

ROLE OF STATE GOVERNMENT IN PROMOTING  
AGRICULTURAL IN RAJASTHAN: AN EMPIRICAL  
STUDY OF SELECTED FARMER'S SATISFACTION  
LEVEL

A

Thesis

Submitted for the Award of Ph.D. degree of

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in the

Faculty of Commerce and Management

Doctor of Philosophy

by

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December 2017

## **Candidate's Declaration**

I hereby certify that the work, which is being presented in the thesis, entitled **“Role of State Government in Promoting the Agricultural in Rajasthan : An Empirical Study of Selected Farmer’s Satisfaction Level”** in partial fulfillment of the requirement for the award of the Degree of Doctor of Philosophy, carried under the supervision of Dr. Anukrati Sharma and submitted to the Department of Commerce and Management, University of Kota, Kota, represents my ideas in my own words and where others’ ideas or words have been included. I have adequately cited and referenced the original sources. The work presented in this thesis has not been submitted elsewhere for the award of any other degree or diploma from any Institutions. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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- (a) Course work as per the University rules.
- (b) Residential requirements of the University (200 days).
- (c) Regularly submitted Annual Progress Report.
- (d) Presented his work in the Departmental Committee.
- (e) Published / accepted minimum of one research paper in a Referred Research Journal.

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## **Thesis Approval for Doctor of Philosophy**

This thesis entitled “**Role of State Government in Promoting Agricultural in Rajasthan: An Empirical Study of Selected Farmer’s Satisfaction Level**” by Megha Goyal, Reg. No. F-6 () /Res/ UOK/2014/ 25110-11 Submitted to the Department of Commerce and Management, University of Kota, Kota, is approved for the award of degree of Doctor of Philosophy.

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## **Abstract**

Agriculture is a prime sector of the Indian economy for earning a livelihood. It plays multiple roles as big contributor in GDP, Key employer for generating employment to approximately 54.7 percent of the population, major supplier of raw materials to various industries, large provider of fodder to more than 13 crores cattle, prime supporter to international trade and base for poverty eradication in the socioeconomic development of the country.

Agricultural Marketing is the key element for agriculture development and prosperity of farmers in the country. So after independence government policies and programmes are focused on increasing yielding rate of farm products as well as the development of farm marketing infrastructure in the country. Establishment of the regulated markets, warehouses, cold storages; setting upgrading and standardization methods, promotion of direct marketing, contract farming, and timely amendments in APMC act, are examples of these initiatives taken by the central and state government. Despite these government efforts several problems like improper warehouses, inadequate market information, the dominance of middlemen, lack of transport and communication still present in the agricultural marketing system.

Rajasthan is the largest state of India; presently it is divided into 33 districts where around 70% of populations of Rajasthan depend on Agriculture for their livelihood. Approximately 52% of the state's income is derived from Agriculture. Rajasthan has cultivated area of almost 20 million hectares and 20% of the area out of this is irrigated. There are geographical variations found in great extent in terms of soil, surface, climate, and vegetations in Rajasthan.

This research is focused on State government's promotional activities and policies in the agriculture sector for promoting the agricultural marketing in Rajasthan. The main objective of this research is to study the existing scenario of Agriculture Sector in Rajasthan and roles and practices of the State Government for promoting Agricultural

Marketing in the state. The research is conducted to find out the awareness and satisfaction level of farmers towards these promotional activities in the state.

The thesis divided into six chapters. Chapter I “Conceptual Framework of Agricultural Marketing” deals with the brief introduction of agricultural marketing, types, functions, and existing challenges of agricultural marketing in the country. Chapter II “Institutional Support for Agricultural Promotion in Rajasthan” describes the present status of agricultural marketing in the state, policies, schemes, and various institutes initiated by the state Government in Promotion of Agricultural Marketing. Chapter III “Review of Literature” provides a sound base for scientific investigation. It is a text written by someone to consider the points of current knowledge including substantive findings in the field of agricultural marketing. Chapter IV “Research Methodology” explains research methodology which was used in conducting research and collection and analysis of data and reaching conclusions. Chapter V “Data Analysis and Interpretation” presents the collected data from respondents in tabular and logical form and results of the research. It also deals with hypothesis testing. “Suggestive mechanism, recommendation and conclusions are given in Chapter VI “Findings and Suggestions”.

Finally, this research concludes that the state government had initiated various schemes and policies to improve marketing of agriculture products as well as farmer’s condition in the state. Most of the farmers in the state are aware of most of the schemes and government’s strategy for making farmers aware of their initiatives are sound and effective. Some initiatives can be considered as more successful and some initiatives need to more efforts to be successful in the state and farmers are able to grab some of the benefits from these initiatives so they are partially satisfied not fully. The government had not adopted appropriate strategies for promoting agricultural marketing in all districts of the state according to their level of developments. However, the governments played major roles to improve the modality of the agricultural marketing in the state but they should make promotional strategies according to the degree of development of the particular region.

**Role of State Government in Promoting Agricultural in Rajasthan: An  
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## **Chapter – One**

# **Conceptual Framework of Agricultural Marketing**

## Chapter – One

### Conceptual Framework of Agricultural Marketing

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#### 1.1. Introduction

Agriculture is one of the most ancient livelihoods of a human being. It is not only the basis of bread and butter but also the pivot of financial development. It fulfills the basic needs of the human being by supplying food, shelter, clothing, and medicine to them. It is also an essential source of raw materials, industrial products and consumer goods for various industries.

As per estimates by the Central Statistics Office (CSO), Agriculture and its allied sectors contributed around 15.35 % Gross Value Added (GVA, earlier referred as Gross Domestic Product) of the country at 2011-12 basic prices during 2015-16 (Government of India, 2017). It generates employment to approximately 60% of the total workforce in the country. It also provides fodder to more than 13 crore cattle. There are many leading industries which directly or indirectly rely on the agriculture sector for their raw materials, and together they account for 50% of income generated in the manufacturing sector in India. It plays a vital role in maintaining food security, containing inflation and processing of national security (Acharya, 2007). So the agriculture sector can be considered the backbone of the Indian economy.

After independence, the Indian agriculture sector was facing several problems such as inadequate irrigation facilities, lack of knowledge about the scientific method of the farming, malpractices of landowners and money lenders, small agriculture production, infant marketing system, self-insufficiency in food grains, and low farm income. However, now it has experienced a revolutionary breakthrough in food grain production (green revolution), milk (white revolution), oilseeds (yellow revolution), fish (blue revolution), and fruit and vegetables (golden revolution). It transformed the country from deficit and import arena to the active state of self- sufficiency and the buffer stock through several programs and practices adopted by the central and state government during five-year plans

(1951-2012). On account of this ebullient endeavor of the government, the equation of agriculture sector has reversed “from the importer to the exporter of farm products” and the concept of production for home transformed into production for the market both global and domestic.

The “changing scenario” gave new wings to Indian Agriculture for flying in the sky of the global world has a lot of new opportunities for farm producers. However it brought some new challenges such as seeking the domestic and international market for the marketed surplus; formation of integrated, regulated and coordinated internal agricultural marketing system for providing fair marketing practices and advancement to the farmers; and developing fit farm technologies and agro-management applications for ensuring food and nutritional security; exploiting export opportunities; satisfying diversifying global and domestic market demands; alleviating poverty; and securing prosperity in the farming community. To envisage these challenges, the agriculture sector is demanding to be market-driven, more profitable, competitive, innovative and responsive to high technology and IT applications. It will be possible through effective, efficient and adequate agricultural marketing practices adopted by the Central and State Government.

## **1.2. Concept of Agricultural Marketing**

Agriculture is defined in the Agriculture Act 1947, as including ‘horticulture, fruit growing, seed growing, dairy farming and livestock breeding and keeping, the use of land as grazing land, meadow land, osier land, market gardens and nursery grounds, and the use of land for woodlands where that use ancillary to the farming of land for agricultural purposes’.

It can be considered as a business to get a maximum net return by skillfully performing farm jobs like management of land, water, capital, and labor, employing the knowledge of various sciences and techniques for the production of food, fiber, fuel, livestock and other industrial materials.

“Marketing” is the set of coordinated activities that direct the flow of goods and services from the producer to the consumer. It starts with identifying customer

needs and wants and ends with satisfying them through exchange process and generates profit for the producer.

The American Marketing Association (AMA) defines marketing as “the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational goals (Bennett, 1995).”

Agricultural marketing is a link between farm activities and non -farm activities. It includes all the activities, procedures and policies needed for the disposal of agricultural outputs from the land to the consumer for both commercial and domestic purposes.

It is a process which commences with a precise determination to produce a marketable farm product, and it includes all the functional and institutional aspects and approaches of market system by economic and technical consideration. It also covers both pre-harvest activities like buying farm inputs and post-harvest operations such as operations, assembling grading, storage, distribution, and transportation (Government of India,1976).

It is an organized series of the commercial functions involved in moving farm, horticultural, and allied products from producer or farmer to consumer.It also reflects another dimension from the supply of farm product from rural to rural and rural to urban and from rural to industrial consumers (Acharya, 2004).It also comprises the activities regarding the procurement of agricultural inputs such as pesticides, fertilizers; machinery, tools, other appliances; and feed for livestock demanded by farmers for performing farm operations.

Therefore, Agricultural marketing can be defined as a set of all activities that are carried out in the supply of agriculture inputs to the farmers for agricultural production and movement of agricultural outputs from the farms to the ultimate consumers. It includes several activities as an assessment of demand and supply of inputs and outputs, post-harvest handling of agriculture products, storage warehousing, transportation, price determination, grading, financing, and information dissemination.

Hence Agricultural marketing is all about marketing practices, market infrastructure, and distribution channel which are adopted by agriculturist to dispose of their marketed surplus at a remunerative price to the customer and to assure a supply of agricultural raw materials at reasonable cost.

### **1.3. Characteristics of Agricultural Marketing**

The essential features of Agricultural Marketing are the following:-

1. Adequate physical infrastructure for cleaning, sorting, storage (scientific & cold storage), packaging, grading and post-harvest management.
2. Systematic and orderly organized market to the farmers for selling their farm products.
3. Price setting system for ensuring remunerative prices and timely payments to the farmers for agricultural commodities.
4. Information and communication technology support for communicating information about products, types, quantity, quality, ruling prices, location and market conditions to farm producers and consumers for making profitable decisions at the right time.
5. Free movement, well-established distribution channels and affordable transport facility to the farmers for taking their surplus produce to the target market.
6. Legal and dispute settlement machinery to redress conflicts and complaints regarding methodology and practices in the market.
7. Credit provisions and insurance for financial assistance to farm activities.
8. Research into product varieties, post-harvest handling, preservation, processing, preparation, and presentation.

### **1.4. Types of Agricultural Marketing**

Agricultural marketing can be classified into two categories as:-

#### **1.4.1. Farm Input Marketing**

Farm Input Marketing is a crucial aspect of agricultural marketing. It includes a timely supply of agricultural inputs such as seeds, fertilizers, pesticides, plant protection chemicals, labor, electricity, farm equipment and machinery, diesel oil,



and credit to the farmer at a fair price for the agriculture production. The efficient farm productions are possible only through a timely availability of agricultural inputs at a reasonable cost.

The Indian government provides subsidies on different types of agriculture inputs for minimising the cost of foodgrains, avoiding food inflation and ensuring income security to the cultivators. The government gives the enormous subsidies to the farmers for procuring hybrid seeds, power, fertilizers, irrigation, food, and credit. The food and fertilizer subsidies are borne by the central government whereas the irrigation and electricity subsidies are borne by the respective state government. Credit subsidies, which include interest subvention and interest subsidy are given through the banks. These are applicable for short-term loans sanctioned for fulfilling production purpose for one year. The government provides some other subsidies to farmers in the form of seeds, development of oilseeds, cotton, pulses, maize, rice, crop insurance schemes and price support schemes through the Farmers' Cooperative Societies (Bhagyalakshmi & Kumar, 2016).

#### **1.4.2. Farm Output Marketing**

Farm Output Marketing is a complex process. It involves all activities and practices which are performed in the movement of the agricultural products to the ultimate consumer from the farmers. All farm outputs do not have the same shelf life. Some like milk, vegetables have a short shelf life, and some have a long shelf life like cotton. All producers and consumers of farm products are not located in one place. They are spread at different places in the country. The forms of agricultural commodities in which they are produced, and they are consumed are different from each other. So marketing of agricultural produce is a combination of three dimensions as time, place and form of agriculture commodity.

#### **1.5. Functions of Agricultural Marketing**

The major functions of agricultural marketing are described given below:-

### **1.5.1. Packing**

Packing refers to covering or wrapping goods for protection against damage, spoilage, breakage, decay, leakage, infestation by insects, pests, and rodents or adverse effects of weather. In packing, goods are placed in bags, boxes, parcels, containers or bottles (in different sizes and weight) according to the need and convenience of buyers or ultimate consumers. The type of materials and containers used in the packing depends on the kind and form of a commodity as well as the phase of marketing. Packing helps buyers in purchasing products regarding quality, product composition, type of product, and usage. Packing or packaging facilitates the handling of the product and reduces the marketing and storage cost. It is an effective tool for branding, advertising and promoting the product.

### **1.5.2. Transportation**

Transportation refers to the physical movement of an agricultural product from the farm to the local market or primary market and primary market to secondary market or retail market or directly to ultimate consumers. The place of production and consumers of farm produce are not the same. They are spread throughout the country. So transportation helps in bridging the gap between the producers and consumers located in different places. It adds the place utility to goods and generates employment. It helps in enhancing the movement of capital and labor and checking the price rises and falls (due to surplus or scarcity of produce) in a different place throughout the country.

The movement of goods is done by road, by train, by air or by water and it depends on quantity, availability, and the phase of marketing. The cost of transport accounts for about 50 percent of the total cost of marketing. It is affected by such factors as quantity (small or large), nature of products (perishability, fragility or inflammability), distance, risk association with transportation and mode of transport (rail, road or air).

### **1.5.3. Warehousing and Storage Facilities**

Storage refers to holding and preserving products and goods from the time they are produced until they are needed for consumption (Achrya & Agrawal, 2011). Most of Agriculture goods can be produced in a particular season and production of farm output fluctuates year to year due to dependency on natural factors. So storage adds time utility to agriculture goods and ensures a continuous supply of products throughout the year in the market when production of the commodity is not possible due to unfavorable conditions.

Storage is a practice for maintaining a balance between demand and supply of agriculture products; however, the time of productions and consumption are different from each other. It is helpful for the stabilization of prices by regulating demand and supply of agriculture commodities. It helps in generating employment and income through price advantages and keeping safe perishable and non-perishable agriculture commodities from demolition. Sometimes it is necessary for performing other marketing functions such as transportation, buying, and selling.

Underground storage structure, surface storage structure, bag storage, bulk storage, CAP storage, pussa bin, warehouses, rural godowns and cold storage are types of storage structures for storing agriculture commodities.

### **1.5.4. Grading and Standardization**

Standardization refers to the determination of the standards to be set for different commodities. Pyle has defined standardization as the identification of the key limits on grades or the formulation of model processes and practices of producing, handling and selling goods and services (Acharya & Agrawal, 2011). According to ISO standardization, it is the procedure of formulating and enforcing rules and regulations for an orderly approach to a specified activity for the benefit and cooperation of all concerned, and in particular, for the promotion of the overall economy, considering due safety requirements.

A standard is a scale that is universally granted as having definite set value and followed by all in the trade. It is fixed by certain features such as weight,

composition, size, appearance, color, taste, and design. So it can be said that standardization is a process of setting up basic standards to which the products must conform, and it ensures that the goods are produced according to these established quality specifications. Grading is a sub-function of agricultural marketing and involves graduating the products into distinct lots or groups as per the established standards and quality specifications laid down.

Grading and Standardization help the customer to know about the product, to make a comparison with other product and to choose the most suitable product for them. It increases the sale of the product and fetches a better price.

Grading of agricultural commodities has three main purposes as (i) to promote a common trade language and avoid the requirement for physical checking and handling at multiple points; (ii) to protect consumers by ensuring quality; and (iii) to protect the producer from exploitation by ensuring prices commensurate with the quality of the produce (Pattanayak,2016).

For agriculture commodities, AGMARK-STANDARD is established under “**Agricultural Produce (Grading and Marking) Act, 1937**” by the central government. These standards are implemented by grading and marking rules and instructions stipulated for the commodity.

#### **1.5.5. Value Addition and Processing**

Processing involves a change in the basic form of commodity to more consumable form. It is concerned with the enhancement of value to the product by transforming its form. For example, milk changes into ghee, butter, curd, and cheeses, or into another more usable form. It adds form utility to goods.

It is an essential agricultural marketing function for the producer, seller, and consumer. The consumer has several options for food articles and chooses an option that is liked by him or suitable for him. It reduces time and labor for the customer. For example, the wheat grains are processed in various forms as flour, bread or biscuit. The consumers can choose any form of wheat grain according to their need and suitability. It creates employment opportunities and generates

income for producers and sellers through price advantage after processing of raw materials.

Processing industry endows a well-established market for farm raw materials and demands heavy investment for the formation of the necessary infrastructural facilities regarding plants, machines, and buildings.

#### **1.5.6. Buying and Selling**

Buying and Selling are essential functions of agricultural marketing. Buying includes getting the right product at the right price in right quantity in exchange for money. Selling involves disposing of the product at a fair price achieving profit. It creates possession utility of goods.

#### **1.5.7. Price Determination**

Prices for agriculture commodities are primarily determined by domestic demand and supply factors and affected by national price policy. To some extent prices of commodities are influenced by negotiation power of customer and desire of seller about profitability. It is a continuous process which involves evaluating the status of demand and supply, analyzing customer's wants, and willingness of paying for a particular quantity of commodities at each stage of marketing and allocating the general level of prices for the products.

#### **1.5.8. Assembling**

It includes a collection of farm produce or commodities for sale in the larger market, submarkets, and 'mandies' or bringing together a few agricultural products for better convenience and economy in transporting, purchasing or processing as a change in the form of the commodity into more consumable form. It is related to the assembly and transport of produce from the field to a common assembling area or the market.

It is a necessary function which is performed in the distribution of finished products where wholesaler buys commodities from many processors or producers to satisfy the demand of retailers and consumers.

### **1.5.9. Distributing**

The producers and consumers of farm products are not present at the same place; they spread throughout the country, and mainly producers stay in villages while consumers are in urban areas. So the movement of goods from one location to another or from producers to ultimate consumer is necessary to satisfy the need of consumers. It is done through the distribution process. Distribution involves dispersing, wholesaling, retailing and marketing of farm products. Agricultural commodities move from producers to the consumer through various routes are known as distribution channels.

The length of distribution channel depends on the type of farm products. Every group of agricultural commodities has different own marketing channels. However, there are two common routes as direct route (involving the movement of goods from producers directly to consumers) and indirect route (involving movements of goods from producers to consumers through various intermediaries such as village traders, wholesalers, retailers, processors, facilitators, cooperative societies, speculator, brokers, commission agents, or vendors) for distributing process. The numbers of intermediaries depend on nature and type of commodity, consumer demand for the product, the quantity of product to be moved, the demand of particular kind of the product, availabilities of storage facilities, and the distance between producer and consumers.

### **1.5.10. Financing**

Finance is a necessary input for agriculture production and marketing. Farmer's needs for finance can be divided into three categories as short-term, medium-term and long-term based on period required by the farmers. Short period finances are needed by the farmer for less than 15 months for purchasing pre harvesting inputs such as seeds, fertilizers, pesticides, and petrol. Medium period credit lies between 15 months and 05 years for buying cattle, equipment or making some improvements on the land. Long-term finance, provided for more than 05 years is required for acquiring costly machinery, purchasing land or to pay off old debts.

Between the period of production and sales of agriculture produce to ultimate consumers, several marketing functions as processing, storing, packaging,

transportation and grading are performed by farmers and intermediaries as processors, wholesalers or retailers. So farmers and intermediaries require finance arrangements for performing these activities efficiently and improving their holding capacity.

For satisfying these needs, there are two types of sources of finance as institutional and non-institutional credit available to the farmers.

#### **A. Non-Institutional Credit**

It includes borrowing money from informal sources such as landlords, friends, relatives, money lenders or commission agents. It is popular among farmers due to some lucrative features like fewer complexities in the procedure, low paperwork requirement and easily approachable even at odd hours for both farm and non-farm jobs' credit requirements. Although it has some great disadvantages like the moneylenders or landlords charge a huge rate of interest or keep overvalued commodity as pledged or exploit the farmers as bonded slaves in case of no repayment of loans.

#### **B. Institutional Credit**

It means loans provided by co-operative credit societies, regional rural bank, and commercial bank at a minimum rate of interest. The motive behind this arrangement is to increase productivity by providing timely and sufficient credit input to farmers and maximizing their income. It makes the distinction between long-term and short-term needs of cultivators and provides loans accordingly. They charge a different rate of interest for various purposes (such as the use of seeds, fertilizers, farm machinery or deepening of wells) and follow a set of rules and regulations for granting loans.

#### **1.5.11. Risk Taking**

The risk is latent in all activities of agricultural marketing and production. Controllable (typically pests, diseases, weeds, and seed material) and uncontrollable (climatic such as erratic rainfall, extreme temperature conditions, hail incidences, extreme wind speeds, and humidity variations) risks are mainly associated with agricultural functions. The threat of the loss farm produce by the

theft, the fire, rodents, or other factors, fall in price, taste alteration, trends in the market, change in technology and delivery of the products to wrong hand or place are some common types of risks in the marketing of agriculture products.

Many alternatives such as the use of safety measures like fireproof materials, improved storage structures, transfer of physical losses to insurance companies, allocation of the prices (minimum and maximum) for agriculture produce (Acharya & Agrawal, 2011), various agriculture insurance schemes, cooperative marketing with price pooling, forward contracts for commodity sales or input delivery, and hedging on future markets are applied for minimizing the risk associated with the commercialization of agriculture production.

#### **1.5.12. Dissemination of Market Information**

Appropriate, sufficient, accurate and timely available information about market and market conditions are necessary for farmers, intermediaries, government and other stakeholders for taking the right decision about marketing practices. Market intelligence creates a competitive market process and checks the growth of monopoly or profiteering by individuals. It is the lifeblood of the market produce (Acharya & Agrawal, 2011).

Farmers can require substantial knowledge and information about improved farming practices, pricing strategy, market betterment, new policies, schemes, and weather. Intermediaries need information about trends in the market, prices of the commodity, and demand and supply of the farm produce for the planning of purchase, sale or storage of agricultural products. The government requires information for framing policies regarding import-export, market regulation or prices, etc.

Newspapers, magazines, journals, posts, telephones, internets, Kisan Call Centers, price bulletins, government agencies reports, and websites are many sources available for collection of information about market and market conditions.

#### **1.6. Challenges in Agricultural Marketing**

There are lots of challenges in the marketing of agricultural goods. They are:



### **1.6.1. Faulty System of Dissemination Market Information**

The traders and processors use their informal sources while farmers use both formal and informal sources for getting information. Market news is collected by various institutions as Agricultural Produce Market Committee (APMC), Directorate of Economics and Statistics, Department of Food and State Department of Agricultural Marketing etc. and disseminated through electronic media (T.V., Radio), print media (newspapers), display boards in markets yards, and announcements during open auction etc.

The farmers receive information from other farmers or traders. The market information provides only a broad overview to farmers because of various defects in the system. The price quotations are not backed by grades and the information is available only for the small duration of time. It may alter with time and this information is not linked to local grade standard. Quite often, a range of prices is made available, which is of little use to the farmers. There is also a serious misconception about the buying and selling price, which is distinctly different (Agriculture Division, 2007). Farmers mostly in tribal areas rely on traders or brokers to get information about ruling prices of their farm produce. Traders or brokers never reveal the right price to farmers because of their personal benefits.

The lack of awareness of schemes or policies or modern techniques among small farmers and marginal farmers is another important noticeable factor by which they can't receive benefits from them.

### **1.6.2. Inadequate Infrastructure Facilities**

Inadequate storage facilities (only 30 % scientific storage capacity of total needed capacity is available) , low number of available cold storage (only for 10 percent of fruits and vegetables), low number of grading units (only 1637 grading units are set up at primary level and 1368 grading units are functioning in a total of 7246 market yards or sub-yards), the wide gap between rural and urban teledensity, high transportation cost and poor connectivity through rail and road etc. are major reasons of high post-harvest losses.

### **1.6.3. Defects in Existing Markets**

In some states, the number of the regulated market is very low and farmers have to travel long distances to sell to their crops in the primary or local market to save transportation cost and reduce post-harvest losses. Periodic or primary markets don't have basic amenities and they are most neglected by the Government. There are no strong laws or legislation for the regulation of this type of market.

The weak governance of APMCs is the main problem in regulated market and facilities like cleaning, grading and packaging before sale are not available or sufficient in most of the market yards in the country. An insufficient number of warehouses and cold storages is another considerable constraint to create popularity about these markets among farmers specifically small and marginal farmers. Corruption also creates several hurdles to farmers for the trading process in the regulated market.

Presence and dominance of a large number of intermediaries in the market is another big challenge for agricultural marketing. The farm produces move from farmer to consumer through a long chain of intermediaries and in this process, middlemen buy products from farmers at a low price and sell the product to the consumer at higher prices. They snatch a big share of profit from farmers and sometimes farmers do not get their production cost.

