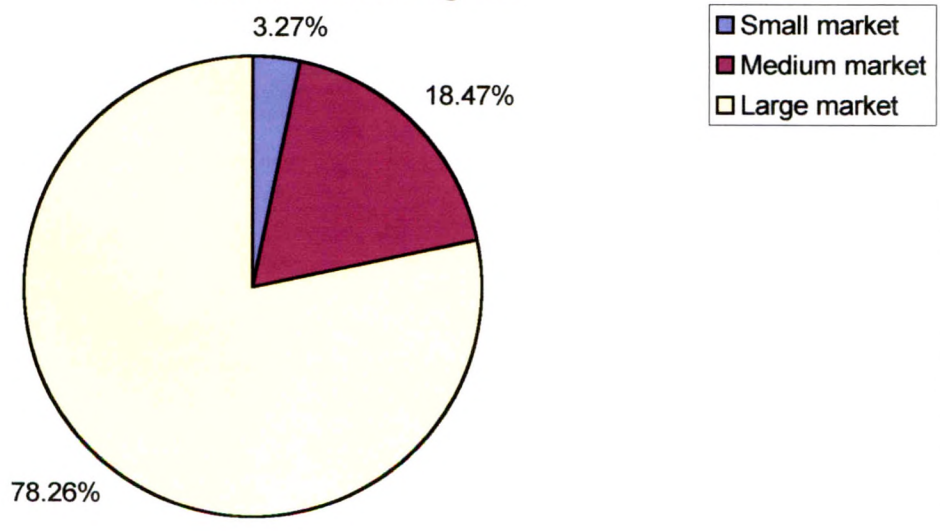


Table 4.2(c) : Common drying yard.

Regions/ Markets	Av. Number	Av. Area Sq.ft.	Adequecy
Marathwada			
Small	0.5	25000	Yes
Medium	-	-	-
Large	0.5	500	Yes
Total	2.00	6000	
Average	0.33	1000	
Western Maharashtra			
Small	-	-	-
Medium	0.5	1750	Yes
Large	0.5	2500	Yes
Total	2.00	70000	
Average	0.33	1416.6	

	Marathwada	Western Maharashtra
Markets with facility:	33.33%	33.33%
Facility being utilized:	100%	100%

Table 4.2(d) : Trader's modules

Regions/ Markets	Av. No. of office	Av. No. of Auction Hall	Av.No.of Godowns	Adequacy
Marathwada				
Small	42.00	42.00	11.5	Yes
Medium	333.00	333.00	338	Yes
Large	237.5	237.5	1174	Yes
Total	1225	1225	1174	
Average	204.16	204.16	195.66	
Western Maharashtra				
Small	26.00	26.00	20.00	Yes
Medium	135.00	135.00	123.00	Yes
Large	460.00	460.00	450.00	Yes
Total	1242.00	1242.00	1186.00	
Average	207.00	207.00	197.66	

	Marathwada	Western Maharashtra
Markets with facility:	100%	100%
Facility being utilized:	50%	83.33%

average this facility falls short, off. However large markets have these facilities and utilized to the fullest extent. In Western Maharashtra all the markets under study possessed common auction halls facilities and were adequate and used to their full capacity. Table 4.2 (b) indicated the availability of common open auction platform. This facility necessary for depicting the produce in the market for the observation of bidders. It was observed regarding Marathwada region that except small markets, common open auction platforms were available, whereas in Western Maharashtra, all markets possessed this facility with adequacy. The number of markets having this facility was higher (100%) in Western Maharashtra compared to Marathwada (66.67%).

Common drying yard is also essential in the Agricultural markets. It was noted from table 4.2 (c) that medium markets in Marathwada and small markets in Western Maharashtra did not possess this facility. The average area of common drying yard was higher in Western Maharashtra.

The trader's modules consists of offices, auction halls and godowns. This is depicted in table 4.2 (d) which indicated that this facility is available to the equal extent in the markets of both the regions.

In the regulated market yards the retailers are also allowed to conduct their trading activities. For this purpose they are allotted the places or buildings inside the market yards. Table 4.2 (e) revealed that this facility is available at the greater extent in the Western Maharashtra as compared to Marathwada. However partial utilization was recorded in small markets of Marathwada and medium and large markets of Western Maharashtra.

4.3 Ancillary Trading Facilities

It consists of storage Godowns, cold storage, processing units, grading equipments, weighing equipment etc. Storage play a vital role in the marketing system of the Agricultural produce. It helps to stabilize the prices, and make better off condition of the seller-farmers. The glut in the market can be avoided by the creation of storage facilities including cold storage for the perishable agricultural production. Study regarding storage godowns available in the surveyed markets was conducted and presented in table 4.3 (a). It showed that almost all the markets in both the regions had storage facilities but it was larger in Western Maharashtra. In Western Maharashtra the number of Storage godowns increased with the increase in size of the market. Further, it was noticed that some of the godowns were owened by the markets themselves and other were constructed by State Government. On enquiry it was told that the storage facilities are adequate in the markets of both the regions under study.

Cold storage facility is not only important but essential for the perishable agricultural commodities like fruits, vegetables, milk, and milk products, meat etc. From this point of view the information was collected from the sample markets regarding the availability and size of cold storage. It was noticed that in small and medium agricultural markets this facilities was lacking and only in large markets cold storage facility was available in private sectors. Further it was inadequate but was used to the fullest extent, in Marathwada region (table 4.3 b). Regarding the markets in Western Maharashtra, cold storage facility was available in medium and large markets whereas it was not available in small markets. In Marathwada cold storage facilities was available only in 16.67 per cent markets under study ;

Table 4.2(e) : Retailer's Shops

Regions/ Markets	Av. Number	Av. Area Sq.ft.	Adequecy
Marathwada			
Small	18.5	4162.5	Yes
Medium	139.5	13950	Yes
Large	45.00	6375	Yes
Total	406	48975	
Average	67.66	8162.2	
Western Maharashtra			
Small	20.00	1875	Yes
Medium	114.5	11450	Yes
Large	90.00	18000	Yes
Total	449.00	62650	
Average	74.83	10441.66	

	Marathwada	Western Maharashtra
Markets with facility:	100%	100%
Facility being utilized:	83.33%	50%

Table 4.3 Ancillary trading facilities

(a) Storage facilities (godowns) :

Regions/ Markets	Av. Number	Av. Capacity (M.T)	Av. Age of Storage godowns	Godowns are state/Private/ Co.op/own	Adequecy
Marathwada					
Small	2.00	1850	19.5	Co.op/State	Yes
Medium	6.00	1350	39.5	Own/Co.op	Yes
Large	1.00	1000	43.5	Own	Yes
Total	18.00	8400	205		
Average	3.00	1400	34.16		
Western Maharashtra					
Small	1.00	4000	40	Own	Yes
Medium	2.0	5500	45	State	Yes
Large	249.5	39495	45	Own/Private/State	Yes
Total	505	97990	260		
Average	84.16	16331.66	43.33		

	Marathwada	Western Maharashtra
Markets with facility:	100%	100%
Facility being utilized:	100%	100%

Fig. 3 Retailers shops including agricultural inputs.

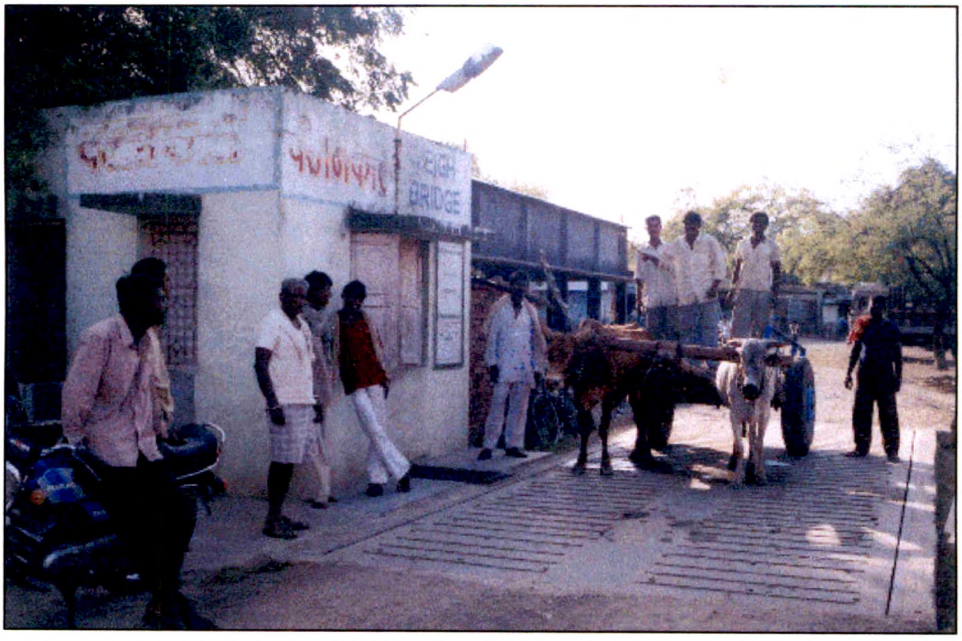


Fig. 4 Weigh Bridge Facility in the APMC.

Table 4.3 (b) Cold Storage

Regions/ Markets	Av. Number	Av.Area Sq.ft.	State/Co.op/ Private	Adequecy
Marathwada				
Small	-	-	-	-
Medium	-	-	-	-
Large	0.50	1000	Private	Not
Total	1.00	2000		
Average	0.16	333.3		
Western Maharashtra				
Small	-	-	-	-
Medium	0.50	1600	Private	Not
Large	1.00	4000	Private	Not
Total	3.00	11200		
Average	0.50	1866.66		

	Marathw da	Western Maharashtra
Markets with facility:	16.67%	50%
Facility being utilized:	100%	100%

Table 4.3 (c): Processing units.

Regions/ Markets	Av. Number	State/Co.op/ Private/own	Adequecy
Marathwada			
Small	24	Own	Yes
Medium	28.5	Own	Yes
Large	37.5	Own/State	Yes
Total	180		
Average	30		
Western Maharashtra			
Small	14.5	Own	Yes
Medium	32.5	Own/State	Yes
Large	54	Own/State	Yes
Total	202		
Average	33.66		

	Marathwada	Western Maharashtra
Markets with facility:	100%	100%
Facility being utilized:	100%	100%

Table 4.3 (d): Grading equipment.

Regions/ Markets	Av. Number	Adequecy
Marathwada		
Small	1.00	Not
Medium	1.00	Not
Large	5.00	Yes
Total	14.00	
Average	2.3	
Western Maharashtra		
Small	1.5	Not
Medium	2.5	Yes
Large	5.5	Yes
Total	19	
Average	3.16	

	Marathwada	Western Maharashtra
Markets with facility:	100%	100%
Facility being utilized:	100%	100%

Table 4.3 (e): Weighing equipment.

Regions/ Markets	Av. Number	Av. Capacity (M.T.)	Adequecy
Marathwada			
Small	5.5	80	Yes
Medium	4.5	145	Yes
Large	3.00	100	Yes
Total	26.00	650	
Average	4.3	108.3	
Western Maharashtra			
Small	3.5	115	Yes
Medium	6.00	280	Yes
Large	6.00	140	Yes
Total	31.00	1070	
Average	5.16	178.33	

	Marathwada	Western Maharashtra
Markets with facility:	100%	100%
Facility being utilized:	100%	100%

Fig. 5 Weighment of Agricultural Produce in APMC.

Fig. 6 Parking area in the APMC.

and 50 per cent markets in Western Maharashtra. Less availability of cold storages in Marathwada might be due to small marketable surplus compared to Western Maharashtra. In Western Maharashtra irrigation facilities are on the large area and results in greater production of fruits and vegetables and hence need of large cold storage facilities, which might have been created in the markets of Western Maharashtra.

It is surprise to note that all this cold storages were own by the private sectors and the facility was inadequate but used to its full capacity. Now a days rarely we can think of market without storage facilities. It should be made available with its adequacy. Storage is recommended by many research workers to avoid the excess supply in the market immediately after the harvest. Storage facility is needed immediately as per Nagraj and Chandrakant (1985), Vigneshwara (1986), Pawar and Yadav (1987), Subhanarasaiah an Mohan (1987), Renuka and Ali (1991) , Pokale (1994) and so on.

Non-availability of cold storage facilities in the markets of both the regions might be due to the requirement of large investment. However, financial help can be sought from the State Government, NABARD and other appropriate financial agencies, for constructing cold storages.

Processing is very important aspects of the Agricultural marketing. It adds value to the produce and fetches better prices. Table 4.3 (c) showed that the processing units are available in all the markets under study in both the regions and most of them were owned by markets themselves. Further, it was noticed that processing units were adequate and their utilization was better except medium markets in Marathwasda region.

Grading is still a neglected aspects in the marketing of agricultural produce in our country. In fact, all the agricultural commodities should be graded before marketing. The primary aim of grading is to protect the producers by knowing the quality and grade to the produce. He is in a better bargaining position against the trader. For this commercial grading has been introduced in the regulated markets to cover important crops. It was recorded from table 4.3 (d) that grading equipments were present in all the sampled markets in both the regions, but they were not adequate in small and medium markets of Marathwada and small markets of Western Maharashtra. Whatever grading equipments were available used to the full capacity. Grading is followed in case of few agricultural commodities at secondary and terminal markets. In APMCs still produce is not graded and results into loss to the producers as it cannot fetch better prices. The absence of grading may be due to non-availability of grading equipments and habits of the producers. However, this difficulty has been reported by the research workers like Vigneshwar (1980) and Pawar and Yadav(1987) and Agrawal (1981) etc. They suggested to provide the facilities of grading in the agricultural markets.