The imbalance between demand and supply creates fluctuation in the price of farm produce also is a big challenge for the farmers. In case of bumper crops, farmers get a very low price or sometimes below production cost for their produce due to ample supply of farm produce in the market.

Some another barrier like licensing system for new traders or buyers, multiple licensing system, multi-point levy fee and restriction on movement of farm goods intrastate and interstate etc. create difficulties to farmers and other parties. Promotion and advertising of agriculture products are very difficult for farmers due to lack of resources. So they can't create demand for their products.

Lack of producer's organization is responsible for exploitation of farmers, especially small and marginal farmers by middlemen or moneylenders. They have

less collective bargaining power and are easily manipulated by the middlemen. They bring small quantities of farm output in the market due to lack of cooperation and as a result, the transportation cost increase.

#### **1.6.4. Inadequate Supply of Agriculture Inputs**

Inadequate supply of farm inputs like seeds, fertilizers, and pesticides create several problems as farmers have to go to another place to buy these inputs as a result production cost may increase or these may be a delay to sow seeds at right time or they may have to use obsolete technology in farm jobs. Unawareness of subsidies on farm inputs is another considerable area for policies makers.

Easy and timely availability of agricultural finance is another major challenge for efficient agricultural marketing. The complex and unfamiliar procedure, high interest rate, non-availability of banks or financial institutions in the vicinity, corruption, inadequate amount sanctioned under the loan, lack of information about institutional credit or government schemes etc. are some of the major issues which are responsible for keeping farmers far away from borrowing from the institutional credit sources and still small and marginal farmers depend on non-institutional credit sources which charge high interest rate ranging between 10 % to 40%.

#### **1.6.5. Insufficient Capital Formation in Agriculture Sector**

The rate of growth of Gross Capital Formation (GCF) in agriculture has a positive relationship with the agricultural output (Government of India & Ministry of Agriculture, 2016). Public sector investment is an important source of GCF and it helps to maintain growth in agriculture. It is required for the development of market facilities, extension and conduction research. Last few decades, the past data highlighted that it is not increasing as required pace and affected agriculture growth to a great extent. Lack of interest of private investor due to extensive regulations and low policy support in making an investment in agriculture sector is also the main reason for low flow of capital in the sector. Loan waives and subsidies on various farm inputs are also responsible for inadequate capital formation by the government and public sector for development and extension activities.

## References:

1. Acharya, S.S. (2007). Agribusiness in India: Some Facts and Emerging Issues. *Agricultural Economics Research Review* (Conference Issue, Vol. 20, pp 409-424).
2. Acharya, S.S. (2004). *Agricultural Marketing in India: A Millennium Study of Indian Farmers* (Vol.17). New Delhi, India: GoI, Academic Foundation.
3. Acharya, S.S., & Agrawal, N. L. (2011). *Agriculture Marketing in India* (Fifth edition ISBN 978-81-204-1755-7). New Delhi, India: Oxford & IBH Publishing Company Pvt. Ltd.
4. Agriculture Division, Planning Commission, Government of India. (2007). Report of the Working Group on Agricultural Marketing Infrastructure and Policy Required for Internal and External Trade for the Xi Five Year Plan 2007-12.
5. Bennett, P. D. (Ed.). (1995). Dictionary of marketing terms. Chicago: American Marketing Association.
6. Bhagyalakshmi, M., and Kumar, S.M. (2016). Rationale of agriculture subsidies in India: a case study. *International Journal of Applied Business and Economic Research*, 14(3), 1507-1514.
7. Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare, & Directorate of Economics and Statistics.(2017). Agriculture Statistics at a Glance 2016. New Delhi, India.
8. Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare, Directorate of Economics and Statistics.(2016). State of Indian Agriculture 2015-16.New Delhi, India
9. Government of India, & Ministry of Agricultural and Irrigation. (1976). Report of the National Commission on Agriculture Part XII Supporting Services and Incentives. New Delhi, India.
10. Pattanayak, S.K. (2016). State of Indian Agriculture 2015-16.NewDelhi, India: Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare Directorate of Economics and Statistics.

## **Chapter -Two**

# **Institutional Support for Agricultural Promotion in Rajasthan**

## **Chapter -Two**

# **Institutional Support for Agricultural Promotion in Rajasthan**

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### **2.1 Introduction**

Rajasthan is the largest state of India, occupying 10.41 percent geographical regions of the country with 3, 42,239 sq.km. constituting 3, 36,808 sq.km. rural and 5,431 sq.km. urban geographical area. Its shape is like an irregular rhomboid and spreads 869 km. from east to west and 826 km. from north to south. The state has four major physiographic-divisions, namely (i) the Western desert constituting barren hills, sandy and rocky plains (ii) the Aravali hills and Hilly region subdivided into Aravalli range and Borat plateau, and Northeastern hilly region (iii) the Eastern plains contains the Banas basin and the Chappan plain, and (iv) the Southeastern plateau known as Hadauti plateau covering eastern part along the Chambal river.

The state is divided into 33 districts, 07 divisions,192 subdivision,33 Zila Parishad,184 Nagar Nikay (5 Municipal Corporations,13 Municipal Councils,and 166 Municipalities ),244 Tehsils,104 Sub Tehsil,297 cities, 249 Panchayat Samitis, 9,175 Gram Panchayats, 44795 revenue villages and 1408 inhabited villages(Government Of Rajasthan,2013). The total population of Rajasthan is 6, 85,48,437 which constitutes 5.67 percent of the entire population of the country.

### **2.2. Agriculture Profile of Rajasthan**

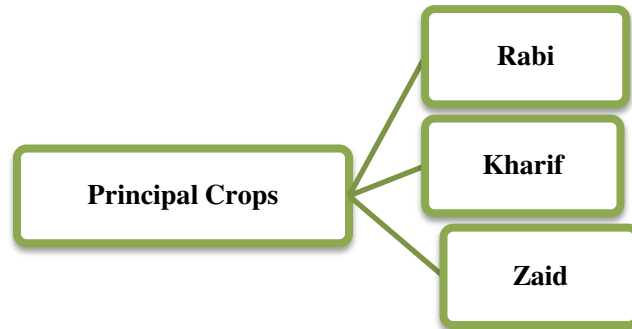
Rajasthan is an agrarian state where a large part of the population lives in rural areas. More than 70 % of the population is dependent on Agriculture and its allied sector for their livelihood. Approximately 52% of the state's income is derived from Agriculture, and it contributes approximate 19.88 % (2012-13) to Gross Domestic Product of the state. Geographical variations in Rajasthan are found in great extent regarding soil, surface, climate, and vegetation. The state is divided into ten agro-climate zones by climatic conditions and prevailing farm practices. In most of the part of rainfed areas of the state, only one crop can be grown during

the year. Therefore, farmers need to make agriculture practices more resilient in the light of ever harsher and changing agroecological conditions.

### 2.2.1. Principal Crops of Rajasthan

Rajasthan has three principal crops as given below:

**Figure 2.1: Crops in Rajasthan**



**Source: Department of Agriculture, 2013**

**(Modified by researcher from theoretical to figure form)**

#### **A. Kharif (Siyalu)**

These crops are summer crops such as Bajra, Pulses, Jowar, Maize, Sugarcane, Gaur, Cotton, Urad, Til, Soya Bean, and Ground Nuts. These crops are sown in June and July and harvested in September and October. 90% of Kharif crops are sown in ‘Baranee’ region which depends entirely on rainfall (Agriculture in Rajasthan, 2010).

#### **B. Rabi (Unalu)**

These crops are winter crops such as Barley, Wheat, Gram, Pulses, Coriander, Cumin, Fenugreek, and Oil Seeds (Rape and Mustard). These crops are seeded in October and November and are reaped in March and April (Agriculture in Rajasthan, 2010).

#### **C. Zaid**

These crops are seeded in March and harvested in June. It includes the crops containing a high amount of water such as Watermelon, Muskmelon, and

Cucumber. These crops are sown in the place where there is much availability of water. The crops can be categorized as Zaid Rabi and Zaid Kharif.

### 2.2.2. Area and Production of Major Crops

Typically 135 to 145 lakh hectares area is used for seeding of Kharif crops, and 70 to 80 lakh hectares area is used for sowing of Rabi crops in the state. Nearly 65 % of the total cultivated area is seeded in Kharif season. The status of production of Kharif and Rabi crops in 2012-13 are given in table 2.2.

**Table: 2.1. Area and Production of Major Crops in 2012-13**

Crops	Area (Lakh Hector)	Production (Lakh Tonnes)
<b>Kharif</b>		
Cereals	57.52	63.36
Pulses	19.56	06.37
Food Grains	77.08	69.73
Oilseeds	20.76	25.48
Sugarcane	0.06	4.02
Cotton	5.23	15.28
Gaur	45.26	20.23
Others	3.73	-
<b>Total sown land</b>	<b>152.12</b>	-
<b>Rabi</b>		
Cereals	33.71	117.25
Pulses	12.90	13.20
Oilseeds	28.36	38.16
Food Grains	46.61	130.45
Others	11.82	-
<b>Total sown land</b>	<b>86.79</b>	-

Source: Department of Agriculture, 2013

Rajasthan Agricultural Statistics 2012-13 reported that Rajasthan is India's largest producer of Mustard, Pearl Millet, Cluster Beans, and Isabgol, second largest producer of pulses and third largest producer of Soya bean. It has a significant place for the production of Wheat, Maize, and Groundnut in the country. The state has got the first rank in the production of three spices like Cumin, Coriander, and Fenugreek. Rajasthan has secured the second rank in the production of livestock in the country. The state is contributing about 10 percent of the country's milk and 30 percent of mutton production (Government of Rajasthan, 2013). Agriculture and Livestock productions take place in the main parts of Rajasthan often in extreme agroclimatic conditions.



### 2.3 Government's Initiatives for Agricultural Promotion in the State

Over the past decade, the government played a very vital role to improve the performance of the Agriculture sector and condition of the farming community. The state governments have made systematic efforts in mainly two manners first, to set up organizations and institutions for conducting and regulating activities related agriculture sector; and second, to introduce various new schemes, programs, and policies from time to time for the advancement of the agriculture sector and farmer's welfare. In this section, the details of major institutions and some currently ongoing schemes and programs, introduced by the state government in agricultural marketing are discussed. These are the following:

**Figure 2.2: State Government Organizations for Promoting the Agricultural Marketing**



Source: (Agricultural Portal, 2017)

(Modified by researcher from theoretical to figure form)

#### 2.3.1. Department of Agriculture (DOA)

The Department of Agriculture came into existence in 1949 and was expanded in 1952. The Department of Animal Husbandry was separated from the Department. The Department was reorganized in 1955 and the new structure was introduced on the block level. There are Panchayat Committees employed for expansion work

at field level, and the research centers and laboratories have been set up at the regional level in the state.

### **A. Objectives and Functions of the Department of Agriculture**

- i. To attain self-sufficiency in food production and to increase the income of farmers and farm workers.
- ii. To cut the cost of cultivation and make efforts for holistic development of farmer and introduce crop insurance to aid farmers against natural disasters and monsoon failure.
- iii. To ensure availability and quality of agricultural inputs and provide the raw material for industries by increasing production of certain farm commodities.
- iv. To introduce scientific and modern techniques for farm operations.
- v. To promote women empowerment in agriculture and find practical solutions for problems experienced by farmers in daily farm jobs.

### **B. Programs and Schemes of Department of Agriculture**

The significant schemes and programs of the department in the state are the following:

#### **I. Schemes and Programs for Information Dissemination**

The department uses electronic and print media widely for providing advanced knowledge and information regarding climate, price, projects, and programs of the government, and new developments in the agriculture sector to farmers.

The department distributes from time to time free pamphlets, posters, books, circulars and guidelines to farmers, representatives of various sectors related to agriculture, farm experts and students of agriculture stream to provide information related to agriculture, animal husbandry, horticulture, and schemes of the particular department. The monthly newspaper 'Kheti Ri Batan' is published by the department to provide information regarding farm operations.

The various programs are being broadcasted on radio and television for providing information to farmers at large scale. On all Radio channels of 'Aakashvani,' the

show 'Kheti Ri Batan' is broadcasted across the state. Various programs as 'Kheti Badi,' 'Krishi Darshan' and 'Chaupal' are broadcasted on Doordarshan T.V. channels and others several programs and series regarding agriculture sector are broadcasted on others popular T.V. channels such as E.T.V and H.B.C.

Wall paintings and hoardings in public place such as market yards, bus stands, and Jila Parishad are effective media for the promotion of various schemes and improved techniques in the field of agriculture at the panchayat level. Press notes are also issued from time to time to provide information to the masses.

## **II. Rajasthan Kisan Aayog**

Rajasthan Kisan Aayog was set up by the Government of Rajasthan on 21 November 2011. The organization acts as a mediator between the government and farmers over their issues and problems experienced during the farm work. The fundamental goal of the organization is to submit a report to the state government and give suggestion to solve the problems. It is working as a bridge between the government and farm communities as it communicates directly to farmers about their issues raised in daily farm work and intimates the issues to the government and suggests applicable remedial for the issues.

## **III. Crop Insurance Schemes**

Various crop insurance schemes are introduced by the state government to mitigate the loss of crop due to natural adversities such as drought, flood, fire, and diseases. Some of these schemes are the following:

### **a. National Agriculture Insurance Scheme (NAIS)**

It came into force in the state from Kharif 2003. The scheme was initiated in all the districts of Rajasthan. Under the regime, the compensation and insurance coverage is provided to farmers for crop loss due to natural disaster or diseases.

### **b. Weather Based Crop Insurance Scheme (WBCIS)**

The scheme was implemented from Kharif 2010 in place of NAIS in the state. The scheme was initiated in 21 districts of Alwar, Baran, Bharatpur, Banswara, Bundi, Bikaner, Churu, Dausa, Dholpur, Dungarpur, Karauli, Ganganagar,

Hanumangarh, Jodhpur, Jhalawar, Kota, Nagaur, Jaipur, Sikar, Sirohi, and Udaipur.

**c. Modified National Agriculture Insurance Scheme (mNAIS)**

The scheme was implemented in Rabi 2011-12 in three districts of Tonk, Jalore, and Rajsamand. The scheme covered all types of natural disasters. Only four districts of Sikar, Tonk, Jhunjhunu, and Rajsamand were covered in Kharif 2012, Rabi 2012-13 and Kharif 2013 and other 29 districts were covered under WBCIS. The 13 districts of Ajmer, Bhilwara, Barmer, Jalore, Jaisalmer, Chittorgarh, Pali, Pratapgarh, Jodhpur, Hanumangarh, Sirohi, Rajsamand, and Tonk were covered during Rabi 2015-16, and Kharif 2015 under the scheme and other 20 districts were covered under WBCIS.

**d. Pradhan Mantri Fasal Bima Yojna (PMFBY)**

The scheme was launched by the Union Cabinet in January 2016. It replaced the existing two crop insurance schemes NAIS and Modified NAIS. The scheme came into force in June 2016 (Kharif season). The Kharif, Rabi as well as annual commercial and horticultural crops are covered under the programme.

The premium is charged as 2% of the sum insured for Kharif crops and 1.5% of the sum assured for Rabi crops. The premium is ascertained 5 percent for annual commercial and horticultural crops. The central and respective state governments bear the remaining share of premium equally. The yield losses and post-harvest losses are also covered under the scheme. It also bestows farm level evaluation for localized calamities including hailstorms, unseasonal rains, landslides, and inundation. The scheme proposes the mandatory use of remote sensing, smartphones, and drones for quick estimation of crop loss.

**IV. Awareness Program as Kisan Mela, Minikit, and Crops Exhibition**

To make aware the farmers of new developments and trends in the agriculture sector, the state government organizes from time to time several programs such as Kisan Mela, Minikit, and Crops Exhibition in the state. The description of the initiatives is the following:

### **a. Crop Exhibition**

Under Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM), exhibitions of oilseeds and Maize crops in the state are organized to provide advanced knowledge about new and improved varieties of farm produce and modern technology used in farm work. The grants are provided by the government for the exhibition. Under the program, the seeds (10 Kg) of Maize, Bazra, Jwar, Kapas, Moong, Arhar, Moth, and Urad crops are distributed in selected districts in the state on the recommendation of the department.

### **b. Minikit Exhibition**

Under ISOPOM programme, the Minikit exhibitions of pulses, oilseeds, and coarse grains are organized in the season of Kharif, Rabi and Jayad crops to introduce the new technology of farm production and provide information regarding new varieties of agricultural commodities (developed within ten years) to farmers. The Minikits of Maize and oilseeds are allotted by the Indian Government to farmers. Under the program, the training of seed production is provided to farmers at panchayat levels so that farmers can get a plenty quantity of high-quality seeds quickly in their local areas.

### **c. Kisan Mela**

Under Agriculture Technology Management Agency Scheme (ATMA), the 'Kisan Mela' is organized at the district level for the dissemination of information regarding agriculture sector.

## **V. Farmers' Training**

From time to time different types of training under various schemes are provided to the farmers by the Department of Agriculture to provide information and expert consultation about seed production, soil health management, proper utilization of water, and efficient use of farm machinery and equipment. One Day Women Farmers' Training (panchayat/block level training), Two Day Women Farmers' Training (under National Oil Seed and Oil Palm Mission), Two Day Institutional Men / Women Farmers' Training (under National Oil Seed and Oil Palm Mission), Men and Women Farmers' Excursion (interstate and intrastate

educational visit), Kharif and Rabi season trainings (under National Food Security Mission Program), and computer and internet training are provided to farmers by the department. There is a provision that the expenses for conducting training will be borne wholly or partially by the department.

#### **VI. Agricultural Technology Management Agency (ATMA)**

This scheme was implemented on 29<sup>th</sup> March 2005 in the country. It has been set up at the district level as a registered society to conduct the extension reforms with the active participation of farmers or farm communities, Krishi Vigyan Kendras, NGOs, Panchayati Raj Institutions and other stakeholders associated with agricultural development at the district level. It is also responsible for technology dissemination at the districts and serves a focal point for the marketing and integrating research extension. In 2005-06, the scheme was implemented in eleven districts of Alwar, Jaipur, Karauli, Tonk, Jhalawar, Sikar, Bhilwara, Banswara, Shreeganganagar, Pali, and Jodhpur and in 2009-10 all the districts were covered under the scheme. The duty of the project director is being fulfilled by the officials of the Department of Agriculture in the state.

Formulation of Strategic Research Extension Policy (SREP), farmer's training/exposure visit, demonstration, the formation of Farmer Interest Group, training programs for farmers and extension workers, set up of farm schools, Krushi fair/exhibition, conferences/seminar are several activities are performed under the scheme.

#### **VII. Kisan Call Centers**

The Department of Agriculture and Co-operation (DAC) launched Kisan Call Centers on January 21, 2004. It is a centrally sponsored scheme under the Union Ministry of Agriculture across the country to deliver extension services to the farming society. These arrangements aim to respond to the issues raised by farmers, instantaneously, in the imperative local language.

The call centers are set up in all states which are expected to handle the queries from any part of the country. Queries regarding agriculture and allied sectors are being settled through these call centers. When KCC representatives receive a call,

they answer the query based on their intelligence and a computerized knowledge database prepared over the years. The call center officials are of various levels ranging from Agriculture graduates, postgraduates to subject matter experts and scientists. When an expert consultation is needed for solving a critical issue, a call-conference with the expert is arranged by the representatives of KCC. They also send the query to their nodal officer who is some senior agricultural scientist and specialist working in the government system, Indian Council of Agricultural Research (ICAR) institute, or agriculture university.

A State-level monitoring committee comprising the Secretary (Agriculture), Directors in Agriculture and allied Departments, a representative of the local BSNL office, and the nodal officer monitors the activities of Kisan Call Centers. The committee reviews the issues related to the organization of training programs, publicity and telephone connection issues, and ensures the legality and accuracy of the answers given by KCC representatives to the farmers. The Ministry of Agriculture (MOA), Department of Agriculture & Cooperation (DAC), and Government of India review and evaluate the functioning of all the Kisan Call Centers with the Heads of Nodal Institutions. The toll-free number is 18001801551.

### **2.3.2. Rajasthan State Agricultural Marketing Board (RSAMB)**

The Rajasthan State Agricultural Marketing Board was established in 1974 to construct market yards, sub yards, and rural godowns. After liberalization of the economic policy of the country, it also covers the post-harvest management, agricultural marketing developmental activities, and exporting fruits and vegetables from the state.

The board has constructed 139 market yards and 316 sub yards under the principal market yards in Rajasthan. The market is managed and regulated by marketing committees known as Krishi Upaj Mandi Samities (KUMS). The committees provide necessary facilities and amenities in the market and issue license to traders. For providing all essential services, the market fee is collected from the buyers at Rs. 1.60 on every hundred rupees worth of farm products sold. The market fee is collected at a single point in the State.

## **A. Classification of the ‘Mandi’**

Regulated markets are classified into five categories according to their income from market fee which are as given below:

- a. **Super Class:** The markets which have annual revenue Rs.500 lacs or more come under this category. In Rajasthan out of 139 markets, 27 markets are established under Super Class category.
- b. **“A” Class:** - The 21 markets in the state which have annual income Rs.350 lacs or more but less than 500 lacs come under this category.
- c. **“B” Class:** - The market which has annual earnings Rs.200 lacs or more but less than 350 lacs come under this category. 30 markets are operating under this class in the state.
- d. **“C” Class:** - The market which has annual income Rs 75 lacs or more but less than 200 lacs come under this category. There 41 markets are operating under this class in the state.
- e. **“D” Class:** - Out of 139 markets, 20 markets in the state which have annual income Rs. less than 75 lacs come under this category.

## **B. Objective and Function of the Board**

- i. To construct and develop market yards (including main market yards, sub-yards, rural primary markets and rural godowns) for transfer to market committees and provide aid as loans and grants to financially sick market committees.
- ii. To repair and maintain market yards, sub yards, and link roads.
- iii. To endow administrative and technical assistance and training to employees of market committees for efficient management of the market.
- iv. To take corrective measures for the promotion of agri-business, value addition activities and export of agri-food commodities in the state.
- v. To grade and standardize farm produce to assure the quality of the product.
- vi. To Initiate the promotional activities for marketing of agricultural outputs and organization of conferences, seminars, workshops and camps in the state.
- vii. To help and assist the farmers in accidental cases.



### **2.3.3. Department of Agricultural Marketing (DAM)**

The Department of Agricultural Marketing was set up in 1980 after the recommendation of National Commission on Agriculture in the state. The vision of the institution is to establish an agricultural market and regulate buying and selling process of agriculture commodities.

The department has ten divisions to manage and regulate the development process of agriculture marketing in the state. There are 139 Agriculture Produce Market Committees (KUMS) to regulate the functioning of 139 main market yards and 316 sub-market yards. Agricultural Commodities such as cereals, millets, pulses, oilseeds, cotton, and small forest produce have been notified for regulation in the state (Mandi committees categorization, 2017).

#### **A. Objective and Functions of the Department**

- i. To strengthen and improve the infrastructure of agricultural marketing for fostering the economic development of farmers.
- ii. To ensure the competitive price to the farming community for their farm produce by enforcing existing acts and rules and implementing the new technologies in the process of marketing of agricultural commodities.
- iii. To relieve the farmers from illegal deductions in market yards and provide several marketing facilities (such as weighing, grading, and storage) and basic amenities (such as toilets, canteen, and internet) to encourage them to sell their produce in regulated markets.
- iv. To promote the institutions of cleaning, grading, packaging, and processing in the state.
- v. To focus on improvement of marketing infrastructure and commercialization process for specific commodities such as cumin, orange, onion, guava and chili in the state.

#### **B. Programs and Schemes of Rajasthan State Agricultural Marketing Board and Department of Agricultural Marketing**

Both the institutions are interrelated and working together in the field of agriculture marketing in the state. The significant schemes and programs of both

the organizations for the promotion of agricultural marketing in the state are the following:

### **I. Rajeev Gandhi Krushak Saathi Yojna 2009**

The scheme was launched on 30 August 1994 and amended on 9 December 2009 and in 2013-14. According to the scheme, Department of Agriculture Marketing provides compensation or relief fund through KUMS to the farmers or agricultural labors or their family for injury, mutilation or death when they meet with an accident during working in farms or market yards or returning from 'mandi' after selling their produce.

The conditions in which compensation or relief fund is payable to farmers or workers in farms or mandi for death or grievous injury are the following:

- During farming or irrigation while using the equipment or during tube well or well construction or operation due to electrocution or by high tension line passing through farm or thunderbolt.
- While using pesticide on farms or while using farming equipment or vehicle or by a snake or other poisonous creatures or due to drowning.
- During to and fro travel between residence and farm or mandi.

### **II. Post-Harvest Management**

Under this programme, the Rajasthan State Agriculture Marketing Board has established four large 'Pack Houses' in Muhana (Terminal market), Chaumu (Aavla mandi), Jaipur (Shahpura Tinda mandi), and Tonk (Sohela) for better post-harvest management. These pack houses are facilitated with modern technologies like automatic equipment for washing, cleaning, grading and packing and cold storage for storing the vegetables and fruits at a different temperature. 'Refer van' facilities are also available for transporting the perishable produce in the 'pack houses.'