The income of the farmer-sellers depends upon the prices quoted and quantity measurement. In the APMCs only authorized weight and measures and weighing instruments have to used in the market area and inspected by the concerned department. The licensed graders have to provide all the necessary weights and measures and weighing instruments for the weighmet of produce. All weighment of produce, sold in a regulated market must be done through licensed weighmen for getting a certain charges. The existence of weighing equipments and their adequacy is presented in table 4.3(e). It is seen

from the table 4.3 all the markets under studied had the required weighing equipments with full adequacy. None of the equipments was kept idle.

It is our observation that inspite of provision of better infrastructural facilities in the market yards, there is decreasing trend of arrivals in the markets indicating thereby poor participation of farmers in bringing their produce to the market yards. It compels to think reasoning of this process. Probable reasoning might be lack of pledge finance in markets. Provision of pledge finance scheme was introduce to provide short term advances to the small and marginal farmers against the pledge of their produce on easy terms with minimum documentation so as to encourage the farmers to sale their produce in the market yards. The information regarding pledge finance was collected and it was observed that there is no facility of pledge finance in all the markets under study. This might be due to commercial bank facilities. Therefore, it is suggested that pledge finance should be made available in all the market yards in the State so as to increase the market arrivals and getting remunerative prices. The findings are inconformity with Thomas and Mukundan (1989), Rasne and Gore (1992), Singh (1993), Hajarika and Sarma (2001) and Reddy (2001) they reported the urgent need to provided pledge finance facility in the agricultural regulated markets.

4.4 Administrative facilities

It covered banks, post offices, police post and security posts in the yards of APMCs. Banks are considered to be very essential for all types of financial transactions taking place in the marketing. Bank facilities were present in all the markets under study in both of regions shown in table 4.4

Table 4.4 Administrative facilities.

Regions/Markets	Bank Av. Number	Post Office Av. Number	Police post Av. Number	Security post Av. Number
Marathwada				
Small	2.5	1.00	1.00	1.00
Medium	1.00	1.00	0.5	0.5
Large	4.00	0.5	0.5	4.00
Total	15.00	5.00	4.00	4.00
Average	2.5	0.8	0.6	0.6
Western Maharashtra				
Small	1.5	1.00	1.00	1.00
Medium	5.00	1.00	1.00	1.00
Large	3.5	1.00	1.00	1.00
Total	20.00	6.00	6.00	6.00
Average	3.33	1.00	1.00	1.00

	Banks		Post office		Police post		Security post	
	Marathwada	W. Maharashtra	Marathwada	W. Maharashtra	Marathwada	W. Maharashtra	Marathwada	W. Maharashtra
Markets with facility:	100%	100%	83.33%	100%	6.67%	100%	66.67%	100%
Facility being utilized:	100%	100%	100%	100%	100%	100%	100%	100%

Postal services are very old means of communications used in business circle. It is used for correspondences and letters involving bills of exchanges, sale and purchase orders etc. This also helps receipts and dispatch of market news letters etc. It is observed from table 4.4 that all the markets under study has the facility of post offices.

Police posts and security posts are very essential to protect the people and their properties, materials in the market yards and regulating the various activity inside the yards. The security posts are provided by the market committee in the market yards. It was observed from table 4.4 that all the markets in both the regions had the facility of police post and security post. Further it was noticed that this facility was better in Western Maharashtra as compared to Marathwada region.

4.5 Farmer s' facilities

It consists of farmers rest houses, dormitory accommodation and agricultural inputs shops. The data regarding this facilities were collected and presented in table 4.5. Farmer s' rest house is provided for staying during the day time as well as night times. Dormitory accommodation is the temporary resting place which are required to accommodate a large number of moving population in the market yards. From table 4.5 it was noticed that all the markets possessed well constructed farmers' rest houses which is also adequate and used to the fullest extent. However, none of the markets was having dormitory accommodation.

As far as agricultural input shops are concerned information was presented in table 4.5. This shops inside are provided in the market yards so as to facilitated the farmers to purchase their requirements of various agricultural inputs like seeds, fertilizers, plant

Table 4.5 Farmer's facility.

Regions/ Markets	Farmer's Rest House			Dormitory accommodation	Agricultural input shops	
	Av. No.	Construction Material	Adequacy		Av. No.	Adequacy
Marathwada						
Small	2.00	Cement	Yes	-	11	Yes
Medium	1.5	Cement	Yes	-	50	Yes
Large	4.5	Cement	Yes	-	81	Yes
Total	9				284	
Average	1.5				47.3	
Western Maharashtra						
Small	1	Cement	Yes	-	20	Yes
Medium	3	Cement	Yes	-	38	Yes
Large	1.5	Cement	Yes	-	90	No
Total	11				296	
Average	1.83				49.33	

	Farmer's Rest house		Agricultural input shops	
	Marathwada	W. Maharashtra	Marathwada	W. Maharashtra
Markets with facility:	100%	100%	100%	100%
Facility being utilized:	66.66%	100%	50%	50%

protection chemicals, agricultural implements etc. The presence of this shops inside the market yards is more beneficial as the farmers can carry home their purchases by the same vehicles which they used for bringing their produce for sale to the market yards. It was seen from the table 4.5 that all the sample markets agricultural input shops were present with their adequacy. However, partial utilization of such shops was in small and large markets in Marthawada region, and small and medium markets of Western Maharashtra region. About half of the shops were not in use.

4.6 Common facilities

Common facilities like bathrooms, toilets, urinals, sundry shops, tea shops, canteens etc. were studied and information is presented in table 4.6. A large number of moving population are expected to be coming to market yards including farmers, merchants, market functionaries etc. The farmers are reported to be reaching the market yards in the early hours of the day and at times during the previous night. To meet these routine requirements the market should provide bathing facilities, toilet facilities, urinals, sundry shops, tea shops, canteen etc. The data regarding all the above is presented in table 6 and it was observed that in all the markets bathing facilities were available but their utilization was partial. Partial utilization might be due to dirtyness around bad conditions and improper water supply. As far as the toilets are concerned they were provided in all the markets but they were not adequate, daily needs, tea shops and canteens were provided in all the markets with full adequacy. In Western Maharashtra the utilization of canteen was observed as partial in small and medium markets.

Table 4.6 Common Facilities.

Regions/ Markets	Bathroom		Toilets		Urinals		Daily Needs Av.No.	Tea shops		Canteen	
	Av. No.	Adequacy	Av. No.	Adequacy	Av. No.	Adequacy		Av.No	Adequacy	Av. No.	Adequecy
Marathwada											
Small	4.5	Yes	3	Yes	1	No	1	2	Yes	1	Yes
Medium	4	Yes	4	Yes	2	No	2.5	10	Yes	2.5	Yes
Large	9	Yes	9	Yes	3.5	Yes	-	2.5	Yes	5	Yes
Total	35		32		13		7	29		17	
Average	5.8		5.3		2.1		1.16	4.8		2.8	
Western Maharashtra											
Small	5.5	Yes	4	Yes	2.5	No	5	3.5	Yes	1	Yes
Medium	15	Yes	15	Yes	4	Yes	14.5	9.5	Yes	3.5	Yes
Large	27.5	Yes	27.5	Yes	7.5	Yes	20	7.5	Yes	17.5	Yes
Total	96		93		28		79	41		44	
Average	16.00		15.5		4.66		13.16	6.83		7.33	

	Bathroom		Toilets		Urinals		Daily needs		Tea shops		Canteen	
	M	W.M.	M	W.M	M	W.M	M	W. M	M	W.M	M	W.M
Market With facility:	100%	100%	83.33%	83.33%	66.67%	83.33%	33.33%	100%	100%	100%	100%	100%
Facility being Utilized	83.33%	100%	80%	100%	100%	100%	50%	100%	100%	100%	100%	100%

Regarding availability of common facilities like, bathrooms, toilets and urinals. The situation was not satisfactory and hence need attention to improve the conditions of this facilities. The partial utilization of canteen facility in medium and small markets may be due to the disputes between canteen contractor and the APMCs. Secondly the monopoly inside the market yard resulting higher rates than the nearly outside canteens. Outside market yards canteens or hotels might be providing better quality food preparations at cheaper rates.

4.7 Drinking water facilities

The drinking water can be made available through open/tube wells, municipal water supply, electric pump sets, drinking water taps etc. Under present study it was seen that in all the markets there was no scarcity of drinking water. The water was supplied through either open/tube well, municipal water supply. However, it was also noticed in large markets of both the regions that the taps were in broken condition or they were not in working conditions. This might be due to the negligence of APMCs and large size of market yards.

4.8 Parking and traffic facilities

This facility group consists of the facilities like area for loading and unloading operations, parking, internal roads, electric lighting, boundary, walls, shed trees, benches etc. The data regarding above activities were collected and presented in table 4.8. It is seen from the table that area for loading and unloading and parking was available with all the markets. However, parking sheds were lacking in medium and large markets of Marathwada region. In all the markets, pacca internal roads were constructed. The market yards were protected by

Table 4.7 Drinking Water facilities

Regions/ Markets	Open wells		Municipal water supply		Electric pumpsets		Drinking Water Taps	
	Wells Av.No.	Adequacy	Yes /No	Adequacy	Yes/No	Adequacy	Yes/No	Adequacy
Marathwada								
Small	2.5	Yes	Yes	Yes	Yes	Yes	Yes	No
Medium	1	No	Yes	Yes	Yes	Yes	Yes	No
Large	6.5	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total	20							
Average	3.3							
Western Maharashtra								
Small	2	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Medium	3.5	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Large	5.5	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total	22							
Average	3.66							

	Open wells		Municipal water supply		Electric pump sets		Drinking water taps	
	M.	W.M.	M.	W.M.	M.	W.M.	M.	W.M.
Markets With facility:	83.33%	100%	100%	100%	100%	100%	100%	100%
Facility Being utilized:	80%	100%	100%	100%	83.33	100%	100%	50%

Table 4.8 Parking and traffic facilities

Regions / Markets	Area for loading, unloading and Parking			Internal roads	Boundary walls	Electric light		Shade trees	Platforms/ Sitting benches.
	Av.No of trees	Av.No of sheds	Adequacy			Yes/ No	Adequacy		
Marathwada									
Small	13.5	3.5	Yes	Pacca	Walls	Yes	Yes	13.5	-
Medium	20.5	-	-	Pacca	Wire fencing	Yes	Yes	20.5	-
Large	32.5	-	Yes	Pacca	Wire fencing	Yes	Yes	32.5	-
Total	133	7.00						133.5	
Average	22.16	1.16						22.16	
Western Maharashtra									
Small	12.5	0.5	Yes	Pacca	Wall	Yes	Yes	12.5	-
Medium	25	0.5	Yes	Pacca	Wire fencing	Yes	Yes	25.00	-
Large	109	2.5	Yes	Pacca	Wall	Yes	Yes	109	Yes
Total	293	7.00						293	
Average	48.8	1.16						48.8	

	Area for loading / unloading And parking		Internal roads		Boundary walls		Electric light		shade trees		platform	
	M.	W.M .	M.	W.M.	M .	W.M.	M.	W.M.	M.	W.M	M.	W.M.
Market with Facility:	100%	100%	100%	100%	100%	100%	66.67%	100%	100%	100%	-	66.67%
Facility being Utilized :	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	-	100%

constructing a boundary walls or by putting wire fencing. In all the markets there was no electric light problems, shed trees were present in all the markets but sitting benches were not provided by almost all the markets except large markets in Western Maharashtra.

4.9 Publicity and communication

This is a very important facility consisting of display board, public address system, public telephone etc. Data regarding this aspect were collected and presented in table 4.9. Market intelligence is an important marketing function. Market news information and research are the life blood of the markets. Markets users find the arrivals and prices, along with their movements and the history of the market arrivals and future behaviour with the help of market intelligenc. A well and timely informed farmers regarding marketing information can take the benefits of better prices. From this point of view market intelligence and marketing information dissemination system is necessary in the today's markets. From table 4.9, it is seen that in all the markets, rate display boards, public address sytems, and public telephones were present. But it was questioned whether this facilities were effective or not. Literature says that this aspect of agricultural marketing is neglected so far and needs strengthening and establishment of such facilities in the markets. This has been suggested by Pawar and Yadav (1987), Thomas and Mukundan (1989), Khan (1992) has reported weak market intelligence in agricultural markets (Vegetable) results in the inability of producers in price predictions and reap the highest profits. Tarit Kumar Datta (2002) asserted that growers are deprived of remunerative prices for their produce in the absence of dissemination of marketing information Bansal (1994) reported inadequate market information

Table 4.9 Publicity and communication.

Regions/ Markets	Rate Display boards	Public Address system	Public Telephone
Marathwada			
Small	Yes	Yes	P.C.O
Medium	Yes	Yes	P.C.O
Large	Yes	Yes	P.C.O., S.T.D., FAX
Total			
Average			
Western Maharashtra			
Small	Yes	Yes	P.C.O
Medium	Yes	Yes	P.C.O., S.T.D., FAX
Large	Yes	Yes	P.C.O., S.T.D., FAX
Total			
Average			

	Rate display Boards		Public Address system		Public Telephone	
	M.	W.M.	M.	W.M.	M.	W.M.
Markets with Facility	100%	100%	100%	100%	100%	100%
Facility being Utilized	100%	100%	66.76%	100%	100%	100%

services. Singh (1993) suggested to stregthen marketing extension services and market intelligence activities. Pokale (1994) suggested to improve the communication of market information and publicity system in regulated markets. Phuke and Patil (2003) pointed out that personnel information source of market information is still a major source. This information is not displayed on TV , News paper, radio . covered the market information but is inadequate and absolate. It is suggested by them that agricultural market information system (AMIS) may be telecasted on TV through a new channel. Further, Phuke and Pawar (2003) felt the need to prepare a manual on recommended package of production and export practices in printed form and distribute it to the banana farmer-exporters and extension organizations. They have also suggested to develop the market intelligence and marketing information system to disseminate marketing information to the farmer quickly and accurately so as to make efficient marketing decisions.