The five small 'Pack houses' are set up in Jaipur (Kotputali), Jodhpur (Mathaniya), Jalaure, Sikar, and Chittorgarh (Nimbaheda) by the board for effective post-harvest management so that farmers can sell their produce at a reasonable price.

### **III. Kisan Bhawan**

The board has set up 'Kisan Bhawan' in all the divisional headquarter towns of the state for providing dining, rooms, and dormitory facilities at a reasonable price to the farmers coming to the cities or towns from the rural area. Apart from these facilities imparting information and training in latest farm techniques and supply of agriculture input under one roof are critical goals of the setup.

Primarily, the 'Kisan Bhawan' has been established in Jaipur, Jodhpur, Udaipur, Bharatpur, Kota, Bikaner and Ajmer and all the Bhawans are being managed by 'KUMS' except Jaipur. In Jaipur, the six-storeyed 'Kisan Bhawan', with accommodation and library facilities for farmers, is being run by the "Rajasthan state Agriculture marketing board."

### **IV. Kisan Kalewa Yojna 2014**

The scheme was launched on 20 January 2014 after revising the scheme "Aapni Rasoi Yojna 2009". To provide food at a reasonable rate to the farmers coming to market yards to sell their farm produce is the key objective of the scheme.

Superclass, "A," and "B" category markets (excluded fruits and vegetable market) are included for implementation of the scheme. The registered porters or workers in market yards are also beneficiaries of the scheme. The food is provided by the token system to the farmers and their associates. The token should be used the same day of issuing by the person concerned. The maximum price of the plate is Rs.30 in which Rs. 25 is granted by the market committee, and Rs.5 is paid by the framers/workers/ porters. Under the scheme, almost 20 lac farmers are benefited every year, and 2 percent of income is spent on the scheme by the KUMS.

### **V. Establishment of Agro and Food Processing Centers**

Under this programme, the state level agro and food processing unit was established in Bharatpur to impart training on various type of processing units and agriculture trade to farmers and agri -entrepreneurs. The subsidies are provided by the board and Directorate of Horticulture for the establishment of food processing units of fruits such as Orange, Aonla, and Isabgoal in the state. The Directorate of Horticulture approved grants for eleven processing units in the state in 2011.

## **VI. Establishment of Cold Storage**

Six cold storages with 17000 MT tonnes capacity (Bhilwada, Jodhpur, Sikar, Alwar, Udaipur, and Sumerpur) have been built under 'National Agriculture Development Scheme' in the state for better post-harvest management of fruits and vegetables. The other two cold storages in Barmer and Bhawanimandi are being constructed. The board has built another cold storage with 4000 MT tonnes capacity in Jhalawar. By using the facility, farmers and farm traders will be able to store their perishable farm produce at different temperature for a long time.

## **VII. Small Farmers' Agribusiness Consortium**

Rajasthan Small Farmers' Agribusiness Consortium was established in 2004 under "Sanstha Society Act 1958" with the co-operation of Central Small Farmers' Agribusiness Consortium. It has a total fund of Rs. 50 lacs, out of such fund Rs. 25 lacs is a share of Central Small Farmers Agribusiness Consortium. The Institution has total 11 members for administration.

Establishment of agro-based small-scale industries, promotion of private investment, job creation in rural areas, and provision of financial support to entrepreneurs as venture capital(interest free) and for DPR completion through banks (nationalised banks, State Bank of India(SBI), Industrial Development Bank of India (I.D.B.I.), Small Industry Development Bank of India (S.I.D.B.I.), National Bank Agriculture and Rural Development (NABARD), National Cooperative Development Corporation(N.C.D.C), Export Import Bank of India (EXIM Bank), Regional Rural Banks., and state financial corporation) are key objectives of the organization.

Beneficiaries of this scheme are individuals, farmers, manufacturer groups, individual and partnership firms, self-help groups and companies, agricultural export units, unemployed agriculture graduates whose projects are affiliated with the agriculture or allied sectors as horticulture, bee-keeping, fisheries, poultry farms and dairy, etc.

### **VIII. Krashak Jagrati Programme**

National Institute of Agriculture Marketing with the collaboration of Indian government organizes 50 to 100 camps every year at Krishi Vigyan Kendra or KUMS in the state for providing information on production, value addition, marketing, post-harvest management, and schemes and programs run by the government regarding agriculture marketing to farmers. Under the program, 7754 farmers have been benefited in the camps till June 2015.

### **IX. Krashak Bhraman**

Under the programme, the board organizes an excursion for providing information about better post-harvest management and value addition to farmers. The farmers visit famous research centers of the state and other states under the tours. It is organized when Krishi Upaj Mandi Samiti (KUMS) sends a proposal for it to the board. There is a provision that Rs.450 per farmer per day will be spent on the excursion.

### **X. Distribution of Farm Machinery and Equipment Scheme**

Under the scheme, there is a provision that 75 percent grant will be provided to the farmers to purchase farm machinery and equipment from registered sellers or manufacturers through Krishi Upaj Mandi Samiti (KUMS). The grants are applicable to 2000 different types of farm machinery and equipment.

### **XI. Agriculture Export Zone**

For development and promotion of export and post-harvest management activities in the state, the Export and Post Harvest Management Cell has been established in the Board. The cell has been equipped with the latest technology such as the Internet and Agri-Net connection for providing all the information related to Agri-Business. The state has great potential for export of seed spices and other spice products, So the KUMS like Merta city (Cumin), Jodhpur (Fenugreek, Cumin, Chilies), Jaipur (Fenugreek, Cumin), Sumerpur (Fenugreek), Pratapgarh (Dill Seed, Carom Seeds, Poppyseed, Gorlie and Fenugreek), Ramganj Mandi (coriander), Abu road (Fennel) and Sikar (Fenugreek, Cumin) are being promoted exclusively for export marketing in the state.

For export of guar from the state, five export zones have been established in Jodhpur, Pali, Barmer, Bikaner, and Shreeganganagar. The Agriculture Research Station (Agriculture University, Kota) at Ummedganj in Kota and Agriculture College at Jobner in Jaipur are providing training to farmers and traders and developing export varieties of farm products from local varieties of farm products in the state.

## **XII. Gramin Sampark Sadak (Link Roads)**

The agriculture marketing board of Rajasthan has constructed 15549 km and repaired 12826 km roads for better connectivity of farmers to regulated market after its establishment under 'Gramin Sampark Sadak' scheme.

## **XIII. Other Initiatives**

Some other initiatives taken by the Government for improving agricultural marketing in the state are the following:

- a. **Direct Purchasing Licence:** under this, the exporter, processor, and traders are permitted to purchase farm produce directly from farmers.
- b. **Single License:** under this, the buyer can purchase farm produce from across the mandi in the state with a single license.
- c. **Contract Farming:** State Government has already amended the Rajasthan Agricultural Produce Market Act, 1961 to permit contract farming for fruits, vegetables, medicinal plants or aromatic plants.
- d. **Commodity Specific Markets:** 22 commodity specific markets are set up in the state.
- e. To reduce post-harvest losses the government facilitated to set up cold storage, pack house, and processing units in the mandi yards for the private sector.
- f. **E-Commerce:** State Government has already amended the Rajasthan Agricultural Produce Market Act, 1961 to permit the setting up of private sub e-markets.
- g. Mandis in the state are linked to eNAM (Electronic National Agricultural Market) under the central government scheme.

#### **2.3.4. Rajasthan State Warehousing Corporation (RSWC)**

The Rajasthan State Warehousing Corporation (RSWC) was set up on 30 December 1957 in the state after the Indian Government enacted “The Agricultural Produce (Development & Warehousing) Corporations Act, 1956” and it began functioning from 24 March 1958. The act was revised in 1962 as “The Warehousing Corporations Act, 1962.” The organization has two shareholders first, Government of India and second, the central warehousing corporation.

The corporation has built 91 warehouses centers including 76 warehouses in Mandi yards, 12 warehouses in sub yards and other three warehouses in other places. The total number of godowns is 551 with 1163690 MT capacity including 493 with 1008670 MT capacity constructed by RSWC, 17 hired from KUMS/PWD/GOVT./Corpn. with 31790 MT capacity and 41 hired from private organizations with 123230 MT capacity.

#### **A. Functions of the RSWC**

- i. The corporation constructs and acquires warehouses and godowns within the state after consultation with the Central Warehousing Corporation (CWC).
- ii. It conducts and manages warehouses for storing of farm produce, seeds, fertilizers, manures, agricultural implements, and notified commodities.
- iii. It provides transportation facilities for moving farm produce, seeds, fertilizers, manures, agricultural implements, and notified commodities to and from the warehouses
- iv. It plays the role of an agent of the Government or CWC for the sale, purchase, storage, and distribution of farm produce, seeds, fertilizers, manures, agricultural implements, and notified commodities.

#### **B. Schemes of RSWC**

The significant schemes and programs of the department in the state are the following:

## **I. Relaxation in the Fare of Warehouses of RSWC**

Under the scheme, the corporation provides the relaxation in the fare of RSWC's warehouses to the farmers. Under the provision, 70 percent relaxation to the farmers, who come under ST or SC category and 60 percent relaxation to all other farmers in the fare of warehouses are provided.

## **II. Loan against the Stored Goods in the RSWC's Warehouses:**

Under the scheme, the loan facility is provided by the cooperatives and commercial banks to the farmers, merchants and other depositors who store their goods in the corporation's warehouses. The amount of the loan is sanctioned equal to 75 % of the value of warehouse receipt (WR) issued by the corporation.

### **2.3.5. Rajasthan State Cooperative Marketing Federation Ltd. (RAJFED)**

It is an apex body of marketing cooperatives at the state level and was set up on 26 November 1957 in the state. It was found for the benefit of the farmers and consumers by managing purchase and sale of farm commodities co-operatively. Presently, it amalgamates about 250 block level and more than 5000 village level cooperative societies across the state.

It has established an Isabgol Bhusi plant with a capacity of 450 tonnes per annum at Abu Road, a unit of production of animal feed with a capacity of 12,000 tonnes per annum, cold storage and an ice plant at Jaipur.

#### **A.Functions of the RAJFED**

- i. It purchases the farm produce from the market by an open auction method and sells it later when prices are high.
- ii. It creates the competition in the market and ensures that farmers get fair prices for their produce.
- iii. It supplies agricultural inputs like improved seeds, fertilizers, pesticides, gypsum, and plant protection implements to the farmers. It provides a marketing platform to Department of Agriculture for 'Buffer Stocking Scheme' by which essential fertilizers are supplied to the needed farmers in the state.



- iv. It works as an essential state agency for price support operations. It acts as an agent of NAFED, FCI, and RMAP for procurement of farm commodities.

#### **2.3.6. Rajasthan State Seeds Corporation Limited (RSSCL)**

It was found on 28 March 1978 under National SEED Project. It was formed under Indian Company Act, 1956. It has three shareholders first, the Government of Rajasthan with 84% shares; second, National Seed Corporation Ltd. with 14% shares; and third, Seed grower farmers of the state with 2 % shares. It has 22 processing units with the seed processing capacity of 16.09 lac quintals per annum and storage capacity of 8.26 lac quintals.

The main objectives of the organization are to undertake the production of certified seeds in sufficient amount, to provide the seeds to farmers at reasonable prices, to construct, operate and manage seed processing plant and storage facilities, to undertake and promote research in agriculture particularly seed production, to establish and conduct seed testing laboratories and to perform other activities like marketing, financing, publishing, and consultation regarding seed production etc.

#### **2.3.7. Rajasthan State Seed & Organic Production Certification Agency (RSSOPCA)**

It was established in 1978 by the Government of Rajasthan as Rajasthan State Seed Certification Agency (RSSCA) under “the Seeds Act 1966, Section 8. On 15 October 2004, the name of the organization was changed to Rajasthan State Seed and Organic Production Certification Agency by the Rajasthan Societies Registration Act, 1958 and on 24 August 2005, The Government of Rajasthan has also approved it. The organization has its head office in Jaipur; six regional offices at Jaipur, Shriganganagar, Banswara, Suratgarh, Kota, and Bharatpur; and eight sub-regional offices at Hanumangarh, Jodhpur, Chittorgarh, Pilibangan, Alwar, Kherli, Ajmer, and Gharsana.

Seed certification agency performs various functions such as to recognize eligible varieties of seeds for seed certification; to maintain the list of source of breeder

and Foundation seeds approved by the Central Seed Certification Board.; to publish the list of eligible varieties of seeds annually; to outline the process for submission of an application for growing, harvesting, processing, labelling and tagging of seeds intended for certification; to regulate the seed processing at seed processing units; to undertake inspection of seed processing units and seeds fields; to arrange the sample of seeds for verifying the prescribed standard of seeds; and to promote the production and use of certified seed through educational programs.

Rajasthan Organic Certification Agency (ROCA) is an autonomous body and integral part of RSSOPCA which was registered under Rajasthan Societies Registration Act 1958 and recognized by the Government of India, Agricultural and Processed Food Product Export Development Authority (APEDA), and Ministry of Commerce & Industry on 10 October 2007. It is functioning for organic certification as per guidelines of ISO-65 and NOP-USDA Standard. It operates Organic Certification activities as per NSOP (National Standards of Organic Production) and certifies the product to international recognition by performing all applicable requirements. Its certification mark creates reliability and trust between consumer and producer and it helps the poor and marginal farmers to sell their organic agricultural products through the organic certification mechanism at low cost in comparison to other private certification agencies. It promotes the organic certification for not only crop production but also processors, traders, farm inputs, and wild harvest collection.

#### **2.4. Present Status of Agricultural Marketing in Rajasthan and Comparison with the Other States:**

After independence, the central and state governments have taken a lot of initiatives and measures to improve the framework of agriculture and betterment of farmers. The state government has made a massive investment in every five years plans for improving necessary infrastructure and agricultural marketing modality. The primary goals of the investments were/are an expansion of irrigation facilities; better connectivity to 'mandi' by rail and road network; efficient agriculture input supply; availability of credit to farmers at the right time;

facilities of warehousing and cold storage for reducing post-harvest losses; expansion of agriculture market and distribution channel, introducing Minimum Support Price (MSP) for a fair price to farmers and adopting improved and modern technologies for better farm practices.

The contribution of Agriculture and Allied Sector in Gross State Value Added (GSVA) at Current Prices (2011-12 series) is 25.87% and 4.34 % growth over the previous year in 2014-15. The share of Agriculture and Allied Sector in GSVA at Current Prices (2011-12 series) in seven state as Punjab (27.38%), Tripura (27.47), Uttar Pradesh (25.74%), Andhra Pradesh (29.42%), Arunachal Pradesh (42.91%), Madhya Pradesh (35.93%), and Nagaland (33.37%) are more than in Rajasthan (GoI,2017).

The state has remarkable ranks in the production of some crops such as Red Chillies (I), Isabgoal Husk (I), Mustard(I), Bajara (I), Coarse Cereals (I), Gram(II), Oilseeds (II), Pulses(II), Spices(II) Food grains (IV), Maize(IV), and Wheat (IV) in the country. It is the fourth largest producer of foodgrains in the country after Uttar Pradesh, Punjab, and Andhra Pradesh. It has enormous potential to export some farm produce such as Kinnow, Red Chillie, Honey, Isabgoal Husk, Fresh Vegetables (Tomato, Tinda, Cabbage, Cauliflower, Capsicum, Karela, Onion, Okara, Pea, etc.), Garlic, Spices seeds, Rose petals, Henna Powder, and Mandarin. It is the largest producer of wool and has the third position for sheep and goat husbandry. It is also one of most significant producers of milk in the country as it almost produces 10 percent of the total milk. The state has excellent scope for establishment of processing units of some farm products such as Soybeans for Soya protein and Soya milk; Barley for Malt purpose; Cereals for low-fat products and corn syrup; Spices for powder and raw seeds; and Guar gum derivatives for textile and mining.

The state has total 446 regulated markets including 139 principal markets and 310 sub-market yards for marketing of farm produce efficiently. The number of regulated markets in the state is low in comparison to other states as Andhra Pradesh having 905 regulated markets included 337 principal markets and 568 sub-market yards; Maharashtra having 881 regulated markets including 303

principal markets and 578 sub-market yards; West Bengal having 684 regulated markets including 43 principal markets and 641 sub-market yards; Uttar Pradesh having 613 regulated markets including 249 principal markets and 364 sub-market yards; Madhya Pradesh having 526 regulated markets including 251 principal markets and 275 sub-market yards; and Karnataka having 513 regulated markets including 155 principal markets and 358 sub-market yards. Other states like Punjab (424), Odisha (436), and Gujarat (400) have regulated markets almost equal to those of Rajasthan. The act is not enacted in Kerala, Manipur and 3 UT as Dadar Nagar Haveli, Daman & Diu, and Lakshadweep while in Jammu & Kashmir and Mizoram the act is not implemented, and in Bihar, the act is repealed (DMI,2014). About 11 regulated markets are connected under NAM in Rajasthan.

Around 750 wholesale and rural primary markets are functioning in Rajasthan. The number of wholesale and rural primary markets in the state is low in comparison to other states like Maharashtra (4381), Uttar Pradesh (4048), West Bengal (3204), Assam (1140), Bihar (1794), Karnataka (1243), Kerala (1362), Madhya Pradesh (1572), Chhattisgarh (1134), Odisha (1548), Punjab (1795), Tamil Nadu (977), Andhra Pradesh (905), and Jharkhand (803) (DMI,2014).

For grading and standardization of farm produce such as edible oil, spices, and flour, eight 'Agmark' laboratories are established all over the state (RSAMB,2016). There are 78 fertilizer quality control laboratories in the country and out of 78 laboratories, 04 laboratories are situated in Rajasthan. The number of laboratories is less than those in other five states such as Tamil Nadu (14), Karnataka (07), Andhra Pradesh (05), Uttar Pradesh (05), and Maharashtra (05) and equal to Madhya Pradesh (04). In India, about 1244 soil testing laboratories including both mobile (196) and static (1048) are set up, and out of 1244 laboratories, 59 laboratories are set up in Rajasthan. The number of laboratories is less than that in other seven states such as Karnataka (64), Andhra Pradesh (88), Uttar Pradesh (281), and Maharashtra(158) Madhya Pradesh (63), Gujarat (139), and Punjab (71) (GOI,2016).

In India, the total storage capacity for Agricultural produce is 814.84 lakh MT in March 2016. Storage capacity pertains to Food Corporation of India (FCI), Central

Warehousing Corporation (CWC) and State Warehousing Corporation (SWC). It includes Owned and Hired, Covered and Cap Storage. In Rajasthan, the total storage capacity for Agricultural produce is 23.24 lakh MT. RSWC is operating 91 warehouses at various locations in the state with the total storage capacity of 9.25 lac Metric Tonnes. In comparison to other states, Rajasthan comes to a nin<sup>th</sup> place for total storage capacity in the country. Haryana (116.11 lakh MT), Punjab (252.56 lakh MT), Uttar Pradesh (64.4356 lakh MT), Andhra Pradesh (24.0256 lakh MT), Karnataka (29.62 56 lakh MT), Maharashtra (31.5556 lakh MT), Madhya Pradesh (129.6656 lakh MT) and Chhattisgarh (24.9856 lakh MT) are the states which have more storage capacity than Rajasthan(GOI,2017).

About 159 cold storages with 521387 MT including six cold storages with 17000 MT capacity (Bhilwada, Jodhpur, Sikar, Alwar, Udaipur, and Sumerpur) have been built under 'National Agriculture Development Scheme', which are functioning in different parts of the state as on 31 March 2016. Most of the cold storages are conducted by private parties while some cold storages are being owned by cooperatives. The number of cold storage is less in comparison to other 13 states as Uttar Pradesh (2250 with 13978608 MT), Andhra Pradesh including Telangana (426 with 1729286 MT), Maharashtra (575 with 881860 MT), Gujarat (692 with 2570973 MT), Bihar (305 with 1416095 MT), Punjab (655 with 2152003 MT),Haryana(318 with 695795), West Bengal (511 with 5940511 MT), Karnataka(193 with 548001 MT), Kerela (196 with 78105 MT),Madhya Pradesh(294 with 1253715 MT), Odisha (167 with 523139 MT) and Tamil Nadu (168 with 316583 MT) (GOI,2017).

60 Agri Export Zones are established in India for promoting the export of farm produce. Out of 60, 02 Agri Export Zones (Coriander and Cumin) are set up in Rajasthan. The number of Agri Export Zones is less in comparison to other 10 states as West Bengal (06), Karnataka(04), Uttarakhand (04), Punjab(03),Uttar Pradesh (04),Maharashtra(08),Andhra Pradesh(05), Madhya Pradesh (05),Tamil Nadu (04),and Gujarat(03) and equal to Kerela(02), Jammu & Kashmir (02), and Sikkim(02) (Agri Export Zone, 2015).

The crop area insured under all Insurance Schemes is 26.11% of total gross area sown in India. In Rajasthan, the percentage of crop area insured under all Insurance Schemes is 43.85 % of total gross area sown in the state. Rajasthan comes to the second position after Madhya Pradesh (50.11%) in the country (Government of India, 2017).

The average monthly income per Agricultural Household is Rs. 6426 in the country and in Rajasthan it is Rs.7350. Rajasthan comes to in 15<sup>th</sup> position when compared to other states. Punjab (18059 Rs.) has first position whereas Haryana (14434 RS.), J&K (12683 Rs.), Kerela (11,888 Rs.), Meghalaya (11,792 Rs.), Arunachal Pradesh (10869RS.) and Nagaland (10048 Rs,) have second, third, fourth, fifth sixth, and seventh positions respectively. In Gujarat, Himachal Pradesh, Karnataka, Maharashtra, Manipur, Mizoram and UTs, the average monthly income per Agricultural Household is below Rs.10.000 but more than that of Rajasthan (Government of India, 2017).

## References:

1. Agricultural Portal. (2017). Retrieved From <http://www.agriculture.rajasthan.gov.in/content/agriculture/en.html>
2. Agri Export Zone of India. (2015). Retrieved From [http://apeda.gov.in/apedawebsite/trade\\_promotion/Agri\\_Export\\_Zone.htm](http://apeda.gov.in/apedawebsite/trade_promotion/Agri_Export_Zone.htm).
3. Agriculture in Rajasthan-Maps of India. (2010). Retrieved from <http://www.mapsofindia.com/maps/rajasthan/rajasthanagriculture.htm>
4. Department of Agriculture. (2013). Administrative Progressive Report 2012-13. Jaipur, Rajasthan.
5. Directorate of Marketing & Inspection, Department of Agriculture & Co-operation, Ministry of Agriculture and Government of India. (2014). Directorate of Marketing and Inspection Statistical Bulletin. Faridabad, India.
6. Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare, Directorate of Economics and Statistics.(2017). Agriculture Statistics at a Glance 2016. New Delhi, India.
7. Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare, Directorate of Economics and Statistics.(2016). State of Indian Agriculture 2015-16.New Delhi, India.
8. Government of Rajasthan, Directorate of Agriculture (Statistical Cell). (2013). Rajasthan Agricultural Statistics at a Glance 2011-12. Jaipur, Rajasthan.
9. Mandi committees' categorization. (2017). Retrieved from [http://www.agriculture.rajasthan.gov.in/content/agriculture/en/RAM-dep/about-us/state-at-a-glance.html#par1\\_text](http://www.agriculture.rajasthan.gov.in/content/agriculture/en/RAM-dep/about-us/state-at-a-glance.html#par1_text)
10. Rajasthan State Agriculture Marketing Board, Department of Agriculture Marketing. (2016). Marketing Progressive Report. Jaipur, Rajasthan.

## **Chapter - Three**

### **Review of Literature**



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### Review of Literature

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Review of literature is an essential step for conducting research. It is an evaluative report of relevant information and knowledge found in the literature. It provides a sound basis to the researcher to understand the problem very well and analyze all aspects of the problem. It provides an insight into the previous work regarding problems which have been done by others and avoids the replication of research work. It guides the researcher for further work with new innovative ideas. The trustworthy sources of available literature regarding selected areas of research such as books, magazine, journals, newspapers, online articles, published research papers bulletin, and reports of organizations should be analyzed thoroughly and carefully for making the theoretical framework and identifying methodological issues related to the study for conducting the research effectively.

Keeping the objectives of the study in view, the literature has been analyzed on the following aspects:

- 3.1 Basic understanding of Agriculture and its reforms in India
- 3.2 Government measures for promoting Agricultural Marketing in the country
- 3.3 Present status of Agricultural Marketing in India
- 3.4 Status of Agriculture Sector in Rajasthan

#### **3.1. Basic Understanding of Agriculture and Its Reforms in India**

The term Agricultural Marketing is compiled with two words as Agriculture and Marketing. Agriculture originated from Latin words Ager and Cultura. Ager means land or field and Cultura means cultivation. Thus the term 'agriculture' implies cultivation of land. So it is the science and art of producing crops and livestock from the natural resources of the earth for economic purposes and maintaining a biological

equilibrium in nature. It is the synonym of farming viz the production of food, fodder and other industrial materials (Broadway & Broadway, 2007).