4.10 Garbage disposal and drainage system

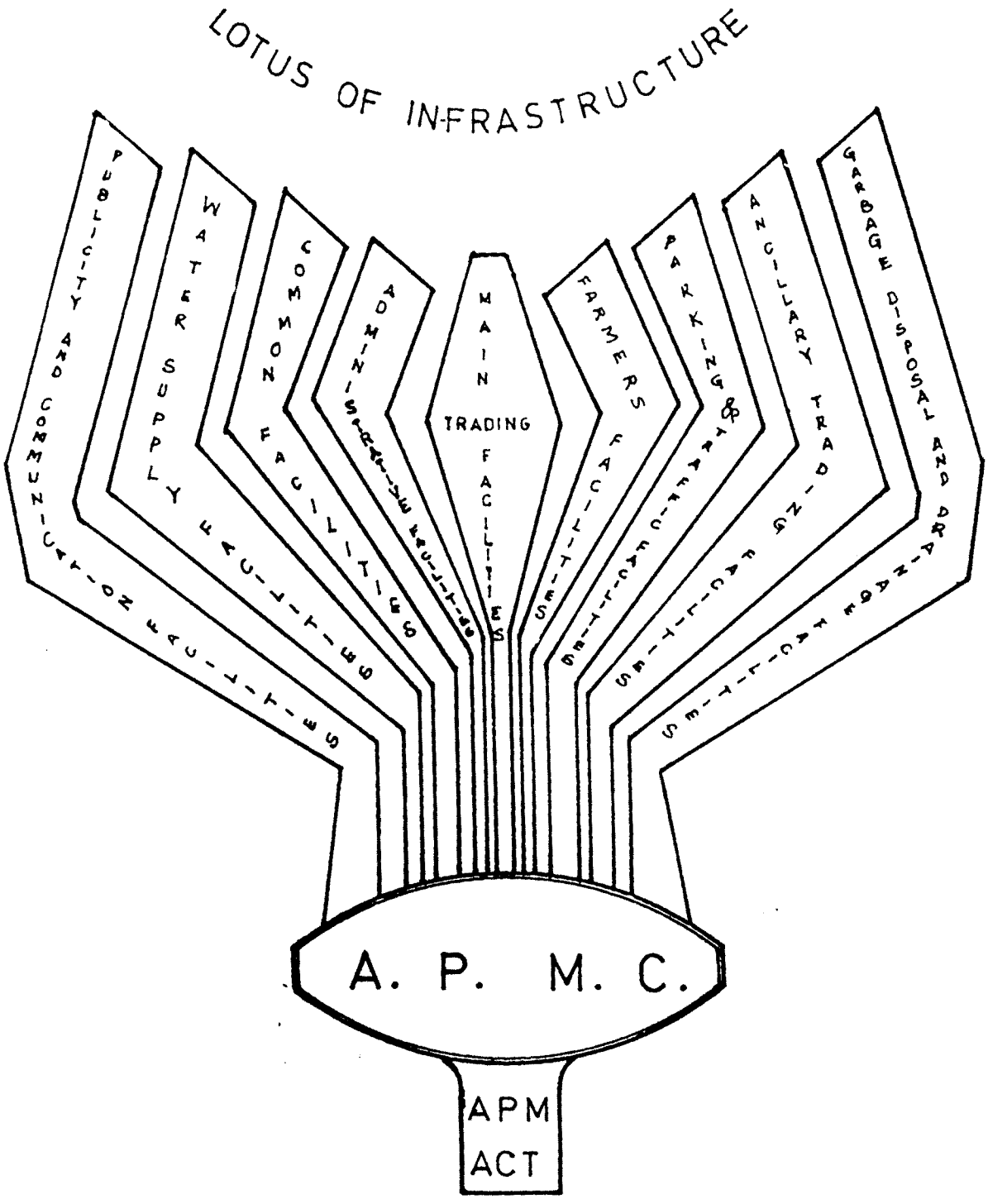
This is the very important facilities in the market yards from the health and hygiene point of view. If it is not provided adequately the health of the market visiting population may affect adversely. The information regarding garbage disposal and drainage system was collected and presented in table 4.10. The methods of garbage disposal observed were headload in small markets and bins and trunk or tolley in medium and large markets. It is unwilling to note that the garbage disposal was not proper and timely. This needs control over the contractor or officers of municipal corporation. Drainage system was either open nalla or underground pipe line. The open nalla system was recorded in small markets and underground pipe line in medium

Table 4.10 Garbage disposal and drainage system.

Regions/ Markets	Garbage disposal Method	Drainage system
Marathwada		
Small	Head load	Open nala
Medium	Bins, trolley	Under ground pipe line
Large	Bins, trolley	Under ground pipe line
Total		
Average		
Western Maharashtra		
Small	Head load	Open nala
Medium	Bins, truck	Under ground pipe line
Large	Bins, trolley, truck	Under ground pipe line
Total		
Average		

	Garbage disposal methods		Drainage systems	
	M.	W.M.	M.	W.M.
Markets with Facility	100%	100%	100%	100%
Facility being utilized	100%	100%	100%	100%

an large market of both the regions. Even though the drainage system was provided, in some markets maintenance was not properly. There was poor maintance and as a result there was water logging in the market yards. A good system of garbage disposal and drainage is very essential and was suggested by Phuke and Hedgire (1986).


LOTUS OF INFRASTRUCTURE
MAIN TRADING FACILITIES
FARMERS
PARKING &
ANCILLARY TRAD
GARBAGE DISPOSAL AND
WATER SUPPLY
COMMON FACILITIES
A. P. M. C.
APM ACT

Summary and Conclusions

Chapter V

SUMMARY AND CONCLUSIONS

A well developed Agricultural marketing system is considered as a pre-requisite for the development of agricultural sector. The regulated markets (APMCs) have been started to safeguard the interest of the produce-sellers in getting better prices for their produce, avoid delay in payment to get rid of the cheating and malpractices of agent and traders and to have overall orderly marketing. Infrastructural facilities in APMCs is defined as, "Facilities in the market yard helps to carryout marketing of farm produce in a better ways, and also helps to the farmers to get remunerative prices for their produce." The development of infrastructural facilities in the agricultural modern market yards had succeeded to the significant extent in smooth flow of agricultural produces, from the producer to consumer.

The infrastructural facilities covered a number of services provided to the farmers and other market users. In recent past a general postulate prevailed in the minds of though concern with the development of agricultural and rural economy, that the infrastructural facilities provided in the APMCs are mismatched with the production potential or marketable suplus across the regions. It is also felt the infrastructural facilities provided by APMCs are either under utilized or mis-used, hence it leads to low efficiency of marketing. It was felt necessary to undertake the research study entitled "Study of infrastructural facilities available at Agricultural produce market committee (APMCs) and their utilization in Maharashtra State, with following objectives.

1. To identify the infrastructural facilities created/provided by the selected Agricultural produce market committees.

2. To study the adequacy of infrastructural facilities

3. To study the utilization of infrastructural facilities by the various market users.

For the present study Marathwada and Western Maharashtra regions were selected purposively and from each region, six markets were selected on the basis of their annual gross income, as small (less than 40 lakh), medium (in between 40 lakh and 2 croer) and large markets (more than 2 crore), thus total 12 markets were selected. The data was collected from the office records of the selected APMCs and by face to face interview of officers of APMCs. The collected data were tabulated analysed by using simple statistical tools like averages, percentages, ratio etc. The data covered the infrastructural aspects like trading facilities, ancillary trading facilities, administrative facilities, farmers facilities, common facilities, drinking water and parking facilities, publicity and communication and garbage and drainage disposal system.

The findings of the study are summerised as below :

1) The economic profile of APMCs in Western Maharashtra was better than Marathwada region.

2) Small and medium markets in Marathwada region did not possess the closed and open common auction halls, whereas in Western Maharashtra all the markets have these facilities with adequacy and being utilized to the fullest extent.

3) Medium markets in Marathwada and small markets in Western Maharashta were without common drying yards. However, the size of the common drying yard in Western Maharashtra markets was larger.

4) Retailers trading facility was meager in medium and large markets in Western Maharashtra.

5) Almost all the markets in both regions were with the adequate facility of storage godowns.

6) Small and medium markets were without cold storage facility. In large market it was adequate in Marathawada region. Whereas in Western Maharashtra cold storages were available in medium and large markets. All the cold storages in both the regions were owned by the corporate sector.

7) Grading of Agricultural product was inadequately followed in all the marketsof both of regions.

8) There was no pledge finance facility available in all the markets of both the regions.

9) All the market in both the regions were with the administrative facilities like banks, post offices, police posts, security post, etc.

10) All the markets had farmers rest house for staying during night times.

11) Agricultural input shops were provided in all the markets but about half of them were not used.

12) In all the markets under study the common facilities like bathrooms, toilets, and urinals, were provided but some of them were in partially usable conditions.

13) The facilities like canteen, tea stalls, sundry shops, were provided in all the markets. However in some of the markets canteens were running unsatisfactory.

14) Drinking water facilities were provided in all the markets through open wells/ tube wells, drinking water taps, etc. However, in large markets taps were not running properly and their was wastage of water.

15) As far as parking and traffic facilities are concern all markets have provided these facility i.e. area for loading unloading, boundary walls, electric light, internal roads etc. However, sitting benches were not provided by all the markets except large markets in western Maharashtra.

16) The market intelligence and marketing information dissemination system was found weak in all the markets of both the regions.

17) Drainage and methods of garbage disposal was not proper and caused water logging and other difficulties in the market yards.

IMPLICATIONS

The orderly marketing of Agricultural produce and efficiency of APMCs depends upon the nine pillars of infrastructure in the market yards. They are trading facilities. Administrative facilities, common facilities, water supply, publicity and communication. Farmers facilities, parking traffic facilities, ancillary trading facilities and garbage disposal and drainage facilities.

From the present study it was recorded that at overall level the markets in the Western Maharashtra are better in providing infrastructural facilities in the markets. This called for creation of satisfactory infrastructure facilities in the markets of Maharawada region. This needs better out look of the concerned persons and budgetary provisions.

Cold storage required heavy investment and hence facilities might have not been created. For this purpose financial help can be obtained from NABARD and other financial institutions.

Grading and standardization of agricultural produce is still not satisfactorily followed. It requires machines and tools and training to the persons, agents, traders in the market. Not only this sufies the purpose but needs to create awareness among the producers regarding and standardization of agricultural produce. The common facilities like bathroom, urinals, canteens, farmers rest house etc. are extremely needed in the market yards. The available facilities should be done by the concerned officers

working in the APMCs. Marketing information dissemination system is a need of the day and hence attention should be given to establish such facilities with its effective working so that the farmers can be benefited. Well drainage and garbage disposal system are prevailing but they are not working properly. The attention of the concern is invited for orderly working of the system

College	:	Agriculture College. Parbhani
Student	:	**Miss Vikhe Archana Vishwanath.**
		Reg.No. 59M/2001A
Research Guide & Chairman	:	Dr. K.D.Phuke
Thesis title	:	**Study of infrastructural facilities available at Agricultural produce market committees (APMCs) and their utilization in Maharashtra State**

ABSTRACT

A well developed Agricultural marketing system is considered as a pre-requisite for the development of agricultural sector. The regulated markets have been started to safeguard the interest of the produce sallers in getting better prices for their produces. avoid delay in payment. to get rid of the cheating and malpractices of agent and traders and to have overall orderly marketing. Infrastructural facilities in APMCs is defined as facilities in the market yard help to carryout marketing of farm produce in a better ways and also helps to the farmers to get remunerative prices for their produce. It was felt necessary to study the avaiability of market infrastructure facilities and their utilization and hence the study was conducted with the objectives viz.. to identify the infrastructural facilities created by the selected Agricultural Produce Market Committees. to study the adequacy of infrastructural facilities and to examine the utilization of infrastructural facilities by the various market users.

For the present study Marathwada and Western Maharashtra regions were selected purposively. Two markets from each region belonging to small. medium and large category based on their annual gross income were selected. Thus total 12 markets were selected. The data for the year 2001-2002 were collected from the office records of the selected APMCs and from the officers by face to face

interviews method in the pre-tested schedules. The collected data were tabulated analysed by using simple statistical tools like averages. percentages. ratio etc. The data covered the infrastructural aspects like trading facilities. ancillary trading facilities. administrative facilities. farmers facilities. common facilities. drinking water and parking facilities. publicity and communication and garbage and drainage disposal system.

It was found that at the overall level the market infrastructural facilities were better in the Western Maharashtra markets than Marathwada region. However. facilities like grading and standardization of agricultural produce are not available to the required extent in both the regions. Market information dissemination system needs to be strengthen in the markets of both the regions. In brief markets of both the regions have adequate infrastructural facilities except few which are being utilised by the market users.

Literature Cited

LITERATURE CITED

Agrawal, V.K. (1981). Problem of Agricultural Marketing in India. Indian J. Marketing. 11(9) : 23-26.

Anonymous (1999). Infrastructural facilities provided by the APMCs and their utilization Govt. of India.

Archana, B. S. Rohal, M.K. Gupta, S.P. Baliyan. (1995) Study of cost and margins over time in the marketing of gur 1980/81-1991/92 (A case study of regulated markets of district Muzaffarnagar Western U. P.). Indian J. Agril. Marketing, special Issue. 27-32.