As long as agriculture is the primary source of the earnings for the rural population, production is ultimately bound to consumption. However, agriculture as a business aims at maximum net return through the management of land, labor, water, and capital, employing the knowledge of the various sciences for the production of food, feed, fiber, and fuel. In recent years, agriculture has been commercialized to be run as a business through mechanization (Prasad, 2006).

There are six pillars like cultivators, climate, water, soil, seeds and tools on which agriculture principally depends (Kaul, 2011). Rural development is not possible without agriculture developments which play a prominent role in improving the living standard of the peasants (Rajawat, 2010).

Agriculture sector and industry are well interrelated. In the theory and empirical literature, the interrelationship has been discussed from different channels. First, food grains are supplied to industry for facilitating absorption of labor in it by the agriculture sector. Secondly, agro-based industries demand the inputs such as jute, raw cotton, tea, coffee, and latex supplied by the farm sector. Thirdly, the agriculture sector needs industrial inputs such as machinery, pesticides, and fertilizers for better farming practices. These inputs are supplied by the industry. Fourthly, the output of industrial consumer goods is influenced by the farm sector through demand. Fifthly, the farm and its allied sectors generate surpluses of saving. It can be deployed in industry and other sectors of the economy for investment. Sixthly, the private corporate investment decisions regarding the impact of trade on profitability may be affected by the fluctuation in the production of farm outputs (Ahluwalia & Rangarajan, 1986).

Growth or advancement in the agriculture sector may be estimated by the increases in production of farm produce over time. Increase in the total area under various crops, raising the yield rate for different crops, and substitution of more remunerative crops

in place of less remunerative crops, are the three factors which contribute to the increase in the total agricultural production (Mishra, 2007).

The agriculture sector is associated with various types of risks, and these risks are accompanied by several adverse outcomes. These several adverse outcomes are results of a predictable faulty mechanism for climatic, biological, and price variables. Biological variables include insects, pests, and diseases while climatic variables include drought, flood, and unseasonal rain. Both types of variables cannot be controlled by the farmers. There are other types of risks such as personal risk, price or market risk, financial or credit risk, production risk, and technology risk which can be controlled by the farmers or other stakeholders (Swami, 2009).

In India, the agricultural risk is caused by several different factors such as climate variability and change, repeated natural calamities, uncertainties in farm production, recurrent price fluctuations, improper rural infrastructure, unorganized markets, and lack of efficient financial services and design of risk mitigation instruments like insurance. These factors affect the farmer's livelihood and incomes to a great extent. They also weaken the viability of agriculture sector and its capacities to solve the problem of endemic poverty of the cultivators and agricultural labors. The sector needs considerable governmental and financial sector interventions for generating savings and investments in the grossly underfunded sector and ensuring household food and nutritional security for farmers and their family (Planning Commission, Government of India, 2007).

Post-independence, the history of Indian agriculture can be divided into four phases as 1947 to 1964, 1965 to 1985, 1985 to 2000 and 2000 to present (till date). For scientific agriculture, the infrastructural development was the prime focus during the first phase (1947 to 1964). The setup of pesticides and fertilizers factories and construction of large multipurpose of irrigation-cum power projects were significant developments during the first phase in Indian agriculture sector. The second phase was focused on setting up institutions for assuring fair price to farmers for their farm

produce and to provide them better market opportunities. All these initiatives led to the bumper productivity of crops such as rice and wheat, so it is called as 'Green revolution.' The Green Revolution (1968) reversed the equation from dependency on other countries to self-dependence for food grain production and generated the sense of self-confidence in farm production capabilities. The foodgrain production has risen four times, and the milk, oilseeds, and horticulture production has increased six times during this phase. To be self-sufficient in the production of pulses, oilseeds, milk, vegetables, and fruits was the main motto of the third phase. In the fourth phase or present time, Indian agriculture sector needs a second green revolution and technology advancement for making a presence on the world map (Iyer& Singhi, 2012).

For deploying available natural resources efficiently and sustainably, the country adopted modern methods of cultivation and developed infrastructure in the agricultural sector. Several agencies made many efforts combined with engineering and scientific inputs in farm jobs. As a result, the image of the country transformed into the bread basket from a 'begging bowl' (Pandey, 2009).

Over the last five decades, Indian agriculture sector has developed into a mature and modern sector. Farm mechanization was adopted in the country after independence for optimal utilization of available power sources for agriculture work. Adoption of farm mechanization and tractorization in farm work reduced drudgery and made it easy. It also increased cropping intensity and productivity. Farm machinery and tractors gained popularity among cultivators and farm labors for their enormous benefits. As a result, the sale of farm machinery has reached saturation phase in the country and India has become the largest tractor manufacturer in the world. The engineering inventions can increase productivity to 15 percent and reduce the cost of cultivation to 20 percent. Burt these inventions have not been applied fully, and traditional methods are used in the range of farm work still. There is an urgent need to extend it to the entire gamut of production agriculture in the country (Pandey, 2009).

Indian agriculture sector has experienced numerous considerable changes in cropping patterns and preferences for the cultivation of crops as the cultivation of commercial crops has become more popular than food grain crops. Between 1970-71 and 2007-08, the area under coarse cereals crops has decreased by 13.3 percent (Kannan & Sundaram, 2011).

During Tenth Five Year Plan period (2002-2007) and Eleventh Five Year Plan period (2007-2012), the growth rate was meager every year; it was just 1.8 percent and 3 percent respectively. Various factors as low yield growth, insufficient public investment, declining water level, environmental constraints, and marketing hurdles led to poor performance (Tuteja & Chandra, 2012).

After independence, Indian agriculture sector is progressing continuously but several problems such as too much dependence on agriculture, slow growth in the agriculture development, inequality between agriculture and industrial growth, unemployment and poverty in rural sector exist still and demand careful thinking by all developed section of people in the country (Bhalla, 2010).

In 1991, The new economic policy was introduced which is known as economic reform. During this reform process, liberalization, privatization, and globalization were significant remedies to overcome fiscal deficit and trade deficit which had been faced by the country (Moni, 2009). Agriculture sector got affected by these reforms to a great extent adversely and faced several problems as less technical support to farmers, expensive and poor quality seeds, reduction in food crop area, inappropriate storage, minimum support price, irrigation, and insufficient credit availability due to a reduction in the availability of commercial bank credit to farmers (Singh, 2011).

After economic reforms of 1991, the world has become a global village and created many opportunities as well as numerous challenges for the global market. The global market looks at global opportunities with fear and optimism to Indian rural market which is proliferating as a result of the policy of globalization. Hence, it is necessary to make corporate growth strategy to grab these opportunities and face challenges.

So, Indian agribusiness has created many opportunities for packaging, value addition, retailing, and exports of agricultural products with a high application of advancement in technology and management (Bansal, 2011).

The share of farm production is decreasing, and processing, distribution, and trade of farm produce are increasing after structural transformation in Indian economy. The forward and backward linkages are increasing, and the differences between agriculture and agro-based industries are getting indeterminate. Farm production, processing, and trade are getting coupled increasingly (Acharya, 2007).

As a result of the structural transformation of agriculture and increasing share of corporate sector by infusing new and advanced technologies and accessing new markets, the traditional agriculture market has converted into an organized retail market operated by the corporate sector. The contract farming was introduced to increase a direct interaction between farmers and retailers. The parties involved in contract farming can gain access to improved technology or better prices for quality produce or an assured market to sell their increasing farm produce for augmentation of their income. It is not only contract farming but also an institutional arrangement as it may be cooperatives or farmer's organization (Gulati, 2009).

Nowadays, there is a lack of trust between the firm and farmers, having an uneven playing field. There is a requirement to introduce specific institutional reforms that promote firm-farm linkages. The Amended Model Act (Agricultural Produce Marketing Committee Act) must be implemented all over the country to allow direct trade of farm commodities between the farmers and corporate organizations. Computerization of land records and legalizing land leasing is recommended for ensuring greater transparency in land deals (Gulati, 2009).

The present legislation is not sufficient and has several loopholes in it. There is a lack of organized and regulated market for trading the farm produce, and the cultivators face many problems and hardship to get fair prices for their farm outputs (Vadivelu & Kiran, 2013).

The quality information inputs help the farmers to make decisions carefully and improve the quality of life of the rural people. Information Technology can play a vital role to facilitate the progression of rural India transformation and to meet existing challenges in the farm sector. It can also help in removing the rapidly growing digital divide and becoming a strategic tool for rural developments (Mittal, 2001).

The ratio of extension workers and farmers is 1:1000 that is very low and for the dissemination of information to farmers, the Village Local Workers (VLWs) are appointed, but there is a lack of sense of responsibility. So there is an urgency to efficiently address information needs to farmers especially poor farmers and resolve previous two issues. Also, to reduce the cost involved in face-to-face interaction for providing necessary information to farmers and the difficulties of approaching the target audiences, there is also a need to introduce ICT applications to farm jobs. ICT helps in updating and extension of information at minimum cost and efforts. At present, various ICT models are introduced in Indian agriculture sector to improve agricultural operations (Chitra & Shankaraiah, 2012).

ICTs (Information Communication Technology) includes any communication device or application such as radio, mobile phones or smartphones, television, computer with software and internet, and satellite systems, as well as the various applications and services associated with them like video or call conferencing. It is an integration of the technologies and the processes to distribute and communicate the desired information to the target audience and make the target audience more participative in nature (Banarjee, 2011). E-Chaupal, Kisan Call Center, Kisan Suchana Kendra, AGMARKNET, Gyandoot, Lifeline, E-Sagu and I Shakti are some example of ITC projects in India. Some benefits of ICTs are the following:

- It is very helpful to take the right decision at right time about farm operations.
- It is very effective medium to share the knowledge of scientific advancement among farming communities across the world.

- It provides advanced knowledge of farm operations to the farmers so they can manage their farm work efficiently.
- Through satellites and other technology, farmers get the knowledge about future weather condition, like famine, drought, hailstorm, rainfall and other natural conditions.
- It provides the knowledge of the suitable market for a better opportunity of selling products at fair prices (Murthy et.al, 2012).

Organic farming can improve the situation of farmers in India due to the high demand for organic foods in domestic markets as well as international market. Organic farming is a holistic approach in which environment, health, and sustainability are supported. The use of organic materials is emphasized in the approach for improving soil properties, reducing health hazard associated with the food chain, and attaining nearly nutrient cycles. They all are key factors of sustainable agriculture. It has numerous opportunities for livelihood security and rural employment. Yet the cultivators do not have so much interest in adopting the organic farming management system due to several existing constraints such as lack of expert guidance for performing efficiently, inadequate supply of organic supplements and inputs, unavailability of the local market to sell the organic farm commodities, and a high cost of certifications and inputs etc. So there is a need for a well- defined framework for promoting organic farming among farmers in the country (Pandey & Singh, 2012).

### **3.2. Government Measures for Promoting Agricultural Marketing in the Country**

Agricultural Marketing is a set of activities, policies, and agencies involved in the procurement of farm inputs by the farmers and the supply of farm products from the farmers to the consumers. It is a link between the farm and the non-farm sectors. It includes the assessment of demand for farm inputs required by farmers, all the organizations which make a deal in the supply of agricultural raw material to processing units and the policies regarding the marketing of agricultural commodities



and inputs (Acharya & Agrawal, 2011). An efficient agricultural marketing is a potent tool for poverty alleviation (Agriculture division, 2011) and rural development.

The development of agriculture sector depends not only on the growth of yield rate and farm production but also on the efficient marketing of farm outputs. Agricultural Marketing is the critical link between farm production and agricultural sector percolating to the cultivators and farm labors. It is a process by which farm products are transferred to consumers and transmits the price signals in the marketing chain. The present agricultural marketing system comprises four channels viz farmers to consumers via direct marketing; farmers to public agencies or cooperative societies; farmers to private wholesalers, then retailers and ultimately to end consumer; and farmers to processors and processors to consumers (Roy, 2012).

After independence, the government introduced some unique programs (e.g. Grow More Food Campaign) to enhance the supply of farm products involving both food and commercial crops. These initiatives were continued in every five-year plan for agricultural development. Therefore, decades after independence, still agriculture is the mainstay of the economy of the country (Iyer & Singhi, 2012).

The progression of agricultural marketing in India involves several initiatives such as the establishment of regulated markets; setting up of Agricultural Marketing and State Agricultural Marketing Boards; implementation of rules and regulation for rural market; and the introduction of market cooperatives brought by the Indian Government after independence (Chengappa, 2003).

The initiatives of the government to develop and modernize the agricultural marketing system are mainly focused in three directions:

- Institutionalizing of agricultural marketing through facilitating the setup of Cooperative marketing societies;
- Regulation of markets for various agricultural products designed to minimize or eliminate unfair trade practices; and

- Direct involvement of the State in the marketing of specific agricultural products (Kadrolkar, 2011).

The main Ministries of Government of India viz. the Ministry of Agriculture; Food and Public Distribution; Food Processing Industries; Health and Family Welfare; Consumer Affairs; Commerce; Rural Development, and Finance, are responsible for the formulation of policies and regulations regarding the respective sectors and the implementation of policies and programme pertaining to agricultural marketing. They have launched about 39 schemes in the agricultural marketing. These schemes promote private investment in domestic trading, post-harvest management, exports, quality management and support initiatives for capacity building, food safety, and improving market information. The estimated expenditure on these schemes was about Rs 1468 crores, consisting of Rs 510 crores of Department of Agriculture and Cooperation, Rs 254 crores of APEDA, Rs 164 crores of National Horticulture Mission, Rs 292 crores of National Horticulture Board, Rs 229 crores of Ministry of Food Processing Industries, and around Rs 19 crores of Technology Mission for NE region. Some major schemes of different Departments in X Five Year Plan are the following (Agriculture Division, 2007):

The interventions of the Indian government in the agricultural marketing include a wide range of activities. Therefore, to attract private investment and to make existing marketing system more efficient, a series of domestic market reforms have been introduced since 2000. These market reforms included reform of Agriculture Produce Marketing Regulation (APMR) Act, direct marketing (only two parties involved in trading as farmer and consumer), contract farming and private markets. As a result of these reforms, various domestic and international firms (MNCs) have entered into trading, marketing, and processing of farm products in Indian agriculture sector (Tuteja & Chandra, 2012).

To promote direct interactions between consumers and farmers and to eliminate the role of intermediaries in trading of fresh produce as fruits, vegetables, and flowers for

increasing share of profit of farmers, the direct marketing has been promoted in the country. The several farmers' markets have been established across the country by the central and state government. Apni Mandi (our market) was the first farmer's market, set up in Punjab and Haryana in the mid -1990s. Rythu Bazaars in Andhra Pradesh was established on 26 January 1999. The number of Rythu Bazars have increased from 49 to 102 and presently it covers almost 40,000 farmers of 2,800 villages in Andhra Pradesh, Uzhavar Santhai in Tamil Nadu, Shetkari Bazaar in Maharashtra, Krushak Bazar in Orissa and Hadapsar Vegetable Market in Pune have been established on the theme of direct marketing by the Government,(Agriculture Division,2007).

Direct marketing has helped farmers to become aware of products requirement and specifications by the markets; to improve product quality; to diversify the portfolio of farm products; and to get knowledge about maximum utilization of resources at minimum cost (Agriculture Division, 2011).

The group marketing practices are adopted by the cultivators to save an avoidable waste or make agriculture marketing more efficient. Under this practice, farmer's organization undertakes marketing activities on behalf of the individual member of the group. These organizations include national level cooperatives [National Agricultural Cooperative Marketing Federation of India Ltd.(NAFED), Tribal Cooperative Marketing Development Federation of India Limited (TRIFED)]; state-level general and commodity specific organizations, and primary level marketing and credit societies have been set up during the last five decades in the country. The self-help groups (SHGs) have been promoted in the country for the last two decades. In 1992, a national wide program was launched in which the SHGs were linked to the banking system. Presently, there are three types of SHGs in the country. First, they are formed and financed by banks; second, they are formed by other organizations and financed by banks; and third, they are formed by other organizations and financed by banks using NGOs. Krishi Vigyan Kendras (KVKs), NABARD and other organizations have formed commodity based farmers' clubs in the country.

Some examples of this farmer's group that are working successfully in the country are Horticultural Producers' Cooperative Marketing & Processing Society (HOPCOMS) in Karnataka, Mahagrapes in Maharashtra, and SAFAL F&V project of National Dairy Development Board (NDDB) in Bangalore (Agriculture Division, 2007).

The Government has adopted fixation of minimum support prices practice for some crops to encourage the farmers for increasing farm production and to protect farmer's interest. Under the practice, the government makes arrangements for purchasing the farm production on state account whenever price goes down below the minimum support price. A network of the regulated market is established to promote organized marketing of farm products in the country by the Government. To attain an efficient and effective system of trading of farm commodities, the governments of the most of the states and union territories have enacted legislation as APMC Act for regulating the agricultural produce markets. The primary objectives of the establishment of the network of physical markets are to ensure a healthy environment for the trading of farm commodities through fair practices of supply and demand forces, to regulate market activities and to achieve transparency in transactions (Tomar, 2013).

In 2000-01, a new scheme of Marketing Research and Information Network (AGMARKNET) based on ICT applications was launched by the Ministry of Agriculture. As on date, almost 3200 markets across the country have been connected with a central portal under the scheme. The auction officers collect data regarding price, quality and quantity of farm produce on a daily basis on the portal and provide the data to farmers or other stakeholders through AGMARKNET. It also provides other market information such as labeling, storage, warehousing, marketing laws, grading, sanitary and phytosanitary requirements. The information is available in 12 different languages besides English and Hindi. The Scheme is being continued during XII Plan. The organizations involved in project execution are Directorate of Marketing and Inspection (DMI) and National Informatics Center (NIC) at the Central level and State Agricultural Marketing Boards/Directorates and Agricultural

Produce Marketing Committees at State Government level (Ministry of Agriculture, 2013).

The setup of community foodgrain banks would be promoted to help in the marketing of underutilized crops and thereby generate an economic stake in the conservation of agro-biodiversity. Terminal markets for agriculture would be developed in public-private partnership model to provide better market access to farmers with better price realization in a transparent trading environment with suitable backward linkages to give technical backstopping services needed for quality and demand-driven production (Department of Agriculture & Cooperation, 2007).

In October 2004, a reform-linked scheme had been launched by the Government of India to attract both private and public investment in the field of agricultural marketing infrastructure. Under the scheme, subsidies are provided for an extensive range of projects to the private and public entrepreneurs. It is credit-linked with 25-33 percent back-ended subsidy which depends on the category and area of the beneficiaries. For public sector investment, there is no limitation on the subsidy whereas, for private sector investor, present maximum subsidy limit is Rs. 50-60 lakh per project. The subsidy is released to the units by National Cooperative Development Corporation (NCDC) and NABARD. The scheme is being executed by the Directorate of Marketing and Inspection, a department of Ministry of Agriculture, situated at Faridabad (Jairath, 2008).

The Government of India has permitted 100% foreign investment in wholesale cash-and-carry and single branded retailing after liberalization in foreign trade policy during economic reforms in 1991. The restrictions on foreign investment were imposed in 1997, but in 2006 these restrictions were removed and opened in single brand retailing and cash-and-carry formats. Foreign Direct Investment (FDI) has been permitted under automatic route in horticulture, floriculture, development of seeds, aquaculture, and cultivation of mushrooms for promoting improved technology in

Indian agricultural sector. FDI up to 100 percent is permitted in tea plantation with prior approval and specific restrictions (Roy, 2012).

In January 2012, the Central Government approved reforms for single-brand stores welcoming anyone around the globe to innovate retail market in India with 100% ownership but required that the single brand retailer sources out 30% of its goods from India. In December 2012 central government won Parliament's approval to the decision of allowing 51 % FDI multi-brand in the retailing sector (“UPA govt. wins,” 2012).

For promoting Make in India Scheme, the permission for 100 % FDI in multi-brand retail has been considered by the central government in 2017 with the prerequisite that product should be made in India. The proposal may also help Modi Government meet its goal of doubling the income of cultivators by 2022 (Sharma, 2017).

Crop insurance is another important measure of the government to mitigate risk arising due to loss of crops. The crop insurance is managed by the General Insurance Corporation (GIC) and subsidized by the central and state governments. It is delivered through rural financial institutions, generally tied to crop loans. At present, the government has set up a separate Agriculture Insurance Company with the capital participation of GIC, NABARD, and the four public sector general insurance companies. These organizations provide crop yield insurance, Calamity Relief Funds, and open market operations at minimum support prices (MSP) (Sinha, 2007).

In 1999, the government launched a crop scheme named “National Agriculture Insurance Scheme (NIAS)” for providing financial support to farmers. The scheme was implemented in 14 states of India. There were some loopholes in that scheme, so it was replaced by the new scheme known as “Modified National Agriculture Insurance Scheme (MNIAS).”The scheme was implemented in six states of the country. Like the previous scheme, it too failed to give any fruitful results due to several limitations such as slow claim procedure, and low sum insured. So, the central government has launched a new crop scheme named “Pradhan Mantri Fasal Beema

Yojna (PMFBY)” in 2016. Under this new scheme, the premium rate will be discounted from the existing rates for all types of crops (PMFBY, 2016).

The government had drawn a regulatory framework for promoting organic farming in the country. The regulations lay down the institutional arrangements for implementing the National Program for Organic Production (NPOP). For the benefits of the farmers, traders, processors, and consumers, the NPOP is implemented, monitored, administered, and followed up on a large scale. The Ministry of Commerce and Industry, and Department of Commerce work as a nodal agency for it. Policymaking and declaration of the standards for organic products, recognition of organic standards of other countries, endeavors to get our standards acknowledged by others and coordination with other components of the government for the successful management of the organic agriculture are the primary functions entrusted to the ministry. The apex advisory body (a national level steering committee) is working to assist the government to promote organic farming in India. This body comprises representatives from the Ministries of Agriculture, Forests, and Environment, Food Processing Industries: Science and Technology; and Rural Development and Commerce (Narayanan, 2005).

Agri-tourism is a fresh and innovative concept and can be viewed as a combined component of services and products of two immense industries viz Tourism and Agriculture. It provides new markets and exposure for farmers and farm products and unique, enriching experience of farming and vernacularism and opportunity to know their roots for tourists. It has a lot of opportunities as it provides additional income sources for farmers and rural people; it emphasizes Rural infrastructure development; it creates employment in the rural area, it attracts investors for making an investment in the agriculture sector; and it helps to spread and recognize folk culture all over the world etc. Basic Principles of Agri-Tourism are as follows:

1. Have something for visitors or tourist to see such as farm, animals, birds, pond, the culture of the village and rural life, dress, and festivals
2. Have something for visitors to do and experience like participating in farm operations, riding a camel, buffalo, cooking and playing the

rural games like Latto, Gilli-danda, Kanche (marble) 3. Have something for visitors to buy like Handicraft, Rural crafts, dress materials, and fresh processed food items etc.(Adam,2004).

It has permeated in Maharashtra and is growing gradually and endowing new hope for the development of farm sector. Rajasthan's economy is primarily Agriculture and Arcadian based economy and its tourism sector contribute 8% of the state's GDP. Agri-tourism can be a boon for development of the economy of Rajasthan. It has the wide potential to attract both domestic and international tourists.

### **3.3. Present Status of Agricultural Marketing in India**

The present status of the agriculture marketing is given under the following heads:-

#### **3.3.1. Rural Primary, Wholesale and Regulated Market**

Primarily the periodical markets like haats, fair, painths, and fairs come in rural primary markets which provide a place to small and marginal farmers to sell their farm produce and purchase products for their consumption. These markets, which also function as collection centers for adjoining secondary markets, are devoid of most of the basic needed marketing facilities (Agriculture Division, 2007). The number of primary rural markets in the country is more than 21,000 (Directorate of Marketing & Inspection, 2014) and 15 percent of these markets come under the ambit of regulation. Nearly 50 percent local or rural markets are managed by town administration or the panchayats. Sometimes the private parties like (Krishi Utpadan Bazar Samities (KUBs) in Bihar) and regulated market committees (Orissa) operate these markets. The basic amenities for the farmers available in the markets are negligible. The exploitation of illiterate and small farmers by traders through willful miscalculation and overcharging is a common phenomenon. Very little efforts have been made so far by the government agencies/market authorities to develop the rural primary markets (Acharya & Agrawal, 2011).



More than 6500 wholesale markets (Directorate of Marketing & Inspection, 2014) or secondary markets are functioning in the country, mostly located in the district, trade centers, taluk headquarters, and nearby railway stations. The markets are better organized than rural primary market but the availability of basic amenities and facilities in the market are not satisfactory. In most of these markets, a large number of commodities are traded. Specialized single commodity markets are not many except few markets for cotton, jute, oilseeds, fruits, and vegetables. The business is conducted according to market practices established by age-old customs, or as per the regulations of APMC wherever regulated. These markets play an important role in determining the prices of agricultural produce assembled there and as such have a governing impact in terms of trade between agriculture vs. other sectors of the economy (Jairath, 2013).