Atibudhi, H.N. (1988) An operational and organizational structure of regulated markets in Orissa. Indian J. Agril. Econ. 53(3): 407-408.

Balalji, P., N. R. Padmanban, S. D. Sivakumar and P. Chinnaiyan (2001). Price spread, marketing efficiency and constraints in marketing of groundnut in Tiruvannamalai, Tamilnadu. Indian J. Agril. Marketing. 15(2): 36-42.

Bansla, R. N. (1994). Export of fruit and vegetables: problems and prospects Agricultural Marketing 37(3): 710.

Barman, K. K. and H. C. Deka (1995). Role of marketing Institutions in market regualtion in Assam : A Critical Evaluation, Indian J. Agril. Marketing. Special Issue : 90-96.

Basu, J. P. (2002) Is potato marketing efficient? "An analysis of villgae survery data for Hooghly District, West Begal" Indian J. Agril. Marketing 16(3) : 147-158.

Biradar, R. D. (1989). Effectiveness of regulated market in protecting the Interests of cultivator- Sellers at the market place. Indian J. Agril. Econ. 53 (3) : 23-26.

Biradar, K. S. and D. V. Kasar (1983). Marketing of Jalgaon banana in Delhi market. Indian J. Marketing, 13 (6-7) : 27-31.

• Chhikara, O. P., K, Kumar and H. Singh (1998). Agricultural Regulated markets in Haryana : Problems and Prospects. Indian J. Agril. Econ. 53(3) : 420.

• Hajarika, J. P. and A. K. Sarma (2001). Short term Demand for and supply projections of Rice in Assam for 2010-11. Indian J. Agril. Marketing. 5(1) : 10-19.

• Jain, B. C. (1998). Market structure and performance of regulated market. Indian J. Agril. Econ. 53(3): 400-401.

Jeyarathnam, M. (2002). Farmers market (Uzharar Sandhai) in Tamil-nadu. A swot Analysis. Indian, J. marketing. 32(8) : 3-5.

Kamatgikar, V. R. (1994). Marketing of banana in major South Indian Markets. Dissertation submitted to the MAU, Parbhani for the award of M.Sc.(Agri.) degree in Agril. Econ.

Kapase, P.M. (1990). Constrains in marketing of Ber in Solapur district. Mah. J. Agril. Econ. 3(9): 24-25.

Khan , RAR. (1992). How to save growers against losses of perishables? Journal of Rural Development and Administration. 24(2): 43-50.

Khunt, H.M., H. M. Gajipara and B. H. Kakadia (2001). Marketing of Kesar Mango in Saurashtra Region of Gujrat State. Indian J. Marketing. 15(5): 47-54.

Krishana, P. V. and G. Rao, (1983). Marketing of Agricultural produce in Bihar sahariff : A case study, SEDME Institue, Hyderabad 10(4) : 41-44.

Lehale, P. K. (1993). Economics and marketing of selected vegetables in Akola district. M.Sc. thesis submitted to M.A.U., Parbhani.

Lodo-c (1991) Rural periodic market : A case study from North Malakisi location. Bungoma district, kenya, Eastern-and-Southern-Africa-Geographical Journal. 2(1) : 35- 55.

Nagraj, M. G. and Chandrakant (1985). Market appraisal for few fruits and vegetables. Indian J. Agril. Marketing 16 (4) : 13-20.

Narasalah, P. V. (2001). Rythu Bazars. A new Era in Agricultural marketing. Indian J. Marketing. 21(9-10) : 18-22.

Nawadkar, D. S., B. V. Pigre, V.G. Pokharkar and D.L. Sale (1992). Arrivals and prices of selected commodities in Pune regulated market of Maharashtra State. Indian J. Agril. Marketing. 6: (3) : 8.

Ojha, V., H. Anand Kumar and Samba Murthy (1982). Role of middleman in agricultural marketing. An empirical Assessment. Indian J. Marketing. 13(5) : 3-13.

Pagire, B. V., H. R. Shinde, B. K. Mali and D. B. Yadav (2000). Progress and performance of Rahuri APMC. A case study. Indian J. Agril. Marketing. 14(3) : 38.

Patil, K. K., S.R. Torane, S. S. Torane and M. T. Ingawale (2003). Current status of mango production, export and strategy for export promotion. Paper presented in 14th Annual conference of MSAE held at Yeshwantrao Chavan Maharashtra Open University, Nasik from 10-11 January, 2003.

Pawar, J. R., D. B. Yadav and V.S. Babar (1986). Effects of imperfection of marketology. Indina J. Agril. Marketing. 19(2): 15-18.

Phuke, K.D. and D. N. Hedgire (1986). Marketing and processing of pulses in Marathwada. AGRESCO Report, M.A.U., Parbhani.

Phuke K.D. and C. D. Patil (2002). Marketing of chilli and model for agricultural market information system (AMIS). AGRESCO Report, M.A.U., Parbhani 2001-2002. PP. 30-37.

Phuke K.D. and C.D. Patil (2003). Agricultural marketing information dissemination system in post WTO era. Paper presented in 14th Annual Conference of MSAE held at Yashwantrao Chavan Maharashtra Open University, Nasik form 10-11 January, 2003.

Phuke K.D. and Pawar N. D. (2003). Current status and export potential of Banana fruit in India. AGRISCO Report 2002-2003. M.A.U., Parbhani. PP.1-6.

Pokale, S. N. (1994). A study of Parbhani (APMC) Regulated Market. Thesis submitted to the M.A.U., Parbhani for the award of M.Sc. (Agri.) degree in Agril. Economics/

Prakash, B. and S. Srivastava (1995). Effect of market Arrivals on price of field pea in Uttar Pradersh Bihar. Indian J. Agril. Marketing 3(3) : 249-254.

Prasad Raj Kumar and R. Kumar (1996). Role of State in Agricultural Marketing. An overview, Bihar J. Agril. Marketing. 4(4) : 335-339.

Radha, Y.and Y. Eswar Prasad (2001). Economics of production and marketing of vegetables in Karimnagar district, Andhra Pradesh. Indian J. Agril. Marketing. 15(1) : 55-61.

Raj, K. N., S. P. Singh, S. N. Singh and V. P. Mehta (2000). Growth and Development of regulated market in Haryana, Indian J. Agril. Marketing 14(3) : 25-32.

Rasne, V.S. and K.S. Gore (1992). Constraints in marketing of flower in Nasik district of Maharashtra. Agricultural Research sub committee Report (Agricultural Econ.) Mahatma Phule Agril. University, Rahuri. PP: 239-341.

Reddy, Y. V. (2001). Indian Agricultural Reform : Concerns, Issues and Agenda, Indian J. Agril. Marketing. 15(1) : 1-9.

Renuka (Mrs.), B. Dasarathan and Neha Iqbal Ali (1991). Problems in marketing of Agril. Products at Market yards Indian J. Marketing. 21 (5-10) : 13-16.