Regulated market set up under State Agriculture Produce Marketing (Development & Regulation) Act for eliminating unhealthy practice and protecting of interests of farmers (Acharya & Agrawal, 2011). There are 7,320 regulated markets (principal and sub-market yards) in the country (Directorate of Marketing & Inspection, 2014). The growth of regulated markets is not uniform in all parts of the country. The number of markets in Rajasthan, Andhra Pradesh, Bihar, Gujarat, Punjab, Haryana, Himachal Pradesh, Tamil Nadu, Uttar Pradesh, Orissa, Karnataka, Maharashtra and West Bengal are appreciable but in Manipur, Meghalaya, Nagaland, and Sikkim are negligible. Market regulation has not been enacted in Jammu & Kashmir, Manipur, Andaman & Nicobar, Dadra & Nagar Haveli and Lakshadweep. Four regulated markets in the Malabar area were established by the Madras State under the Madras Commercial Crops Market Act 1933 in Kerala state. The regulated markets are linked with co-operative marketing and distribution and banking. Cold storage, common Auction platform(open as well as covered), drying yards, retailer's shop, weighing equipment, processing units, traders modules and basic facilities etc. are given to the participants in the markets (Acharya & Agrawal,2011).

The benefits available to the farmers from regulated markets depend on the facilities/amenities available rather than the number of regulated markets in the area. Both covered and open auction platforms exist in two-thirds of the regulated markets. One-fourth of the markets have common drying yards. Traders modules viz. shop, godown, and platform in front of shop exist in 63 percent of the markets. The cold storage units exist in only nine percent of the markets and grading facilities exist in less than one-third of the markets. The basic facilities viz., internal roads, boundary walls, electric light, loading and unloading facilities, and weighing equipment are available in more than eighty percent of the markets. Farmer's rest houses exist in only half of the regulated markets (Jairath, 2013).

With the objectives of controlling price rise, development of post-harvest marketing infrastructure for reducing wastage, reducing the intermediaries in supply chain, promoting the emergence of alternative marketing channels, enhancing private sector investment and accessing to global markets, the Ministry of Agriculture & Farmers Welfare formulated the State Agricultural Produce Marketing (Development and Regulation) Act, 2003 (model APMC Act) in place of existing State APMC Acts (Datt,2006). Under this act, direct marketing, public-private investment for market development, setting up purchase centers and terminal markets, contract farming, e-commerce, forward and future market, negotiable warehouse receipt system, and an establishment of mega-markets have been focused by the Government (Patel, 2010).

### **3.3.2. Warehousing and Cold Storage**

To prevent and take care of storage of farm produce, at present, there are three organizations in public sector viz Food Corporation of India (FCI), Central Warehousing Corporation (CWC), and 16 State Warehousing Corporation (SWCs). The Food Corporation of India (FCI) builds and hires godowns and warehouses from other public and private agencies for storage of food grains. The total storage capacity of FCI (owned & hired) without CAP is about 33.86 MT and with CAP was about 36.89 MT in April 2014. The CWC and SWCs construct storage capacity for the general warehousing as well as for FCI (Bissa & Vyas, 2014).

The CWC and SWCs own and manage about 471 and 1689 warehouses with a total capacity of 104.94 and 266.96 lakh MT respectively on March 2014. The total storage capacity available with different public sector agencies is 78.83 MT. Over 52,600 primary agriculture cooperatives and most of the marketing co-operatives have created around 13.73MT storage capacity, assisted and funded by National Cooperative Development Corporation (NCDC). In addition, a capacity of 16.6 MT has also been created under Rural Godown Scheme. Financial assistance was provided to various States for construction of Godowns at the rural level under the scheme of National Grid of Rural Godowns, which stands transferred to State Governments with effect from April 1, 1992. As on 31 December 2015, the FCI sanctioned a total storage capacity of 151.19 lakh MT, out of which a capacity of about 115.51 lakh MT has been sanctioned to private entrepreneurs. The CWC and SWCs have been sanctioned 7.16 lakh MT and 28.52 lakh MT respectively. A capacity of about 14.96 lakh MT is under construction. At present, about 131.65 lakh MT has been completed, out of which 121.67 lakh MT has been taken over (Government of India, 2016).

The Warehousing Development and Regulatory Authority (WDRA) has been established by the Central Government under the Warehousing (Development and Regulation) Act, 2007. The objective of the setup is to develop and regulate warehousing, including registration and accreditation of warehousing. It also issues Negotiable Warehouse Receipts (NWRs) in the country to help farmers to seek loans from banks against NWRs to avoid distress sale of agricultural products. The authority has notified 123 agriculture commodities and 26 horticulture commodities for the purpose of negotiable warehouse receipts (NWRs). In total, 792 warehouses of the CWC, SWCs, private and Project Appraisal Committees (PACs) have been registered with the WDRA till 31 January 2016 (Government of India-pocket book, 2016).

The total Number of cold storage in the country was 4762 in December 2005 with 195.89 lakh tones storage capacity. In which 4243 cold storage units are privately

owned with 185.32 lakh tones storage capacity, 394 cold storage units are owned by cooperative sector with 9.75 lakh tones storage capacity and 125 units are run by the public sector with 0.82 lakh tones storage capacity (NCCD, 2015).

The direct involvement of the government is negligible in cold storage sector (Jairath, 2013). In 2012 availability of cold storage capacity was only 130.5 lakh tones. Although 90% of these units are made to store the only potato even then it does not meet the requirement of the single crop, the production of which is about 300 lakh tonnes per annum. The present storage capacity of cold stores is sufficient for only 12 percent of the total production of fruits and vegetables. There are two states where there is no cold storage available. On the other hand states like Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Sikkim, and Tamilnadu have cold storage capacity available only for one percent of their produce. There are only four states i.e. Punjab, Uttar Pradesh, West Bengal and Rajasthan which have more than all India average capacity available for their produce. The number of Reefer Vans/ Containers are 3711 in 2010 which is very low for transportation of perishable commodities from one area to another (Acharya & Agrawal, 2011).

**Table 3.1.: Status of Cold Storage Infrastructure in India**

<b>Infrastructure</b>	<b>Infrastructure Requirement(A)</b>	<b>Infrastructure Created(B)</b>	<b>All India Gap (A-B)</b>
<b>Pack-house</b>	70,080 nos.	249 nos.	69,831 nos.
<b>Cold-Storage (Bulk)</b>	341,64,411 MT	318,23,700 MT	32,76,962 MT
<b>Cold storage (Hub)</b>		9,36,251 MT	
<b>Reefer Vehicles</b>	61,826 nos.	9,000 nos.	52,826 nos.
<b>Ripening Chamber</b>	9,131 nos.	812 nos.	8,319 nos.

Sources: National Centre for Cold Chain Development (NCCD), 2015

### **3.3.3. Transportation**

The type of Transportation of farm products depends on the volume of farm outputs and distance of the target market, mainly transported by rail and roads. 80% of total agriculture produce for domestic consumption is transported by road as 2% of

vegetables and fruits of total output are transported by rail and remaining is shipped by roads whereas 85 % of total output of food grains is hauled by roads and rail has only 15 % share in it (Brahma, 2014).

Several initiatives as Pradhan Mantra Gramin Sadak Yojna, Bharat Nirman, Gramin Sampark Sadak, National Highways Development Programme, Special Programme for North East and other various schemes are being taken by the government for the betterment of connectivity and transportation. India has the second largest road network of over 5,472,144 kilometers in the world with 65% of goods carriage and 80% of total passenger travel by roads (Ministry of Road Transport & Highways, 2016).

The rail network is another important means of transportation of farm produce throughout the country. Indian railways have one of the largest networks in the world with 115,000 km (71,000 mi) of track over a route of 67,312 km (41,826 mi) and 7,112 stations. It has 17 zones and sixty-eight divisions and carries almost 1.107 billion tons of freight in a year. Some special train wagons as **Green Parcel Van** with capacity 23t, **Refrigerated Parcel Van** with capacity 5t of frozen goods at -20.c and 12t of chilled goods at 4.C and **Green Bogey** are available for perishable farm output as vegetables, fruits, and others. Railway route length in the country is not sufficient and electrified track is not even bare minimum. The existing rail facilities in the country are highly inadequate. Rail lines even do not connect some of the districts in the country. Railway routes availability is relatively poor in the states of Madhya Pradesh, Orissa, **Rajasthan**, and Karnataka as is clear by the low density of rail route length in these states (Acharya & Agrawal, 2011).

The transportation facilities are sound in Jaipur and Kota districts but they are not so much satisfactory in other four districts named Swaimadhopur, Sikar, Jhalawar, and Tonk.

#### **3.3.4. Grading and Standardization**

At present, the 'Agmark standards' of 213 agricultural commodities are notified by the central government under the provisions of the Agricultural Produce (Grading and

Marking) Act, 1937. Grading and marking under AGMARK is optional as per the provisions of the Act excluding blended edible vegetable oils (BEVO) and fat spreads. The certification of both the commodities is compulsory under AGMARK as per the “Regulations” notified under the Food Safety and Standards Act, 2006. There is 1 central ‘Agmark’ laboratory situated at Nagpur and 11 regional ‘Agmark’ laboratories setup at Amritsar, New Delhi, Jaipur, Kanpur, Bhopal, Kolkata, Rajkot, Mumbai, Guntur, Kochi and Chennai across the country (Directorate of Marketing & Inspection, 2014).

The number of approved grading laboratories was 1373 by the end of March 2013 in which 102 state-owned grading laboratories, 11 laboratories in cooperative sector, 71 private commercial laboratories and 1189 laboratories of the licensees (Packers’ own) functioning for analysis and determination of ‘AGMARK’ grades in the country (Department of Agriculture, Cooperation & Farmers Welfare, 2016).

The Directorate of Marketing and Inspection (DMI) is only the official inspection & certification agency for export of fruit and vegetables to EU countries. The Grade Standards for 49 commodities are notified under Fruit and Vegetables Grading and Marking Rules 2004. The volume of agricultural commodities certified under ‘AGMARK’ for Export trade was 54792 MT during the year 2012-13, valued at Rs. 37180 lakhs. The volume of agricultural commodities certified under ‘AGMARK’ for domestic trade was 18.08 lakh MT during the year 2013-14, valued at Rs. 14,412.91 crores, and 19.12 lakh MT during the year 2014-15, valued at Rs. 12,589.40 crores (Department of Agriculture, Cooperation & Farmers Welfare, 2016).

### **3.3.5. Agricultural Finance**

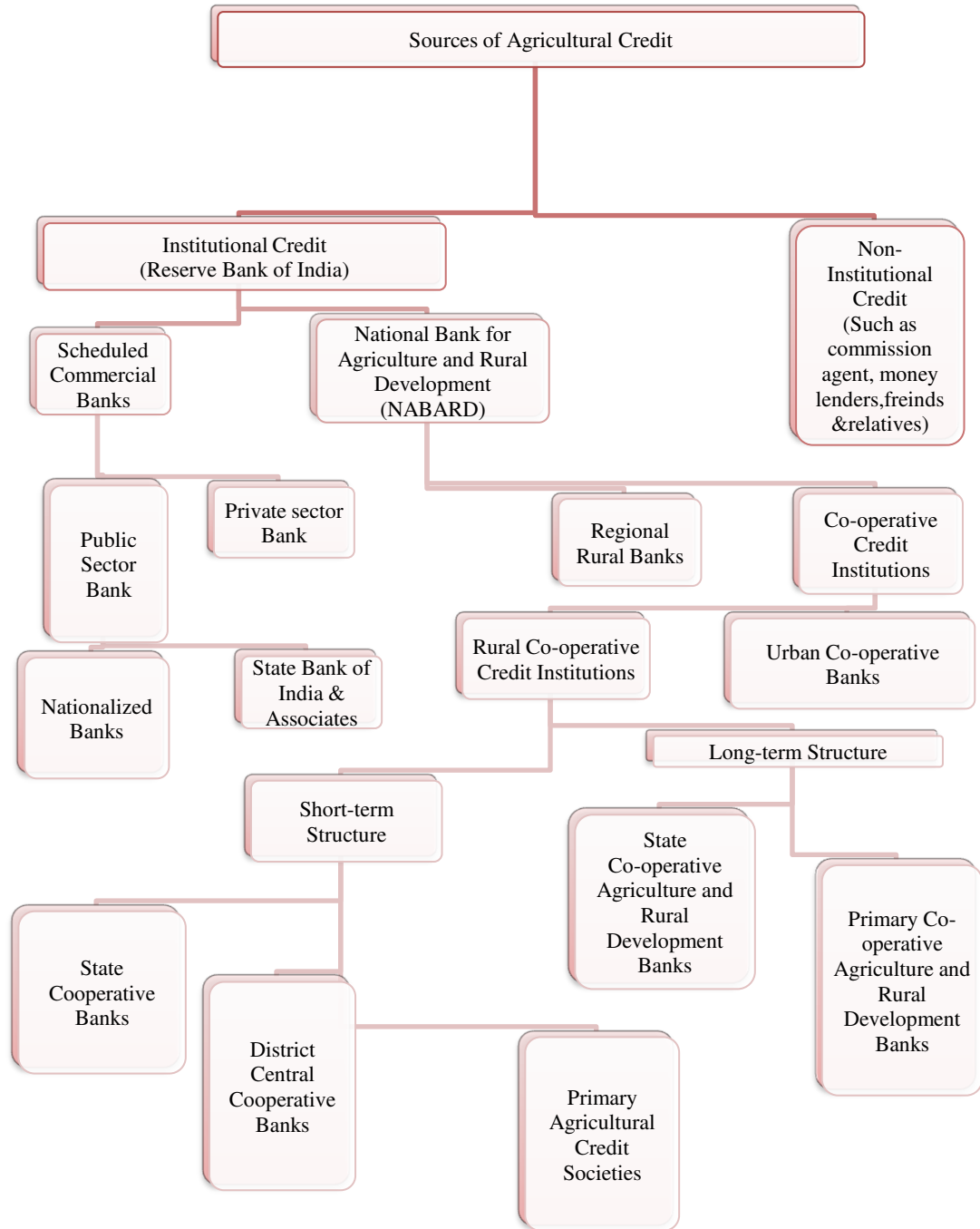
Institutional funding is the main source of agricultural finance in the country. It is mainly disbursed by a multi-agency network comprising commercial banks, regional rural banks, and cooperative banks and societies in the country. There are approximately 27 public sector banks out of which 20 are nationalized banks with 33,627 branches and 7 are SBI and its associates with 13661 branches in the country.

Approximately 20 private sector banks out of which 13 are old private banks with 4511 branches and 7 new private banks with 1685 branches are operated in the country. There are almost 100,000 village-level Primary Agricultural Credit Societies (PACS), 82 Regional Rural Banks (RRBs), 30 State Cooperative Banks (SCBs) with 953 branches and 368 District Central Cooperative Banks (DCCBs) with 12,858 branches granting primarily short- and medium-term farm credit in India. There are nearly 19 State Cooperative Agricultural and Rural Development Banks (SCARDBs) are operated in the country with 2609 operational units and 788 branches. Almost 772 Primary Agricultural and Rural Development Banks (PA&RDBs) are established across the country with 1049 branches (Bissa & Vyas, 2014).

The Government is taking several initiatives consistently to make the institution credit system more responsive to the needs of the farmers. The agricultural credit target is fixed by the Government yearly and is disclosed in the annual budget. For the financial year 2017-18, the agriculture credit target has been fixed at Rs 10 lakh crore. The government provides short-term crop loans up to Rs 3 lakh at the interest rate of 7 percent per annum to the farmers and an additional incentive of 3 percent is provided to farmers for timely repayment of loans within due date and the interest rate of 4 percent per annum is charged. The KCC Scheme has been transformed into ATM enabled debit card. It has been simplified with, inter alia, facilities of one-time documentation, built-in cost escalation in the limit, and any number of withdrawals within the limit, etc. (Government of India-pocket book, 2016).

Over the decades, the farm credit system has been made better through setting up of cooperative credit societies at various levels, expansion of rural branches of commercial banks, and the establishment of regional rural banks. Between 2004-05 and 2014-15, institutional credit to agriculture sector increased from Rs.1,25,309 crores to Rs. 8,45,328 crores and a compounded annual growth rate of 24 percent were registered. It is remarkable that the flow of agricultural credit has not only increased over the years but also has emphatically surpassed the target (Government of India, 2016)

**Figure 3.1.: Source of Agricultural Finance**



Source: Pal, 2016



### **3.3.6. Agri Export Zones (AEZS) and Agriculture Export**

The Government has set up 60 Agri Export Zones across the country for promoting the agriculture exports. These Agri Export zones are spread over 230 districts in 20 states in the country. These zones receive assistance from Central and State Governments and are monitored by Agriculture and Processed Food Products Export Development Authority (APEDA). About 35 agriculture commodities such as fruits, vegetables, spices, cashew, tea, basmati rice, medicinal plants, and pulses were identified and covered for promotion in these zones. The total investment committed under the AEZ program by all agencies (Central and State Government) stands at Rs.1, 724 crores, including private investments of Rs.970 crores (Bissa & Vyas, 2014).

Further, several initiatives have been introduced to help to exporters in meet phytosanitary requirements and Regulatory authorities at the state level have been formed by the central government. The quality standards have been publicized and harmonized and requirements of essential documents have been specified. Every exporter needs to receive an Import-Export Code (IEC) from the Director General of Foreign Trade and then get registered with APEDA. Those who plan to export some products can either register themselves or contact registered export houses, whose names and details are available on websites of APEDA and Indian Trade Promotion Organization (Acharya & Agrawal, 2011).

India is among the 15 leading exporters of agricultural products in the world. The country has emerged as a significant exporter of certain agri-items like cotton, rice, meat, oil meals, pepper, and sugar. India's share in agricultural exports in the world in 2014 was 2.46 percent. Agricultural exports increased from Rs. 2,27,193 crore in 2012-13 to Rs. 2,39,471 crore in the financial year 2014-15 and registered a growth of nearly 5.4%. Increase in the value of agricultural exports during 2014-15 was primarily on account of higher exports of basmati & non-basmati rice, meat, marine products, raw cotton, cashew nut, spices, and guar gum. The share of agricultural

exports in India's total exports decreased from 13.90% in 2012-13 to 12.66% in 2014-15(Government of India, 2016).

### **3.3.7. Government Schemes for Promoting Agricultural Marketing**

The Integrated Scheme for Agricultural Marketing (ISAM) (effective from 01 April 2014) is a new scheme of the central government for improving agriculture marketing infrastructure and for accelerating the pace of a comprehensive and integrated agricultural marketing system in the country. The ongoing Central Sector Schemes implemented by the Division during XII Plan were integrated into this scheme. The ISAM has five sub schemes given below:

#### **I. Agricultural Marketing Infrastructure (AMI)**

The former scheme namely Grameen Bhandaran Yojana (GBY) implemented since 01.04.2001 and the Scheme for Development/ Strengthening of Agricultural Marketing Infrastructure, Grading and Standardisation (AMIGS) implemented since 20.10.2004 have been subsumed into this scheme. AMI subschemes are implemented by Directorate of Marketing & Inspection (DMI). Storage infrastructure and marketing infrastructure other than storage are two components of the scheme. Since its inception and until till 30 September 2016 a total number of 37,574 storage infrastructure projects with a storage capacity of 62.64 million MT and a total of 18205 other than storage infrastructure projects were sanctioned under the scheme. Broadly, the scheme has been considered very successful (Government of India, 2016).

#### **II. Marketing Research and Information Network (MRIN)**

MRIN is an ICT based Central Sector Scheme, launched by the Ministry of Agriculture in March 2000 and implemented by the DMI in collaboration with Agricultural Marketing Boards/Directorates, APMCs and NIC. The objective of the scheme is to provide electronic connectivity to important wholesale markets in the country for collection and dissemination of price- and market-related information. The information regarding Wholesale prices and arrivals of more than 300

commodities and their 2000 varieties are being collected and disseminated through the AGMARKNET portal (<http://agmarknet.nic.in>) on daily basis from about 2700 markets. Presently 3244 wholesale markets across the country have been linked to the portal and the information is being provided in 11 languages. The State APMCs upload data about price and arrival of farm commodities on this portal regularly and some states which (eg. Bihar and Kerela) don't have APMCs, upload data regarding the same through alternative arrangements (Directorate of Marketing & Inspection, 2014).

In addition to price and arrival information, various another market-related information like standards, grades, labeling, sanitary and phytosanitary requirements, the physical infrastructure of storage and warehousing, yards and sub-yards, marketing laws, fees payable etc. are being disseminated through the portal. For providing information at the grass root level some new innovations have been introduced as information is being provided through SMS by GOLIFE, IFFCO Kisan Sanchar Ltd. (IKSL) and IIT, Kanpur etc., through GPS enabled Agri-Market Mobile APP within a radius of 50km, through Price Ticker Boards set up by the Forward Markets Commission (FMC) at different wholesale markets, and through Farmers portal by the Extension Functionaries etc (Government of India, 2016).

### **III. Strengthening of 'AGMARK' Grading Facilities (SAGF)**

The subscheme is implemented by DMI with the objective of Promotion of Standardization and Grading of agricultural and allied produce under the Agricultural Produce (Grading & Marking) Act, 1937 as amended in 1986. SAGF scheme supports the programme by meeting expenditure incurred by 11 Regional Agmark Laboratories (RAL) and the Central Agmark Laboratory on the purchase of equipment, chemicals, glassware, and apparatus, as well as renovation and repair works in the Agmark Laboratories/ Regional and Sub-offices (Department of Agriculture, 2016).

#### **IV. Agri-Business Development (ABD)**

The Sub scheme is implemented by Small Farmers Agri-Business Consortium (SFAC), New Delhi. The objective of the scheme is Agri-business Development (ABD) through Venture Capital Assistance (VCA) and Project Development Facility (PDF). It is the Central Sector Scheme, implemented for agribusiness development in association with nationalized banks, State bank of India (SBI), National Bank of Agriculture and Rural Development (NABARD), Small Industry Development Bank of India (SIDBI), Industrial Development Bank of India (IDBI), National Cooperative Development Corporation (NCDC), Exim Bank, North Eastern Development Finance Corporation Ltd. (NEDFI), Regional Rural Banks (RRBs) and State Financial Corporations for providing (i) Venture Capital to qualifying agribusiness projects, and (ii) assistance to farmers / products groups for preparing bankable Detailed Project Reports (DPR) (Department of Agriculture, Cooperation & Farmers Welfare, 2016).

The main objective of the organization is to promote private investment in agribusiness projects for supporting innovative ideas for the creation of employment and income in rural areas. It provides financial and technical assistance to projects which promote linkages with farmers for procurement of their products and provide rural employment. The scheme was revised in January 2014 to introduce new and liberalized terms and conditions for XII plan. SFAC promotes the formation of Farmer Producer Organizations (FPO) and has launched two schemes namely Equity Grant Fund and Credit Guarantee Fund for Farmer Producer Companies (Department of Agriculture, Cooperation & Farmers Welfare, 2016).

#### **V. Chaudhary Charan Singh National Institute of Agricultural Marketing (NIAM), Jaipur**

It has established by the Government of India in 1988 for undertaking research on several contemporary issues and providing training and assistance to senior to the middle level of State Marketing Boards, farmers and other stakeholders related to agriculture marketing. It emphasized client orientation, and research-based training in

the field of Agricultural Marketing in the country. The linkages and collaboration with agencies across the county helped the Institute to ensure a wider outreach in terms of topics and states covered. It organizes various programmes and activities to create awareness among farmers and facilitate agriculture trade. Some of the activities are:

- Farmer Awareness Programmes to make aware farmers of strategies for agricultural marketing and benefits available for farmers under different schemes of the Government.
- Buyer-Seller Meets (BSM) to facilitate trade in Farm commodities.
- Krushak Pathshala (Farmer Business School) set up for providing education on all the aspects of farm marketing to the farmers.
- International Training Programme on Marketing Management
- Post Graduate Diploma in Agribusiness Management (PGDABM) (Government of India,2016)

#### **VI. Price Stabilisation Fund (PSF)**

It is a Central Sector Scheme approved by The Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) with a corpus of Rs.500 crores for supporting market interventions for controlling price volatility for agricultural commodities.PSF is used to advance interest-free loan to State Governments, Central agencies and PSUs/Cooperatives under Ministries to support their working capital and other expenses on procurement and distribution interventions for such commodities. Initially, the fund is proposed to be used for market intervention in respect of pulses, onion, and potato only (Department of Agriculture, Cooperation & Farmers Welfare, 2016).

#### **3.3.8. Names of some Major Institutions for Promoting Agricultural Marketing in India**

- i. Food Corporation of India (FCI)
- ii. Directorate of Marketing and Inspection (DMI)

- iii. State Agricultural Marketing Boards (SAMBs)
- iv. Council of State Agricultural Marketing Boards (COSAMB)
- v. Indian Standards Institutions (ISI)
- vi. Bureau of Indian Standards (BIS)
- vii. Commission for Agricultural Costs and Prices (CACP)
- viii. Agricultural and Processed Food Products Exports Development Authority (APEDA)
- ix. North-Eastern Regional Agricultural Marketing Corporation (NERAMC)
- x. National Bank for Agricultural and Rural Development (NABARD)
- xi. Central Warehousing Corporation (CWC)
- xii. State Warehousing Corporations (SWCs)
- xiii. Indian Institute of Packaging (IIP)
- xiv. National Institute of Food Technology Entrepreneurship and Management (NIFTEM)
- xv. National Co-operative Development Corporation (NCDC)
- xvi. National Agricultural Co-operative Marketing Federation (NAFED)

**3.3.9. Some Legislative measures in Indian Agricultural Marketing (Mahesha, 2013)**

- i. The Standards of Weights and Measures Act, 1976
- ii. Seed-Act, 1966
- iii. National Bank for Agriculture and Rural Development Act, 1981
- iv. The Agricultural Produce(Grading and Marketing) Act, 1937
- v. State Agricultural Produce Marketing Regulations Acts
- vi. Food Safety and Standards (FSS)Act,2006
- vii. Prevention of Food Adulteration Act,1954
- viii. The Cold Storage Order,1964,1980,1997
- ix. General Grading and Marking Rules,1937
- x. The Warehousing(Development and Reduction) Act,2007

### **3.3.10. Electronic Spot Exchange**

The Forward Markets Commission and the Government have permitted the national commodity exchange to set up spot exchange. These spot exchange create market links among farmers, producers, processors and exporters and consumers with the aims to reduce the intermediation cost and ensure remunerative price for farmers. The set up has benefits for farmers such as it provides a national level transparent platform for trading; the farmers can bid for sale of their produce; they have easy loan facility from banks; farmers are made immediate payment and offered higher price than local markets; and they are provided a platform for buying and selling of warehouses receipts etc. These commodity exchanges should be promoted at large scale by the government for trading all crops. National Spot Exchange Limited (NSEL) and National Agricultural Produce Market Company of India Limited (NPMC) etc. are some example of these exchanges (Acharya & Agrawal, 2013).

The Government of Rajasthan has granted a license to National Spot Exchange Limited (NSEL) under the State APMC Act. It is established as a Private Sub E-Market.

### **3.4. Status of Agriculture Sector in Rajasthan**

The economy of Rajasthan is primarily agrarian. The agricultural sector contributes about 22.5 percent to the state GDP. The major part of the state is arid, infertile and parched, so agriculture has become a difficult job in the state. The total cultivated area is almost 20 million hectares, but the total irrigated area is only 20 percent of it. The availability of groundwater level is only at a depth of 30 to 61m. The farmers in the state have to depend on multiple sources of irrigation such as wells, ponds, tube wells, and tanks. The Narmada River in the south and The Punjab Rivers in the north provide water to the state. The Agra Canals from Haryana and Uttar Pradesh supply water to dry areas of Rajasthan while the Indira Gandhi Canal provides water to Northeastern part of the state (Rajasthan Map, 2017).

The economy of Rajasthan is considered agrarian in nature with a high level of fluctuation in productivity and farm production. So the Gross State Domestic Product (GSDP) is not stable and fluctuates every year. In spite of this, the agriculture sector has exhibited a healthy growth during the recent past. The state's GSDP at current prices has increased by more than double, i.e. from Rs 142236.14 crore in 2005-06 to Rs 368319.52 crore in 2011-12. So it can be said that Rajasthan as one of the fastest growing states of India (Swain et.al, 2009).

**Table: 3.2 SWOT Analysis of Agriculture in Rajasthan**

Strength	Weakness
<ul style="list-style-type: none"> <li>• The land holding per capita is the highest in the country.</li> <li>• About 70 percent of total population of the state depends on agriculture sector for their livelihood.</li> <li>• Agriculture and its allied sector provide employment to more than half population of the state.</li> <li>• Kisan Vigyan Kendra has been established in every district of the state.</li> <li>• There are many agricultural universities, research centers, Agriculture College and National Institute of Agricultural Marketing (NIAM) in the state.</li> <li>• Presence of a large number of labor forces and homeland for the cultivation of jwar, bajra, and spices.</li> <li>• In 24 districts of the state, the National Horticulture Mission has been implemented and in the other districts, the support and assistance would be provided under National Agriculture Developmental Scheme.</li> <li>• In 12 districts, National Bamboo Mission has been implemented.</li> <li>• BRGF is being implemented in 12 districts of the state.</li> </ul>	<ul style="list-style-type: none"> <li>• Around 10 lakh hectare area is under soils containing alkaline and saline.</li> <li>• Lack of suitable drought resistant, short duration, high yielding varieties of cereals, pulses and guar in Kharif season.</li> <li>• Availabilities of expert guidance for research in fodder crops, horticulture and agro-forestry are very limited in the state.</li> <li>• Lack of strategy and tools for reducing problems arising from soil containing alkaline and saline.</li> <li>• Insufficient supply of electricity or power.</li> <li>• Lack of post-harvest facilities as cleaning, washing, grading, warehousing, cold storage, waxing, packaging and container services.</li> <li>• Farm mechanization is not up to date and growing very slowly.</li> <li>• Poor infrastructure and marketing support for horticulture crops.</li> <li>• Lower returns for small and marginal farmers as well as lower wages for agricultural labors due to significant market imperfections.</li> <li>• Best (productivity enhancing) practices, while available, have tended to stay in laboratories rather than being transferred to land or actual farm jobs.</li> <li>• Inappropriate use of chemical fertilizers</li> </ul>



	<p>and pesticides and no proper management of diseases and pests leads to poor productivity of farm outputs.</p> <ul style="list-style-type: none"> <li>• Sometimes Minimum support prices offered by the Government are much below the cost of farm production.</li> <li>• The value commensurate with the risk associated with farm jobs bared or made efforts put in by the farmers is not paid to farmers and division of profit is also not done by considering the factor.</li> <li>• The other stakeholders engage to create wealth and profit maximization rather than to pay a fair price to farmers.</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Crop diversification has wide scope in the state.</li> <li>• A lot of scope for augmentation of skills for cultivators.</li> <li>• Immense opportunities for horticulture crops.</li> <li>• Wide scope for constructing rural mandies and Farmer's market (Direct sale).</li> <li>• Scope for increasing storage and cold storage facilities to reduce distress sale and post-harvest losses.</li> <li>• Possibilities to set up farmer's organizations and producer group etc.</li> <li>• Potential for export the farm produce.</li> </ul>	<ul style="list-style-type: none"> <li>• Primarily agriculture sector in the state is characterized as rained or repeatedly monsoon failure.</li> <li>• The period of monsoon is short, about three months. Its arrival is late and withdrawal early, in comparison to other states.</li> <li>• The great variation in the pattern of yearly rainfall. Almost 90 percent of the total rainfall is received during monsoon seasons.</li> <li>• The Kharif seasons has 65% of total cultivation and mainly depends on rainfall. The rainfall in the state is uncertain and mostly below average.</li> <li>• The tube wells and under wells are commonly used for irrigation. It is almost 60 percent of the total irrigated area.</li> <li>• The underground water table is falling by one meter every year.</li> <li>• Rainfall is highly insufficient and aberrant in nature.</li> <li>• About 61 percent area lies in arid and semi-arid tracts, which soil is not good for cultivation and having low water holding capacity, high infiltration rate, poor fertility, and shallow in depth in some areas.</li> </ul>

Source: RGAVP, 2012

The significant increase in the agricultural production has always been a prime goal of the five-year plans. Extensive area coverage under crops was undertaken to develop the agricultural sector during the first Five Year Plan. Under the second Five Year Plan, the proper use of farm inputs was emphasized for balanced growth. During the third five year plan period, the concept of intensive Agricultural Development Program (ADP) and a package approach for specific areas and crops were introduced in the state. During the fourth Plan and Annual Plans (1966-69), commencement of the green revolution was noticed with the introduction of high yielding varieties. During the fifth five year Plan, integrated area approach, farm development by usage of multiple improved farm inputs and advanced crop management practices through visit and training system were initiated in the state. To reduce or minimize unfavorable atmospheric effects on farm production, once again Input programming has been accelerated during the sixth five-year plan. During seventh the five year Plan, it was aimed to increase irrigation area and proper management of irrigation in existing areas. During the eighth and ninth five years Plans, comprehensive Agriculture Development Projects were prepared for the development of agriculture and allied activities like agriculture marketing, horticulture, dairy, fisheries, sheep and wool, and groundwater exploitation etc. To cope up with National Policy on Agriculture implemented by Government of India and WTO agreement, the structural development was promoted for boosting agriculture economy of the state during the 10<sup>th</sup> five-year plan. The most priority is given to agriculture sector in every planning and development. The agriculture sector was declared an industry. The various initiatives as Agro-climatic zones, Kisan Seva Kendra, cropping system and modern agriculture research etc. were introduced during the same plan. During the period of the eleventh five-year plan, the agricultural growth was suggested through proper use of water, growing high produce of the crops require less water, technology transfer, strengthening extension, marketing linkages for agro-processing and diversification into horticulture along with post-harvest management (Dutta, 2009).

This study examined the performance of the pearl millet seed market in Rajasthan and focused on information between farmers and seed providers. Researchers found that Farmers use various sources of information, especially their own experience, discussions, and observations with other farmers, and the advice of seed merchants (Tripp and Pal 1998).

The study was conducted to examine marketing efficiency in different marketing channels of paddy at Hanumangarh district in Rajasthan. The two marketing channels were analyzed on the basis of Retailer's sale price, Total marketing costs, Total net margins of intermediaries (MM), the net price received by farmers, and MME and it was found that channel 1 was more efficient than channel II (Kaur et.al, 2013).

It depicted technical and marketing development in agriculture after the green revolution in Tonk district. It also described the various programs as agriculture insurance, Kisan Mahotsav, and agriculture loan at lowest interest rate etc. conducted by the government (Upadhyay, 2010).

The study proposed risk management strategies as formal risk management - arrangements that involve individuals or households or such groups like communities or villages and Informal risk management - Market-based activities and publicly provided mechanisms to mitigate risk in Agriculture (Swami, 2009).

The study examined the effectiveness of agro marketing strategies in western Rajasthan and found that most of the government strategies are not very successful and only 14 % respondents took advantages of government schemes while 68% of respondents were aware of these schemes. The study suggested that direct marketing, contract farming, and E- choupal should be promoted at large scale in the state (Vyas, 2014).

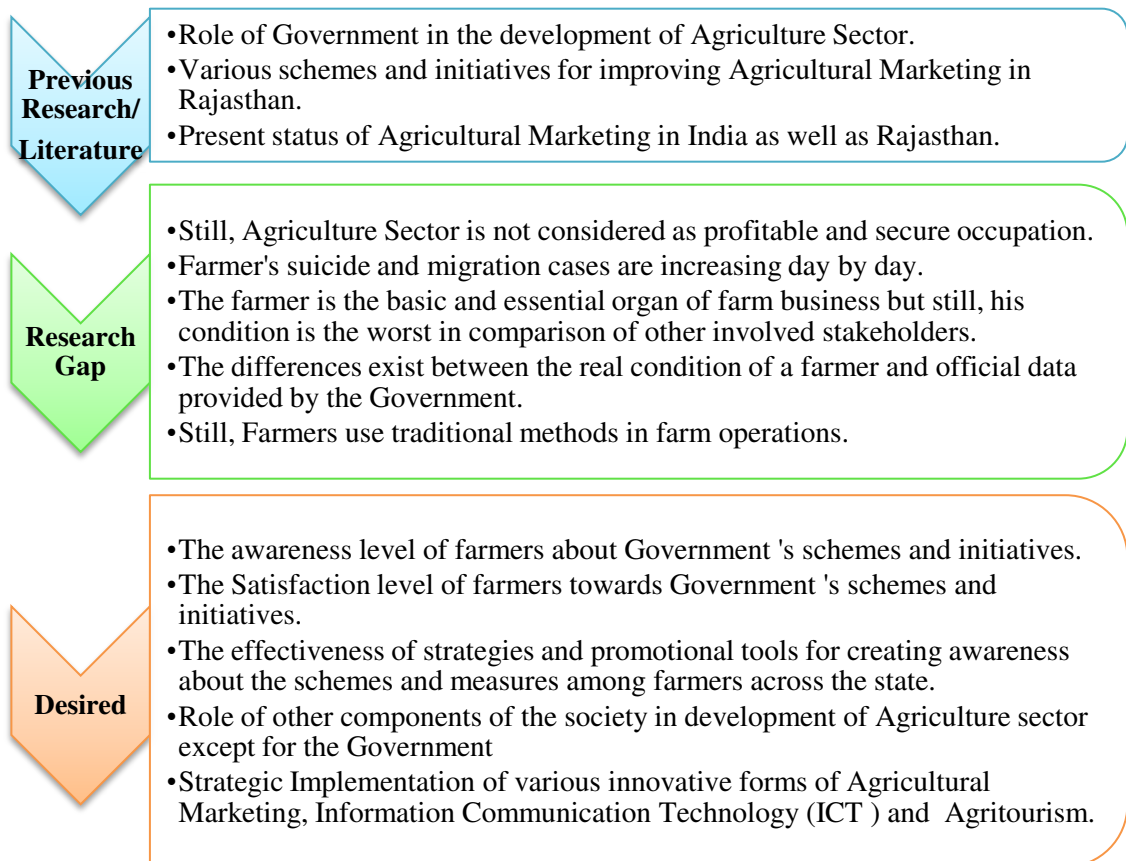
The study examined the status of the regulated markets at Hadoti Region in Rajasthan and found that most of the regulated markets in Hadoti Region have enough space for trading and storing the farm produces but overcrowding, lack of infrastructure

facilities, lack of amenities to farmers and mismanagement etc. are many problems that still remain to be solved. The study suggested that farmers should be treated as a valuable asset for the successful running of regulated markets (Kaushik, 2014).

### 3.5 Research Gap

Most of the studies are conducted to describe the role of the government in Agriculture sector but very fewer studies are conducted to find out the effectiveness of the government initiatives in view of farmers as they are satisfied or they are really grabbing benefits or not. So the research is an attempt to find out the effectiveness of government measures in point of view of farmer's satisfaction level.

**Figure3.2. Research Gap Model of the Study**



Source: Researcher

## References:

1. Acharya, S.S. (2007). Agribusiness in India: Some Facts and Emerging Issues. *Agricultural Economics Research Review* (Conference Issue, Vol. 20, pp 409-424).
2. Acharya, S.S. and Agrawal, N. L. (2011). *Agricultural marketing in India* (Fifth edition, ISBN 978-81-204-1755-7). New Delhi, India: Oxford & IBH publishing company Pvt. Ltd.
3. Adam, L.K. (2004). Entertainment Farming and Agri-Tourism. ATTRA-National Sustainable Agriculture Information Service, 1-800-346-9140, 1-16.
4. Agriculture Division, Planning Commission, Government of India. (2007). Report of the Working Group on Agricultural Marketing Infrastructure and Policy Required for Internal and External Trade for the Xi Five Year Plan 2007-12.
5. Agriculture Division, Planning Commission, Government of India. (2011). Report of the Working Group on Agricultural Marketing Infrastructure, Secondary Agriculture and Policy Required for Internal and External Trade For the Xii Five Year Plan 2012-17.
6. Ahluwalia, I. J. and Rangarajan, C. (1986, December). Agriculture and Industry: A study of Linkages the Indian Experience. World Economic Congress of International Association (Mimeo).
7. Banerjee, A.(2011). The ICT in Agriculture: Bridging Bharat with India. *Global Media Journal – Indian Edition*, 2(2), 1-16.
8. Bansal, A. (2011). Agri-Business in India-Vision 2020. *ZENITH International Journal of Multidisciplinary Research* 1(2), 62-72.
9. Bhalla, G.S. (2010). The Nature of Agricultural Development in India. Delhi, India Jawaharlal Nehru University.
10. Bissa, G. and Vyas, V.(2014). Study of Infrastructural Status in Agricultural Marketing. *Indian Journal of Research*, 4 (1) 90.
11. Brahma, A. (2014). Agri-warehousing & logistics in India. Global Strategy Group, KPMG India Private Limited.

12. Broadway, A. C. and Broadway, A. A. (2007). *Text book of agri business management*. Ludhiana, India: Kalyani Publishers.
13. Chengappa, P. G. (2003). Institutional Aspects of Agricultural Marketing in India. In S. Pal, Mruthyunjaya, P. K. Joshi and R. Saxena (Ed.), *Institutional Change in Indian Agriculture* (pp.331-348).New Delhi, India: Director, NCAP.
14. Chitra B.M. and Shankaraiah. (2012). ICT Initiatives in Indian Agriculture. *Information Technology in Developing Countries*, 22(3), 28-30.
15. Datt, R. and Sundharam, K. P. M. (2006). *Indian Economy* (Revised 54th edn.). New Delhi, India: S. Chand & Co Ltd.
16. Department of Agriculture & Cooperation, Ministry of Agriculture, Government of India. (2007).National Policy for Farmers, pp-16.
17. Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Government of India. (2016). Annual Report 2015-16.New Delhi, India.
18. Directorate of Marketing & Inspection, Deptt. Of Agriculture & Co-operation, Ministry of Agriculture and Government Of India.(2014).Directorate of Marketing and Inspection Statistical Bulletin. Faridabad, India.
19. Dutta, R.A. (2009). State Budgetary Resources and Agricultural Development in Rajasthan. Gujarat, India. Retrieved from [http://www.spuvvn.edu/academics/academic\\_centres/agro\\_economic\\_centre/research\\_studies/Report%20No.%20135%20State%20Budgetary%20Resources%20and%20Agriculture%20Development%20in%20%20Rajasthan.pdf](http://www.spuvvn.edu/academics/academic_centres/agro_economic_centre/research_studies/Report%20No.%20135%20State%20Budgetary%20Resources%20and%20Agriculture%20Development%20in%20%20Rajasthan.pdf)
20. Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare, Directorate of Economics and Statistics.(2016). State of Indian Agriculture 2015-16.New Delhi, India.
21. Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare and Directorate of Economics & Statistics.(2016).Pocket Book of Agricultural Statistics. New Delhi, India.

22. Gulati, A. (2009). Emerging Trends in Indian Agriculture: What Can We Learn from these?. *Agricultural Economics Research Review* 22(July-December) 171-184.
23. Iyer, A. and Singhi, A. (2012). Indian Agribusiness-Cultivating Future Opportunities. Mumbai, India: Boston Consulting Group (BCG).
24. Jairath, M.S. (2008). Trends in Private and Public Investments in Agricultural Marketing Infrastructure in India. *Agricultural Economics Research Review* 21, 371-376.
25. Jairath, M.S. (2013). Agricultural Marketing Infrastructural Facilities in India – State Wise Analysis. Retrieved from [http://www.cosamb.org/wp-content/uploads/2013/07/MISINDIA-Cosamb\(F\).doc](http://www.cosamb.org/wp-content/uploads/2013/07/MISINDIA-Cosamb(F).doc)
26. Kadrolkar, M.V. (2012). Role of APMCs in Agricultural Marketing in India- A Study. Karnataka, India. *International Journal of Retailing and Marketing (IJRM)*, 4(2), 159-165.
27. Kannan, E. and Sundaram, S. (2011). Analysis of Trends in India's Agricultural Growth (ISBN 978-81-7791-132). Bangalore, India: The Institute for Social and Economic Change.
28. Kaul, S. (2011). Historical and Scientific Study of Development of Agriculture Including Global Issues, Pertaining to Agriculture at National Agricultural Science Museum. Delhi, India: Indian Agricultural Statistics Research Institute.
29. Kaur, P.J., Singh, I. P., and Sharma, S. (2013). Production Costs and Efficiency of Marketing of Paddy (PR 106) in Hanumangarh District of Rajasthan. *IJSR - International Journal of Scientific Research*, 2(2), 5-8.
30. Kaushik, S. (2014). An Analytical Study of the Working of Regulated Markets of Agricultural Produce” (With Special Reference to the Hadoti Region) (Doctoral thesis). University of Kota, Rajasthan, India.
31. Mahesha, B.P. (2013). The Role of Law in Securing Good Agricultural Marketing in India. ISSN 2321 – 4171. Retrieved from <http://jsslawcollege.in/wp-content/uploads/2013/05/THE-ROLE-OF-LAW-IN-SECURING-GOOD-AGRICULTURAL-MARKETING-IN-INDIA.pdf>

32. Ministry of Agriculture, Department of Agriculture and Co-operation, Government of India. (2013). Final Report of the Committee of State Ministers, in-charge of Agriculture Marketing to Promote Reforms. Retrieved from <http://dmi.gov.in/Documents/stminprreform.pdf>
33. Ministry of Road Transport and Highways, Transport Research Wing, Government of India. (2016). Basic Road Statistics of India 2013-14 and 2014-15. New Delhi, India.
34. Mishra, S. K. (2007). Trends in Growth of Agriculture Sector of the Indian Economy. Retrieved from <http://www.esocialsciences.org/Download/repecDownload.aspx?fname=Document11232007120.3030359.pdf&fcategory=Articles&Aid=882&fref=repec>
35. Mittal, S.C. (2001). Role of Information Technology in Agriculture and its Scope in India. *Fertilizer News*, 46 (12), 83-87.
36. Moni, M. (2009, September 1). Impact of economic reforms on Indian agricultural sector: Application of geomatics technology to reduce marginalization and vulnerability of small farmers in India. Retrieved from <https://www.geospatialworld.net/article/impact-of-economic-reforms-on-indian-agricultural-sector-application-of-geomatics-technology-to-reduce-marginalisation-and-vulnerability-of-small-farmers-in-india/>
37. Murthy, S.M. Mokshapathy, S. and Chandrashekar, H.M. (2012). Strategies for Application of Information Technology in Agriculture. *Contemporary Research In India*, 2(3), 30-33.
38. Narayanan, S. (2005). Organic Farming in India: Relevance, Problems, and Constraints. Mumbai, India: Department of Economic Analysis & Research, NABARD (publisher).
39. NCCD. (2015). All India Cold-chain Infrastructure Capacity (Assessment of Status & Gap). Delhi, India.
40. Pal, R. (2016). Recent Trends in Agricultural Credit. *International Journal in Management and Social Science*, 4(1), 184.



41. Pandey, J. and Singh, A. (2012). Opportunities and Constraints in Organic Farming: An Indian Perspective. *Journal of Scientific Research*, 56, 47-72.
42. Pandey, M.M. (2009, February 10-12). Indian Agriculture – an Introduction. A country report- India submitted to the Fourth Session of the Technical Committee of APCAEM, Chiang Rai, Thailand.
43. Patel, A.A. (2010). An In-Depth Comparative Study of Supply Chain Management Practices at Selected Agriculture Produce Marketing Committees of North Gujarat (Doctoral thesis). Ganpat University, Mehsana, India.
44. Planning Commission, Government of India. (2007). Report of working group on Risk Management in Agriculture for the Eleventh five year plan, 2007-2012. New Delhi, India.
45. (PMFBY) Padhan Mantra Fasal Beema Yojna |Crop Insurance Scheme.(2016) Retrieved from  
<http://pmjandhanyojana.co.in/pradhan-mantri-fasal-bima-crop-insurance-scheme/>
46. Prasad, R. (2006). *Text Book of Field Crops Production*. New Delhi, India: ICAR.
47. Rajasthan Grameen Aajeevika Vikas Parishad (RGAVP), Ministry of Rural Development, Government of India. (2012). Annual Action Plan (RRLP, NRLP & NRLM) 2012-13.
48. Rajasthan Map. (2017, January 31). Retrieved from  
[www.mapsofindia.com/maps/rajasthan/rajasthanagriculture.htm](http://www.mapsofindia.com/maps/rajasthan/rajasthanagriculture.htm)
49. Rajawat, D.S. (2010). Integrated Rural Development Planning, A case of Jhalrapatal Tehsil (Doctoral thesis). University of Kota, Rajasthan, India.
50. Roy, M. (2012). Agricultural Marketing: New Challenges. *International Journal of Humanities and Applied Sciences (IJHAS)*, 1(2), 54-57.
51. Sharma, A.R. (2017, May 23). Modi government mulls allowing 100% FDI in retail, with caveats. Live Mint (E-paper). Retrieved from  
<http://www.livemint.com/Industry/6EAO7iO19zi8yoW4FIPF1M/Modi-govt-mulls-allowing-100-FDI-in-retail-with-caveats.html>
52. Singh, N. (2011). Indian Agriculture: Before and After Economic Reforms. *European Journal of Business and Management*, 3(4), 292-299.