Senam Raju : (2000). Apprehensions of farmers on working of regulated Agricultural Markets. A case study. Indian. J. Marketing. 32(10) : 9-13.

Shamsul Alam and M. J. Alam (2002). Price Behaviour of Rice in Bangladesh. Indian J. Agril. Marketing. 15(1) : 20-29.

Singh, L. P., (1993). Regulated markets in 21st century. An outline of their future Role Bihar J. Agril. Marketing. 1(1): 7-13.

Singh, R.K. and O.P. Singh (1992). Factors limiting free flow of arrivals into regulated market yard. Indian J. Agril. Marketing. 6 : (3)5.

Singh, S. K., B. B. Singh and R. P. Singh (1998). Study of organisation , structure and performance of Doharighat regulated market in Mau District of uttar Paradesh. Indian J. Agril. Econ. 53(3) : 377-378.

Subbanarsaih, N. and Mohan (1987). Marketing problems and prospect of citrus fruits growers in Backward Region. A case study of a Cuddapah district of Andhara Pradesh. Indian J. Marketing. 17 (9-10) ; 23-28.

Sukhapal Singh (1996). Marketing infrastructure and agro processing development. A case study of Gujrat Indian J. Agril. Marketing. 10(1): 58.

Suryawshi, B.P. (2000). Economics of marketing of major selected vegetgables in Latur Market. M.Sc. thesis submitted to M.A.U. Parbhani.

Tarit Kumar Datta (2002). Problems of infrastructure in the Agril. Markets and villages of Sundarban in West Bengal. Indian J. Agril. Marketing . 16(3) : 137-146.

Thakur, D.S., S.K. Chauhan and K.D. Sharma (1988). Efficiency and weakness of Regulated Market. Indian J. Agril. Marketing. 2(1) 48-59.

Thippian P. and R.S. Deshpande (1998). Analysis of market infrastructure: Price and terms of trade. A case study of Karnataka. Indian J. Agril. Economics. 53 (3) : 359.

Thomas, K and K. Mukundan (1989) Marketing of Pineapple in Trichur District , Kerala state , Agril. Marketing. 23 (3) : 8-10.

Tiwari, S.V. (1998), Economics of production and marketing of selected flowers in Marathwada region. Dissertation submitted to M.A.U. Parbhani for the award of M.Sc. (Agril.) degree in Agril. Economics.

Vigneshwara, V. (1986) , Dynamics of fruit and vegetable marketing in India. India. J. Marketing. 17(4) : 29-32.

Appendix

APPENDIX

STUDY OF INFRA STRUCTURAL FACILITIES AVAILABLE AT APMCs AND THEIR UTILIZATIONS IN MAHARASHTRA STATE.

1. Name of market yard :
2. Year of establishment :
3. Area of market yard :
4. Number of villages covered :
5. Gross income/year :
6. Total expenditure / year :
7. Total net income / year :
8. Total annual turn over :
9. Number of employees :
10. Expenditure on staff salary :
11. Expenditure on maintenance of building etc. :
12. Trading facilities :

a) Common Auction halls (covered) : Yes/No

If Yes : Numbers : _____ Area : _____

Adequacy :_____ Utilization : _____

If No : Reasons :

b) Common open Auction platform : Yes / No

If Yes : Numbers : _____ Area : _____

Adequacy :_____ Utilization : _____

If No : Reasons :

c) Common drying yards : Yes/No

If Yes : Numbers :_____ Area : _____

Adequacy :_____ Utilization : _____

If No : Reasons :

d) Trader's modules :

Office : Numbers _____, Adequacy _____ Utilization _____

Auction halls : Numbers _____ , Adequacy _____ Utilization ____

Godowns : Numbers _____, Adequacy _____ Utilization _____

If No : Reasons.

e) Retailer's shops :

If Yes : Numbers : _____ Area : _____

Adequacy :_____ Utilization : _____

If No : Reasons :

12. Ancillary trading facilities :

a) Storage godowns : Yes / No

If Yes : Numbers : _____ Area : _____

Adequacy :_____Utilization : _____

If No : Reasons :

b) Availability of cold storage : Yes / No

If Yes : Numbers : _____ Area : _____

Adequacy :_____ Utilization : _____

If No : Reasons :

c) 0rocessing units :

If Yes : Number :

If No : Reasons.

d) Weighing equipment :

If Yes : Numbers : _____ Capacity: _____

Adequacy :_____Utilization : _____.

If No : Reasons :

e) Grading equipment :

If Yes : Numbers :_____

Adequacy: _____Utilization : _____

If No : Reasons :

f) Pledge finance : Yes / No

14. dministrative facilities : Yes / No

a) Banks : Yes /No

b) Post office : Yes /No

c) Police post : Yes /No

d) Security post : Yes /No

If No : Reasons :

15. Farmer's facilities :

a) farmer's rest house :

Yes /No

If Yes : Numbers : _____ Adequacy :_____

Type of construction : _____ Utilization : _____

If No : Reasons :

b) Dormitory accommodation :

Yes / No

c) Agricultural input shops : Yes / No

If Yes : Numbers : _____

Adequacy :_____Utilization : _____

If No : Reasons :

16) Common facilities :

a) Bathrooms : Yes / No

If Yes : Adequacy : _____

Utilization : _____

If No : Reasons :

b) Toilets : Yes / No

If Yes : Adequacy : _____

Utilization : _____

If No : Reasons :

c) Urinals : Yes / No

If Yes : Adequacy : _____ Utilization : _____

If No : Reasons :

d) Daily needs : Yes / No

If Yes : Adequacy : _____ Utilization : _____

If No : Reasons :

e) Tea shops : Yes / No

If Yes : Adequacy : _____ Utilization : _____

If No : Reasons :

f) Canteen : Yes / No

If Yes : Adequacy : _____ Utilization : _____

If No : Reasons :

17.Drinking water and other water facilities :

g) a) Open wells/ tube wells : Yes / No

If Yes : Adequacy : _____ Utilization : _____

If No : Reasons :

h) Municipal water supply : Yes / No

If Yes : Adequacy : _____ Utilization : _____

If No : Reasons :

c) Electric pump sets : Yes / No

If Yes : Adequacy : _____ Utilization : _____

If No : Reasons :

d) Drinking water taps : Yes / No

If Yes : Adequacy : _____

Utilization : _____

If No : Reasons :

18. Parking and traffic facilities :

a) Area for loading, unloading and parking :

Yes / No

b) Internal roads : Yes / No

c) Boundary walls : Yes / No

d) Electric light : Yes / No

e) Shade trees : Yes / No

f) Plat form / sitting benches : Yes / No

If No.: Reasons :

19. Publicity and Communication : Yes / No

a) Rate display Board : Yes / No

b) Public address system : Yes / No

c) Public telephone : Yes / No

If No. Reasons :

20. Garbage disposal and drainage system. Yes / No

a) Garbage disposal Yes / No

methods I) ii) iii)

b) Drainage system : Yes / No

If no Reasons :

c) overall conditions of market yard.