53. Sinha, S. (2007). Agriculture Insurance in India. Retrieved from [http://www.ifmr.co.in/wpcontent/uploads/2011/03/cirm\\_sinha\\_paper\\_june2007](http://www.ifmr.co.in/wpcontent/uploads/2011/03/cirm_sinha_paper_june2007).
54. Swain, M. Kalamkar, S. S. and Ojha, M. (2012). State of Rajasthan Agriculture 2011 -12. AERC report 145, Agro-Economic Research Centre, Sardar Patel University, Gujarat, India.
55. Swami, A. (2009). Agricultural Risk Management in Bikaner District of Rajasthan (Doctoral thesis). University of Bikaner, Rajasthan, India.
56. Tomar, N. (2013). APMC Act in India: Rising Food Inflation A Decade Story. *International Journal of Social Science & Interdisciplinary Research*, 2(7), 38-49.
57. Tripp, R. and Pal, S. (1998). Information Exchange in Commercial Seed Markets in Rajasthan. Agricultural Research & Extension Network, Network Paper No. 83. London, England: Overseas Development Institute.
58. Tuteja, U. and Chandra, S. (2012). Impact of Emerging Marketing Channels in Agricultural Marketing-Benefits to Producer-Seller and Marketing Costs and Margins of Agricultural Commodities in Haryana. Research Study No. 2012/01. Agricultural Economics Research Centre, University of Delhi, Delhi, India.
59. UPA govt wins Parliament approval for FDI in retail. (2012, December 07). Zee News. Retrieved from [http://zeenews.india.com/news/nation/upa-govt-wins-parliament-approval-for-fdi-in-retail\\_815237.html](http://zeenews.india.com/news/nation/upa-govt-wins-parliament-approval-for-fdi-in-retail_815237.html)
60. Upadhyay, R. (2010). Modernization of Agriculture, A Case Study of Tonk District (Doctoral thesis). University of Kota, Rajasthan, India.
61. Vadivelu, A. and Kiran, B. R. (2013). Problems and Prospects of Agricultural Marketing in India: an Overview. *International Journal of Agricultural and Food Science*, 3(3): 108-118.
62. Vyas, V.K. (2014). Study of Effective Agro Marketing Strategies with Special Reference to Western Rajasthan (Doctoral thesis). Suresh Gyan Vihar University, Rajasthan, India.

## **Chapter-Four**

# **Research Methodology**

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### **Research Methodology**

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#### **4.1. The Approach to the Study**

The agriculture sector is a primary sector for employment in India as well as Rajasthan where more than half the population depends on it for earning a livelihood. Keeping this point in the mind, after independence, several initiatives were/are introduced by the central and state government to improve methodology and modality of agriculture sector along with its allied sectors. The governments have made several efforts to improve the agriculture sector and to increase the income of the farming community. As a result of them, the Indian Agriculture Sector has experienced a revolutionary breakthrough in the production of food grain (green revolution), oilseeds (yellow revolution), milk (white revolution), fish (blue revolution), and fruits and vegetables (golden revolution). The country moved from deficit and import arena to the positive state of self-sufficiency and buffered stock.

Despite these efforts and breakthrough, the condition of farmers cannot be considered good. Several events such as farmer suicide, migration, and dumping their crops are registered all over the country. According to NCRB data, 8007 farmers committed suicide in 2015 while the figure was 5,650 in 2014. The number of migrant farmers is increasing day by day whereas 40 percent of the farmers have quitted the farm jobs and are engaged in other alternatives (Iyer & Singhi, 2012). The great hurdles such as inadequate credit facilities, inadequate market information, malpractices in unregulated markets, the presence of a large number of intermediaries, inadequate transport facilities, lack of grading and standardization and improper warehouses are present in the sector and are responsible for farmer's poor condition. A large share of profit is snatched by the mediators and farmers' income reduces from it to a great extent. He is deprived of a fair price for his produce and forced to live in poverty and indebtedness.

To bring out the real picture of farmers' condition and to present ground realities the researcher reviewed some caselets which are presented below:

**Caselet: 1**

On 26 April 2016, it was reported by several leading newspapers like Times of India, Navbharat Times, Hindustan Times and The Quint (online) that 116 farmers and agricultural labors committed suicide across the country within three months from January to March 2016. By the data provided by the central government to the parliament, it was reported that the highest number of suicides committed by farmers in Maharashtra with 57 farmers registered on 29 February 2016, Punjab with 56 farmers registered on 11 March 2016 and Telangana with three framers respectively. It was also reported in the same news that more than 2000 farmers committed suicide in 2015. The highest number of suicides reported in Maharashtra alone was with 1841 cases (116 Farmers committed suicide in 2016,2016).

**Cause:** Agrarian problems mainly drought is considered the primary cause of suicide committed in 2016 (116 farmers committed suicide in last 3 months, 2016).

**Caselet: 2**

Due to unseasonal rain and hailstorm during March and April 2015, a considerable number of farmers committed suicide or died due to shock in different parts of Rajasthan. Some cases are discussed such as about 47 farmers died of heart attack in Rajasthan. The highest number of farmers (14) died due to shock in Kota and Bundi (Jawli, 2015). On 25 April 2015, the 45-year-old farmer named Harsu Jatav hailing from Alwar had thrown himself before a moving train due to loss of crops by early rain and hailstorms (Singh, 2015). On 26 April 2015, the farmer named Titu Jat living in Bharatpur hanged himself due to 80 % loss of crop by hailstorms (Sharma, 2015). All three cases have been discussed under one caselet due to the same cause and reason.

**Cause:** The untimely rain and hailstorm during March and April 2015 were considered primary cause of all causalities discussed in caselet 2.

**Caselet: 3**

On 13 March 2016, it was reported by a leading newspaper named The Hindustan Times that an 11-year-old girl named Kavita Lingre lived with a younger brother in Maharashtra. Both sister and brother lived alone in their home, and Kavita looked after her home as well as her brother. Her mother had died in an accident, and her father had gone outside the village to earn a livelihood for their family. Her father was a farmer and had a farm in the village, but repeated unfavorable conditions of weather forced him to go outside the village to find work. So he had no option but to leave them to fend for themselves. Hence, both children were forced to live as orphans. This story is not only about a single family but also about several farmers' families across the country who are struggling to earn bread for their families and have migrated to remote towns leaving children as orphans behind (Panigrahi, 2016).

**Cause:** The above story is about six rain-deprived talukas of Satara, Sangli and Solapur districts in western Maharashtra where monsoon has repeatedly failed for many years. The ratio of rain is below average every year. Over 70 % crops are destroyed every year due to drought. Water is scarce not only for agriculture but also for drinking. Incomes from agriculture sector continue to diminish due to repeated failing monsoons, and more farmers (many with their spouse) are migrating to distant towns to earn livelihood leaving the children behind. The number of farmers, who have migrated from these places, is increasing day by day.

**Caselet: 4**

On 13 January 2017, it was reported by a leading newspaper named The Hindustan Times that the 48-year-old farmer named Haripal Bhagat, hailing from Huddu village in Lohardaga district, Jharkhand grew tomato and vegetables. He dumped his three quintals of the vegetable (tomato) on the road after he failed to get a reasonable price for his produce. Only 50 Rs. per quintal was offered to him. The offered price was only about 10 % of the production cost. He dumped his produce to save transportation cost and other expenses. This story is related to not only a single farmer but also several farmers of Lohardaga, Ranchi and other parts

of the country like Uttar Pradesh, Andhra Pradesh, Maharashtra and Madhya Pradesh where the cultivators faced the same situation and dumped their tomatoes, onions and French beans (Dev, 2017).

**Cause:** The bumper production and supply of crop were considered the main reason for dump their crops by the farmers. Because of the bumper crops, the prices fell, and farmers were not able to get back their production cost, profit was far away. Several farmers dumped their crops to save another cost as transportation cost or maintenance cost.

Therefore, all the above cases reveal that most of the farmers in India are not financially secure as well as not well versed in new technologies and methodologies of the market. After seven decades of freedom, still, farmers depend on rains for good yield. They have less knowledge about new technologies which have been developed for better cultivation. The case 1, 2, and 3 reveal that the farmers are not financially secure. In the case of poor yield or damage of crops in a natural disaster, they are helpless and are forced to commit suicide or leave farm work. The case 4 highlights the poor marketing strategies which led to dumping the bumper harvest by the farmers. Both the situations are opposite, but results are the same as the farmer does not get the right price or financial security in both the cases. Therefore, it can be said that the government made efforts towards increasing production, and they achieved it up to some extent, but efforts towards improving marketing system in the agriculture sector are very less. So a gap exists between agriculture production and farm marketing which is responsible for post-harvest losses, lack of agriculture credit and farmer's low income.

The government practices for improving agriculture marketing and farmer's condition are a prime focus of this research. The data which is provided every year by the government about farmer's welfare and real condition of the farmers is very different. So the research is an endeavor to find out main reasons behind this gap and why farmers are not able to grab benefits from these schemes initiated in the field of Agricultural marketing. Given this, the research was undertaken to interpret all significant initiatives and measures taken by the state government for

promoting the agricultural marketing in Rajasthan and to know the level of awareness and satisfaction of sample farmers of these promotional practices. In this research, through the help of these caselets above, the researcher drew out a systematic solution and practical approach to solve farmers' problem.

#### **4.2. Statement of the Problem**

1. The government policies and schemes play a crucial role in the development of agriculture sector, creation of rural employment and increasing the income of farmers. So keeping this perspective, the central and state government are introducing day by day a lot of initiatives and measures to improve the framework of agriculture and betterment of farmers and making a considerable investment in every five years plans for improving necessary infrastructure and agricultural marketing modality in Rajasthan. The research is focused on such significant initiatives and measures taken by the state government for promoting the Agricultural Marketing in Rajasthan.
2. The effectiveness of these policies and schemes directly depend on the level of awareness of farmers of them as more aware farmers are easily able to grab benefits from these initiatives. Thus, the research is an attempt to know the level of awareness among farmers of government policies and schemes in agricultural marketing and to find out practical tools for dissemination of information in rural areas.
3. The success of these policies and schemes might be measured by the level of satisfaction among farmers towards them in the state i.e. the farmer must be satisfied when he receives the benefit from the particular scheme. The study measures the degree of satisfaction level of farmers towards these promotional schemes and programmes.
4. Despite government efforts, several significant issues are still present in the agriculture sector and the farmer is deprived of a fair price for his produce and forced to live in poverty and indebtedness in the state. So this study



also examines existing problems in the implementation of promotional activities and policies in the state and suggests some practical remedies.

#### **4.3. Objectives of the Research Work**

The objectives of the study are the following:

- 1) To study the existing scenario of Agriculture sector in Rajasthan and its comparison with that other of states.
- 2) To examine the marketing and promotional activities undertaken by the State Government to enhance the Agriculture sector in Rajasthan.
- 3) To find out the level of awareness and satisfaction of farmers about promotional activity performed by the State Government in Agriculture Sector in Rajasthan.
- 4) To study and identify the existing problems in the implementation of promotional activities and policies of Agriculture in Rajasthan and suggest practical remedial measures for developments of Agriculture in the state (Rajasthan).

#### **4.4. Hypothesis**

For the study, the working hypothesis is as given below:-

**H1:** The State Government's policies and initiatives are effective for promoting Agriculture Sector in Rajasthan and farmers are able to grab some of the benefits from these activities. They are partially satisfied but not fully.

**H2:** Lack of awareness of trends and developments in Agriculture sector, farmers are not able to grab benefits from the State Government's policies and schemes.

**H3:** The State Government has not adopted appropriate marketing strategies for development of Agricultural Marketing in Rajasthan.

#### **4.5. Type of Research**

The Research is descriptive and empirical in nature based on qualitative approach. A qualitative approach is related to the subjective assessment of behavioral trait of a human being like attitudes, perception, opinion or behavior. In this study, the

researcher examined the level of satisfaction of farmers towards promotional activity performed by the State Government in Agriculture Sector in Rajasthan. The trait 'satisfaction' implies whether farmers feel positively or negatively towards these promotional activities.

#### **4.5.1. Descriptive Research**

It is a formal research where researcher explores and collects all details about the problem by predetermined and well-defined objectives. It is conducted to describe all aspects of the problems and causes.

#### **4.5.2. Empirical Research**

It is data-based research, in which results are screened by the experiment or observation rather than theory or pure logic. In this type of research, the working hypothesis is developed firstly to potential results and data (acts and information) are gathered by experiment, direct observation, focus group discussion or in-depth interview to provide the hypothesis. The empirical research with qualitative approach provides intensive and rich contextual data for better understanding of all aspects of the phenomenon but cannot be generalized to highlight the statistical relationship between variables.

Hence, the main characteristics of this research are a description of the state of developments and new trends in agriculture Sector. The aim of the researcher is only to report what initiatives have been taken by the state government to promote the agriculture and to know the satisfaction level among farmers towards these measures.

### **4.6. Sampling Framework**

The sampling framework of the proposed study is the following:

#### **4.6.1. Target Population (Universe)**

It is a collection of individuals or objects having common attributes or bound with same traits, or a total number of all possible units, identified by the researcher for the investigation. In this study, the target population is all farmers and farm labors of all 33 districts of Rajasthan.

#### **4.6.2. Sampling Unit**

It contains a single element or group of elements of the target population. It may be a state, district, village or social unit as a family, school or an individual or group of individuals. The sampling unit in this study is a farmer or farm labor who earns a livelihood from agriculture.

#### **4.6.3 Sampling Technique**

In this study, the mixed approach like probability and nonprobability sampling techniques are applied for selecting the sample. The two levels A. Selection of district B. Selection of sample farmers are identified for selection of the sample.

##### **A. Selection of Districts**

Stratified simple random sampling is used for selecting districts. This technique comes under probability sampling and is applied when target population does not comprise a homogenous group. Under this technique, firstly target population are separated by grouping element or members of relatively homogenous subgroup or non-overlapping group known as strata, and then simple random sampling (in which all elements of target population have equal chance to be part of the sample) is applied within each stratum independently for drawing the sample.

For the proposed research, by HDI (Human Development Index), all districts of Rajasthan have been grouped into two strata as developed (Top 16 districts) and developing districts (Bottom 16 Districts).

**Human Development Index:** The HDI was developed by the Pakistani economist Mahbub ul Haq working alongside Indian economist Amartya Sen. It reflects the average of education, life expectancy and income per capita index of a particular territory. It is well used to distinguish whether the particular region mainly country, is a developed, a developing or an underdeveloped. Higher HDI of particular territory indicates the higher development of the territory in three dimensions viz education, income, and health than in others. HDI for all districts of Rajasthan are given in below table 4.1 -

**Table: 4.1 Relative Human Development Index in Rajasthan**

S.N.	District	HDI
1.	Ganganagar	0.763
2.	Kota	0.740
3.	Jaipur	0.734
4.	Bikaner	0.729
5.	Hanumangarh	0.717
6.	Alwar	0.701
7.	Jhunjhunu	0.671
8.	Sikar	0.654
9.	Ajmer	0.635
10.	Jodhpur	0.634
11.	Jaisalmer	0.605
12.	Baran	0.597
13.	Bundi	0.593
14.	Sirohi	0.593
15.	Bhilwara	0.574
16.	Bharatpur	0.562
17.	Jhalawar	0.560
18.	Nagaur	0.556
19.	Churu	0.551
20.	Udaipur	0.537
21.	Dausa	0.530
22.	Rajsamand	0.523
23.	Karauli	0.522
24.	Tonk	0.515
25.	Barmer	0.509
26.	Sawai Madhopur	0.508
27.	Chittorgarh	0.503
28.	Pali	0.498
29.	Jalore	0.469
30.	Dholpur	0.445
31.	Banswara	0.363
32.	Dungarpur	0.357
33.	Pratapgarh	Not known

Source: Human Development Report Update 2008, Rajasthan

- ❖ Pratapgarh was declared 33<sup>rd</sup> district of Rajasthan on 26 January 2008, so its HDI is not available. Hence it is not included in the study.

Three districts (20% of 16) have been selected from each stratum by simple random sampling (lottery method). The selected districts for this study are the following:

### **I. Developed Districts**

Those districts which have high Score of HDI (0.560 to 0.900) come under this category. A district scores higher HDI when the education level, Income per capita and life expectancy is higher in the state. Kota, Jaipur, and Sikar have been selected under this category.

### **II. Developing Districts**

Those districts have low Score of HDI (0.000 to 0.560) in the state come under this category. Jhalawar, Tonk, and Sawaimadhopur have been selected under this category.

### **B. Selection of Farmers**

The farmers are selected from both urban and rural areas of each district by convenience sampling. This technique is non-probability sample technique in which the selection of sample units is made from the target population by easy availability and accessibility of sample unit to the researcher due to time and cost constraints.

#### **4.6.4. Sample Size**

It refers to the total number of units to be selected from target population for constituting a sample. The size of a sample must be optimum neither too large or nor too small (Kothari, 2004). The three factors such as the standard deviation of the population, the acceptable level of sampling error, and the expected confidence level are essential to be considered in determining of sample size.

Sample size calculation:

$$n = \frac{p(1-p)z^2}{ME^2}$$

n= Sample Size

p = Prevalence of Satisfaction (56.7% or 0.567 from pilot study)

z = Standard normal Variant (at 5% type 1 error (P<0.05) it is 1.96)

ME= Absolute error or precision (10% of prevalence)

$$n = (1.96)^2 * 0.567 * 0.433 / (0.0567)^2 = 293$$

Sample size = 293 round off to 300

Hence, a total of 300 farmers constituted the total sample for the present study.

❖ **Pilot study:** A pilot study was conducted in Kota (developed) and Tonk (developing) to find out satisfaction level of farmers. 30 farmers (15 farmers from Kota and 15 farmers from Tonk) were interviewed and it was found that 17 (56.7 %) farmers were satisfied. Therefore 56.7 % is considered as the prevalence of satisfaction.

#### 4.6.5. Sample Size Allocation

It refers to determine the total number of sample units in each stratum. The three types of allocations of strata as equal allocation, proportional allocation, and optimum allocation are applied in stratified sampling (Ahmed, 2009). For this study, the equal allocation method is applied in which the number of units is uniform in all strata. It is used for comparing both strata (developed and developing) precisely and efficiently.

$$nh = n/K \text{ (Ahmed, 2009)}$$

nh = number of units in stratum

n = Sample size

K = number of Strata

nh = 300/2 = 150 in each stratum

**Table 4.2: Sample size**

S.N.	Districts	No. of Respondents(Farmers)
<b>I</b>	<b>Developed</b>	<b>150</b>
1.	Kota	50
2.	Jaipur	50
3.	Sikar	50
<b>II</b>	<b>Developing</b>	<b>150</b>
1.	Jhalawar	50
2.	Sawaimadhopur	50
3.	Tonk	50
<b>Total No. of Respondents (Farmers)</b>		<b>300</b>

Source: Researcher

Therefore, a total of 300 farmers constituted the total sample for the present study which includes 150 farmers from each stratum and 50 farmers from the selected district.

#### **4.6.6. Brief Profile of Selected Districts**

##### **A. Jaipur**

Jaipur is the capital of Rajasthan known as ‘Pink city’ worldwide. It earned name and fame among both national and international tourists for its rich culture, heritage, tradition, magnificent art and handiworks. It is situated in the eastern part of the state. Its total area is 11,143 km<sup>2</sup> constituting 10,405.41 km<sup>2</sup> rural and 737.59 km<sup>2</sup> urban geographical area. The district is divided into 13 Sub-Districts, 13 Towns, 13 Panchayat Samitis, 489 Gram Panchayats, and 2180 Villages. Total population of the district is 66, 26,178 comprising 31, 54,331 rural and 34, 71,847 urban population (Government of India, 2011).

Jaipur comes under Semi-arid eastern plains (IIIA) agro-climatic zones with 895.5 thousand hectares cultivable area. The Pearl millet, Kharif pulses, Groundnut, Wheat, Barley, Gram, Mustard, Horticulture crops such as Mango, Guava, Gooseberry, Lime, Tomato, Brinjal, Cucumber, Carrot, and Pea are main crops grown in Jaipur district. Jaipur secured the first rank in Production Groundnut, Pea, Fenugreek, and Barley in the state. Fenugreek and Cumin are exported from the district. There 7 KUMS and 26 submarket yard are established for agriculture marketing in Jaipur. There are three warehousing centers situated in Chaumu, Jaipur, Naraina with 21900 MT, 16130 MT, 1520 MT capacity respectively. It has the most massive cold storage capacity in Rajasthan with around 33 cold storages. Kisan Bhawan, Agro Food Park, Agro-food processing units, Terminal markets, Large Pack Houses for post-harvest management and AGMARK laboratories are set up in the district.

The district has various government-owned agriculture institutes such as Rajasthan Agriculture Research Institute, State Institute of Agriculture Management, Central Sheep & Wool Research Institute, National Institute of Agriculture Marketing and Sri Karan Narendra Agriculture University.

## **B. Kota**

Kota with second highest HDI in the state after Ganganagar has a strong presence in Indian map for its coaching institutions for medical and engineering entrances exam. It is known as the education city of India. It is situated on the bank of the Chambal river at the south-eastern part of Rajasthan. The total area of Kota is 5217 km<sup>2</sup> and has an average height from sea level is 271 feet. The district is divided into 08 Sub-Districts, 11 Towns, 05 Panchayat Samitis, 156 Gram Panchayats, and 874 Villages. The total population of the district is 19, 51,014 comprising 39.69% rural and 60.31% urban population (Government of India, 2011).

Kota comes under humid southeastern plain (V) agro-climatic zones with 420.9 thousand hectares cultivable area. The Rice, Jwar, Pearl Millet, Groundnut, Wheat, Maize, Sesame, Urad, Soybean, Coriander, Chickpea, Flax Seeds, Barley, Mango, Guava, Gooseberry, Lime, Tomato, Brinjal, Cucumber, Ladyfingers, And Orange are leading crops sown in the Kota district. Kota secured the first rank in the production of flax seeds in the state and coriander is exported from the district.

It has 04 KUMS and 07 submarket yards for agriculture marketing. There are three warehousing centers situated in Itawa, Ramganjmandi, Sultanpur with 4400 MT, 9650 MT, 5400 MT capacity respectively. Five cold storages have been established for storing agriculture produce mainly orange and coriander at Kota. Kisan Bhawan, Agro Food Park (Ranpur), Agro-food processing units, Export Zone for Coriander and Agriculture University have been established in the district for the agricultural development in South-East and Eastern Rajasthan.

## **C. Sikar**

It is situated in the northeastern part of Rajasthan. The total area of Sikar is 7742.43 km<sup>2</sup> and Jaipur, Nagaur, Jhunjhunu, and Churu are neighboring districts. It touches the border of Haryana. The district is divided into 09 Sub-Division, 09 Tehsils, 09 Panchayat Samitis, 343 Gram Panchayats, And 1192 Villages. The total population of the district is 26, 77,737 comprising 76.32% rural and 23.68% urban population (GoI, 2011).



Sikar comes under internal drainage dry zone (IIA) agro-climatic zones with 531.3 thousand hectares cultivable area. The Bajra, Wheat, Gram, Barley, Rape, Mustard, Groundnut, Pulses, Fenugreek, And Guar are central crops of Sikar district. Fenugreek is exported from the district. It has 4 KUMS and 07 submarket yards for agriculture marketing. There is one warehousing center situated in Neem- ka-Thana with 3600 MT capacity. One cold storage has been built under 'National Agriculture Development Scheme' of the state for better post-harvest management of fruits and vegetables. Kisan Bhawan, Agro-Food Processing Units, Agriculture College, and Krishi Vigyan Kendra have been established in the district.

#### **D. Jhalawar**

It is known as the Nagpur of Rajasthan, situated at the south-eastern part of Rajasthan. The total area of Jhalawar is 06,219 km<sup>2</sup>. Kota and Baran are its neighboring districts. The district is divided into 08 Sub-Division, 08 Tehsils, 06 Panchayat Samitis, 252 Gram Panchayats, And 1606 Villages. The total population of the district is 14, 11,129 comprising 83.75% rural and 16.25% urban population (GoI, 2011).

It comes under humid south-eastern plain (V) agro-climatic zones with 322.9 thousand hectares cultivable area. The Jwar, Wheat, Maize, Soybean, Mustard, And Coriander are leading crops of Jhalawar district (Institute of Development Studies, 2008). Jhalawar secured the first rank in the production of Kinnow. Coriander is exported from the district.

It has 04 KUMS and 05 submarket yards for agriculture marketing. There are three warehousing centers situated in Bhawanimandi, Jhalarpatan, and Khanpur with 14550, 18900, 6750 MT capacity respectively. Eleven cold storages and one cold storage with 4000MT have been built under 'Agri-Export Zone' of the state for better post-harvest management different farm produce. Agro-Food Processing Units, Agri Export Zone, Krishi Vigyan Kendra, Agriculture College, and College of Horticulture and Forestry have been established in the district.

### **E. Sawaimadhopur**

It is situated in the eastern part of Rajasthan. The total area of Sawaimadhopur is 5042.99 km<sup>2</sup> and the district is divided into 07 Sub-Districts, 03 Towns, 06 Panchayat Samitis, 200 Gram Panchayats, and 814 Villages. The total population of the district is 2, 66,467 comprising 80.05 % rural and 19.95 % urban population (GoI, 2011).

It comes under transitional plain of Luni basin (IIB) and flood-prone eastern plain (IIIB) agro-climatic zones with 329.647 thousand hectares cultivable area. The Pearl Millet, Wheat, Mustard, Groundnut, Guar, Til, Cotton, Arhar, and Guava, are leading crops sown in this district. It has 02 KUMS and 12 submarket yards for agriculture marketing. There are two warehousing centers situated in Sawaimadhopur and Gangapur city with 14590 MT, and 8450 MT capacity respectively. Krishi Vigyan Kendra is established in this district under Rajasthan Agriculture University, Bikaner (District Collectorate, 2010).

### **F. Tonk**

It is situated on the right bank of Banas River in the northeastern part of Rajasthan. The total area of Tonk is 7,194 km<sup>2</sup>. The district is divided into 07 Sub-Districts, 08 Towns, 06 Panchayat Samitis, 230 Gram Panchayats, And 1183 Villages. The total population of the district is 14, 21,326 comprising 77.65% rural and 22.35% urban population (GoI, 2011).

It comes under Semi-arid eastern plains (IIIA) agro-climatic zones with 539.5 thousand hectares cultivable area. The Wheat, Chana, Groundnut, Til, Gram, and Watermelon are leading crops sown in this district. Watermelons grown in this district are very popular in the country. The agriculture sector in this district is not in good condition (District Collectorate, 2009). It has 05 KUMS and 12 submarket yards for agriculture marketing in the district. There are three warehousing centers situated in Tonk, Dooni, and Niwai with 12650MT, 9900, MT, and 2250 MT capacity respectively. AGMARK laboratories Kisan Bhawan, Krishi Vigyan Kendra and Central Sheep and Wool Research Institute Avikanagar are set up in this district for development of Agriculture.

## **4.7. Sources of Data**

For proposed research, the data were collected from both primary and secondary sources.

### **4.7.1. Secondary Data**

Secondary data is data which have been already collected and published by someone or any organization for their use and are accessible by another researcher, organization or a person for free or by paying charges. It may be available in written, typed or in electronic forms and collected from government published materials, research articles, published and unpublished scholarly papers, books, journals, speeches, newspapers, annual reports, a database available on various websites. It should be collected from authentic and reliable sources.

For the study, the data and information are collected from the following materials:

1. Books related to marketing, agriculture, agricultural marketing, rural marketing, economics and research methodology
2. Journals and Research papers
3. Thesis, Dissertations and Project Reports
4. Articles published in newspapers and online
5. Information available on the Websites of Concerned Organizations
6. Bulletins and Annual reports of various departments following as:
  - i. Ministry of Agriculture & Farmers Welfare, New Delhi
  - ii. Department of Agriculture, Rajasthan
  - iii. Rajasthan State Warehousing Corporation
  - iv. Rajasthan State Agricultural Marketing Board
  - v. Department of Agricultural Marketing, Rajasthan
  - vi. Rajasthan Kisan Aayog
  - vii. Directorate of Economics and Statistics Rajasthan
  - viii. Other organizations such as RBI, NABARD, rural banks, commercial bank, Revenue Department associated with agricultural marketing functions in any manner.

#### **4.7.2. Primary Data**

It is fresh and original and collected by the first-hand investigation through several methods such as observation, experiments, surveys, and interviews. For this study, it was collected from 300 farmers (the respondents) through structured Schedule having predetermined and specific questions based on expert's advice. The Schedule was answered by the farmers through personal interview.

##### **A. Schedule Design**

For this research, the researcher prepared a schedule for collection of primary data. The Schedule is very much like the questionnaire with a bit difference as the schedule is filled by the researcher or enumerators personally (Kothari, 2004). In this method, the researcher or enumerators go to the respondents along with the schedule and fill the schedule according to the response given by them. Schedule method was selected for this study due to the following reasons:

1. The respondents of the study are farmers, and they are not very familiar with computer and internet technology, so it was not possible to send questionnaire through e-mail to them.
2. Some respondents may be illiterate so to get information from them it was only possible through the schedule.
3. Some questions have been prepared with technical terminology, so if the respondents feel any difficulty to understand the terminology correctly, then it can be removed by the researcher instantly.
4. Facial expression and body language can also be observed so that complete, accurate and valid information can be collected from the respondents.

##### **B. Types of Questions**

The schedule is prepared in structured form, containing 16 close-ended, demographic, dichotomous (two opposite choice as yes or no), multiple choice, rating (specific scale basis), and contingency (Questions that require being answered only when the respondent provides a particular response to a question) types of questions. According to Kothari, structured schedule or questionnaire have a definite, concrete and pre-determined set of questions which are presented

in the same order and wordings to all respondents and responses are limited to the stated alternatives. It is prepared in both the Hindi and English languages.

It has two sections where the first section denotes personal and socioeconomic profile of sample farmers containing the questions regarding age, income, class, education, media, and vehicle they use and second sections covers opinion on infrastructural facilities and input availabilities, knowledge level about internet, preference to farm credit, crop insurance, selling and storing the farm produce, awareness and satisfaction level about various government-run schemes, and issues experienced in agriculture marketing.

### **C. Measurement Scale and Scaling**

Developing measurement scale is a crucial practice of research. The scaling can be defined as a set of symbols or numbers developed in such a manner to make easy the assigning of these symbols or numbers to the units under research following certain rules and procedure. Four scales viz nominal, ordinal, Interval and ratio are used for measurement of specific parameters. The respondents may feel some difficulty to put their opinion into exact words so the selection of right scale may help for drawing the right response from the respondents. For this study, nominal and ordinal scales are used for measurement of data.

#### **I. Nominal Scale**

It is merely classifying without revealing any different origin, order, distance or any relationship between variables. The numbers assigned to the variables cannot be added, subtracted or divided to make any comparison between variables. Under this scale, the quantity measure is merely the frequency of the items appearing under each category (Kumar, 2011).

In this study, the caste, sex, house ownership, farm ownership, a vehicle owned by farmers, electronic media they use are measured on the nominal scale. Owing not to availing of particular service as the internet, Kisan Call Centre, disposal at the farm produce to Government Purchase Centre, storage in government-owned warehouses, crop insurance, agriculture loan from banks and other government-

owned organizations, and Kisan Credit Card are also presented on a nominal scale.

## **II. Ordinal Scale**

In this scale, objects are arranged according to some specific order for providing information regarding the relative position of the objects, but ordinal variables do not provide any information regarding the absolute magnitude of the difference between the positions such as the first and the second or the third and the fourth position and so on. In other words, it depicts only 'greater than' or 'less than' without providing information about how much greater or less (Kothari, 2004). In this study, the frequency, knowledge, awareness, and satisfaction are measured by the ordinal scale.

### **a. Rating Scales**

Knowledge is measured by three-point rating scale. Rating scale includes a description of a limited number of aspects of a thing or trait of a person (Kothari, 2004) and judges an object in absolute term against some particular standard. The scale may be two points, three points, four points or with more points. There is no particular rule or criterion whether to select a two-point scale or scale with more points. In general practice, three to seven point scale is used due to the opportunity of the greater sensitivity of measurement (Kothari, 2004).

**Knowledge:** Fully known-little known-unknown

### **b. Likert Scale**

In this study satisfaction and frequency is measured by five-point Likert scale while awareness is measured by the three-point Likert scale. The Likert scale was developed and named by Rensis Likert in 1932. This scale (mainly five-point Likert scale) is very popular among researcher as it is easy to understand and less time-consuming. In this scale, the response for particular objects is provided against various degrees as three points, five points or seven points of agreements or disagreements where one end must be the most positive and the other end the most negative along with one neutral point in the middle of the scale.

**Awareness:** Aware-can't say- not aware

**Frequency:** Always-often-sometimes-rarely-never

**Satisfaction:** fully satisfied- satisfied - can't say -dissatisfied- fully dissatisfied.

#### **4.8. Analysis and Interpretation of Data**

The data collected from primary as well as secondary sources were analyzed scientifically by using simple statistical tools viz percentage and frequency. The same was classified, tabulated and analyzed to draw the logical conclusions from them. Graphs and diagrammatic representation were made through pie and bar diagrams for making the data lucid and presentable. Chi-square and Fisher exact tests were used for hypothesis testing.

##### **4.8.1. Chi-Square Test**

It is a significant statistical test denoted by  $\chi^2$ , used for sampling analysis to compare a variance to a theoretical variance (Kothari, 2004). The chi-square test is applied in two manners as a test of independence and test of goodness of fit. The test of independence is used to analyze an association or relationship between two variables while the test of goodness of fit is applied for identifying a significant difference between the expected and observed frequencies. Chi-square test was selected for this study due to the following reasons:

1. The type of research question is a critical factor in selecting the statistical test to be applied to the study. If it is based on mean and proportions, then z-test or t-test will be used whereas if it is based on frequency distribution than chi-square test will be applied. In this research, all research questions are based on frequency distribution, so chi-square test is used for the hypothesis testing by the researcher.
2. The sample size is other essential criteria for selecting any statistical test such as z-test, t-test or chi-square test. For testing of the hypothesis, the tests are selected according to the sample size whether it is small or large. Chi-square test works only if the sample size is more than 50. Since the sample size was 300 farmers for this study, the chi-square test was used for the hypothesis testing by the researcher.
3. The type of measurement scale is a further important factor which needs to be examined while selecting a statistical test for hypothesis testing. Chi-

square test will be used if the ordinal or nominal scale is assigned for measuring the data otherwise z-test or t-test will be applied for another scale on an interval scale. Therefore, all data are measured in this study based on ordinal and nominal scales which had been depicted previously, so chi-square test is selected by the researcher.

4. Chi-square test is a popular test for measuring qualitative data. The qualitative attributes like farmers' satisfaction and awareness level are measured in this study.

**Process:** the procedure of Chi-square test (Hypothesis Testing, 2005) is given below:

1. Formulate the null and alternative hypothesis.
2. Calculate the expected values for each category by using following formula :

$$\text{Expected values} = \frac{\text{Row total} * \text{Column total}}{\text{Total sample size}}$$

3. Calculate the Chi-square value by using following formula :

$$\chi^2 = \sum \frac{(\text{Observed frequency} - \text{Expected frequency})^2}{\text{Expected frequency}}$$

4. Determine the level of significance and degrees of freedom: the level of significance is predetermined standard value denoted by alpha ( $\alpha$ ). The 'degree of freedom' is calculated by using the following method :

$$\text{df} = (r-1)(c-1)$$

Where

df = Degree of freedom      r = number of rows      c = number of columns

5. Determine the critical value and compare with the calculated chi-square value: the critical value can be obtained from chi-square distribution table for determining the degree of freedom at given level of significance.
6. Conclude: if the calculated value is higher than table value the null hypothesis is rejected and vice versa. If the null hypothesis is rejected, it means there is a significant difference between variables (goodness of fit) or an association between variables (test of independence).



#### **4.8.2. Fisher Exact Test**

For chi-square test, the basic rule is that the smallest expected frequency should be at least five. Hence, if the expected value is less than 05 than chi-square test will be invalid for hypothesis testing (Cochran, 1952). So Fisher Exact test is applied as an alternative to the chi-square test. It is a statistical test invented by Ronald Fisher, applied for analysis of contingency tables. It is valid for all sample size but mainly used for small size samples.

Fisher exact test =

$$P = \frac{(a+b)! (c+d)! (a+c)! (b+d)!}{N! a! b! c! d!}$$

P =probability      a,b,c,d =Variables

The calculations involved in Fisher's exact test may be extremely time-consuming if it is done manually. So in this study 'p' value is calculated under Fisher Exact test by using the available online software as Fisher Exact test calculator.

#### **4.9. Presentation of Research Report and Chapter Scheme**

The entire study was presented in the form of chapters for clarity and better understanding. The study was divided into six chapters and which are described briefly as given below:-

##### **Chapter 1: Conceptual Framework of Agricultural Marketing**

The chapter deals with introduction, concept, functions of Agricultural marketing, and challenges of Agricultural marketing.

##### **Chapter 2: Institutional Support for Agricultural Promotion in Rajasthan**

The chapter deals with the introduction of agriculture sector in Rajasthan, the introduction of various departments of agriculture, description of Government run schemes and policies and present status of Agricultural marketing in Rajasthan and comparison with other states.

##### **Chapter 3: Review of Literature**

This chapter is focused on a comprehensive and critical review of literature for making a sound base for scientific investigation.

#### **Chapter 4: Research Methodology**

This chapter deals with the description of research methodology which was used for conducting research work and drawing results.

#### **Chapter 5: Data Analysis and Interpretations**

In this chapter, the results of the research were presented objective by along with the analysis and discussion.

#### **Chapter 6: Findings and Suggestions**

This chapter deals with the conclusion and suggestions regarding the study. It also highlights the limitations and further scope of this research.

#### **Appendix**

- Schedule
- Bibliography - A detailed list of references about the subject is given at the end.

## Reference:

1. 116 Farmers committed suicide in 2016; 10 states reeling under drought. (2016, April 28). Hindustan Times. Retrieved from <http://www.hindustantimes.com/india/116-farmers-committed-suicide-in-2016-10-states-reeling-under-drought/story>.
2. 116 farmers committed suicide in last 3 months. (2016, April 26). India Today. Retrieved from <http://indiatoday.intoday.in/education/story/116-farmers-commit-suicide-last-3-months-all-you-should-know-indian-farmer/1/655112.html>.
3. Ahmed, Saifuddin. (2009). "Methods in Survey Sampling Biostat 140.640 Stratified Sampling". Johns Hopkins University. Retrieved from <http://ocw.jhsph.edu/courses/StatMethodsForSampleSurveys/PDFs/Lecture4.pdf>.
4. Dey, Sanjoy. (2017, January 13). At 50p a kg, farmers in Jharkhand prefer dumping tomatoes to selling. Hindustan Times. Retrieved from <http://www.hindustantimes.com/india-news/at-50p-a-kg-farmers-in-jharkhand-prefer-dumping-tomatoes-to-selling/story>.
5. District Collectorate.m(2010). District human development report. Sawaimadhopur. Retrieved from <http://plan.rajasthan.gov.in/content/planning/portal/en/des/publications/reports/human-development-report/District-Human-Development Reports>.
6. District Collectorate. (2009). District human development report. Tonk. Retrieved from <http://plan.rajasthan.gov.in/content/dam/planning/portal/Directorate%20of%20Economics%20and%20Statistics/Publication/Human%20Development%20Report/District%20Human%20Development%20Reports/Tonk.pdf>.
7. Government of India. (2011). Retrieved from <http://plan.rajasthan.gov.in/statistics>
8. Hypothesis Testing-Test of Differences. (2005). Business Research Method. ICFAI Center for Management Research, ISBN 81-7881-947-3.
9. Institute of Development Studies, Jaipur. (2008). District human development report. Jhalawar. Retrieved from

- <http://plan.rajasthan.gov.in/content/dam/planning/portal/Directorate%20of%20Economics%20and%20Statistics/Publication/Human%20Development%20Report/District%20Human%20Development%20Reports/Jhalawar>.
10. Iyer, Ashish and Singhi, Abheek. (2012). Indian Agribusiness-Cultivating Future Opportunities. Mumbai. Boston Consulting Group (BCG), report.
  11. Jawli, Nandini. (2015, April 26). Plight of farmers in Rajasthan. Citizen Samvad Jan Jan ki Aawaj. Retrieved from <http://citizensamvad.com/plight-of-farmers-in-rajasthan>.
  12. Khotari, C.R. (2004). Research Methodology Methods & Techniques. New Age International (P) Limited, Publishers, Second Edition. ISBN 81-224-1522-9.
  13. Kumar, Ranjit. (2011). Research Methodology a step by step guide for beginners. SAGE Publications Ltd, Third Edition. ISBN 987-1-84920-300-5 Retrieved from [http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit\\_Kumar-Research\\_Methodology\\_A\\_Step-by-Step\\_G.pdf](http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit_Kumar-Research_Methodology_A_Step-by-Step_G.pdf).
  14. Panigrahi, Debashish. (2016, March 28). In drought-hit western Maharashtra, children forced to live orphans. Hindustan Times. Retrieved from <http://www.hindustantimes.com/india/in-drought-hit-western-maharashtra-children-forced-to-live-as-orphans/story>.
  15. Redman, L.V. and Mory, A.V.H. (1923). The Romance of Research. p10.
  16. Sharma, Kumar, Nitish. (2015, April 24). Third farmer suicide in 24 hours, this time in Bharatpur. The Times of India. Retrieved from <http://timesofindia.indiatimes.com/city/jaipur/Third-farmer-suicide-in-24-hours-this-time-in-Bharatpur-village/articleshow/47033371.cms>
  17. Singh, Bhairavi, (2015, March 03). In Rajasthan's Bharatpur, Weighed Down by Debt, Farmer Commits Suicide. NDTV India. Retrieved from <http://www.ndtv.com/india-news/in-rajasthans-bharatpur-weighed-down-by-debt-farmer-commits-suicide-760183>.

## **Chapter -Five**

# **Data Analysis and Interpretation**

## Chapter -Five

### Data Analysis and Interpretation

Data and information regarding the present study were collected from the respondents (sample farmers) through structured interview schedule. Data were classified, tabulated and analyzed in light of objectives of the study by using simple statistical tools such as frequency and percentage. The values of percentage (%) are presented in brackets below the values of frequency. The facts and findings derived after analyzing the data and information are presented and discussed in this chapter.

#### 5.1 Personal Characteristics of the Selected Farmers

The personal characteristics of the respondents viz. gender, category, age, and educational level are presented in the following tables:

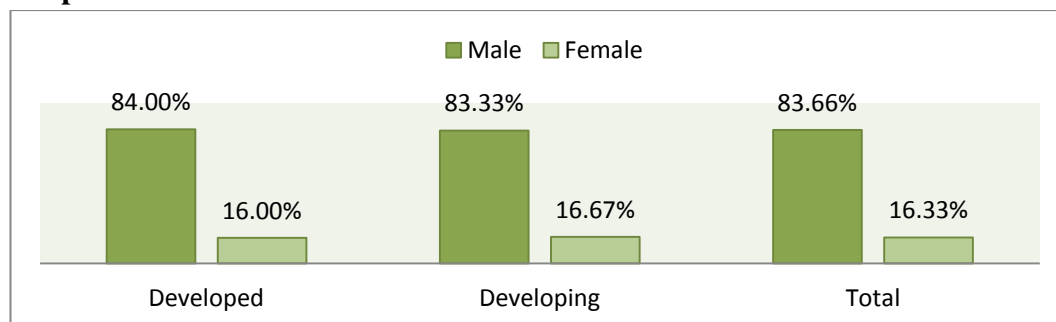
##### 5.1.1. Gender -wise Distribution

**Table 5.1.1: Gender - wise Distribution of the Selected Farmers**

S. N.	Variables	Developed (1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Male	42 (84)	41 (82)	43 (86)	126 (84)	40 (80)	41 (82)	44 (88)	125 (83.33)	<b>251</b> <b>(83.66)</b>
b.	Female	08 (16)	09 (18)	07 (14)	24 (16)	10 (20)	09 (18)	06 (12)	25 (16.67)	<b>49</b> <b>(16.33)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.1.1: Gender- wise Distribution of the Selected Farmers**



Source: Survey Data

## Inferences

The majority of respondents (83.66%) were male whereas only 16.33% respondents were female. Highest participation of female farmers was in Sikar whereas the lowest participation was in Jhalawar. There is no considerable difference between the values of male and female respondents in developed and developing districts.

### 5.1.2. Age-wise Distribution

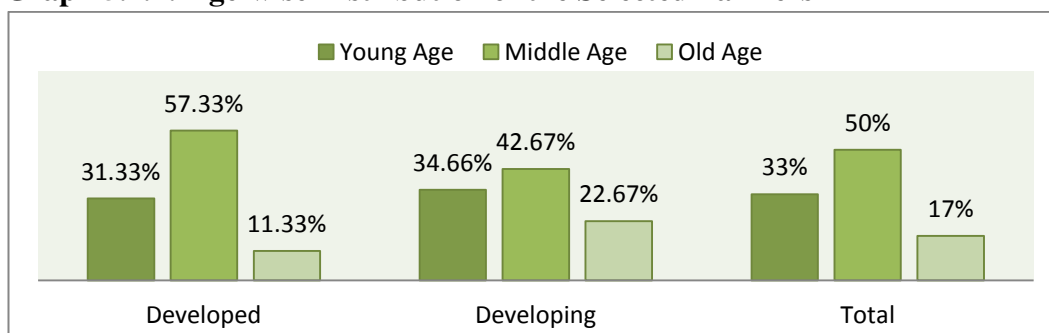
The respondents are classified into three groups such as young age group (below 40 years), middle age group (between 40 and 60 years), and old age group (above 60 years).

**Table 5.1.2: Age-wise Distribution of the Selected Farmers**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Young age group	24 (48)	08 (16)	15 (30)	47 (31.33)	12 (24)	22 (44)	18 (36)	52 (34.66)	<b>99 (33)</b>
b.	Middle age group	20 (40)	36 (72)	30 (60)	86 (57.33)	26 (52)	14 (28)	24 (48)	64 (42.67)	<b>150 (50)</b>
c.	Old age group	06 (12)	06 (12)	05 (10)	17 (11.33)	12 (24)	14 (28)	08 (16)	34 (22.67)	<b>51 (17)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.1.2: Age-wise Distribution of the Selected Farmers**



Source: Survey Data

## Inferences

Most of the respondents (50%) were from middle age group followed by young age group (33%) and 17 percent of them belonged to old age group.

### 5.1.3. Education Level -wise Distribution

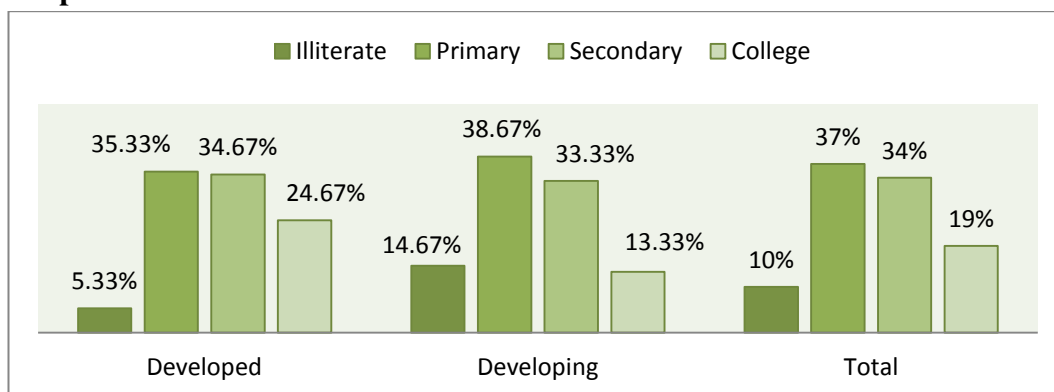
To know the education status of the farming community, the respondents were categorized into four categories viz. illiterate (no education), primary education (up to VIII), secondary education (IX to XII) and college education (above XII).

**Table 5.1.3: Education Level of the Selected Farmers**

S. N .	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Illiterate	02 (04)	04 (08)	02 (04)	08 (05.33)	06 (12)	12 (24)	04 (08)	22 (14.67)	<b>30</b> <b>(10)</b>
b.	Primary	24 (48)	12 (24)	17 (34)	53 (35.33)	18 (36)	24 (48)	16 (32)	58 (38.67)	<b>111</b> <b>(37)</b>
c.	Secondary	10 (20)	22 (44)	20 (40)	52 (34.67)	16 (32)	10 (20)	24 (48)	50 (33.33)	<b>102</b> <b>(34)</b>
d.	College	14 (28)	12 (24)	11 (22)	37 (24.67)	10 (20)	04 (08)	06 (12)	20 (13.33)	<b>57</b> <b>(19)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.1.3: Education Level of the Selected Farmers**



Source: Survey Data

### Inferences

The above table shows that 90 % of the respondents had obtained some level of education where 37 % respondents attended primary schools, 34 % of them had received a secondary education while 19 % respondents were graduates, and some of them were postgraduates. The rest 10 % respondents were illiterates. The number of illiterate respondents was lower in the developed districts rather than in developing districts. The percentage of farmers who had received a college-level education was also higher in developed districts than in developing districts.



## 5.2. Distribution of Socio-Economic Characteristics of the Selected Farmers

The distribution of Socio-economic characteristics of the farmers based on ownership of house and farm, their annual income, vehicle and electronic media used by them are presented in following tables:

### 5.2.1. House Ownership Wise Distribution

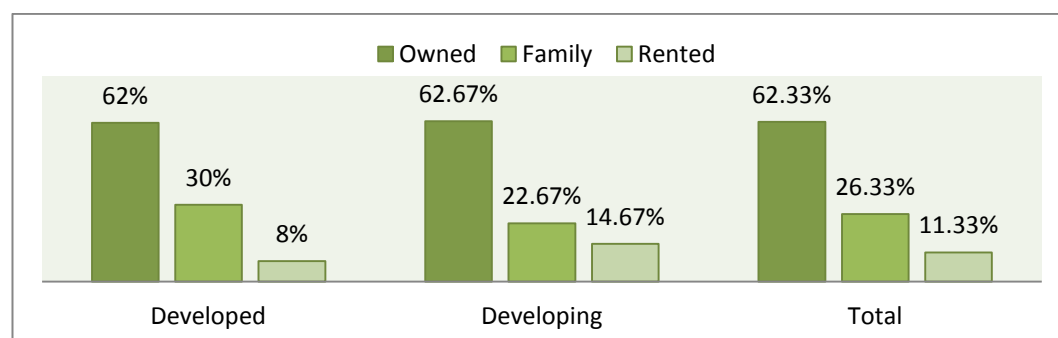
Own house is the biggest desire of every human being which gives him a sense of satisfaction and enhances his living status. To know the status of the respondents about house ownership, the respondents are classified into three groups such as Owned, Family and Rented.

**Table 5.2.1: House Ownership Wise Distribution of the Selected Farmers**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Owned	40 (80)	22 (44)	31 (62)	93 (62)	32 (64)	42 (84)	20 (40)	94 (62.67)	<b>187</b> <b>(62.33)</b>
b.	Family	08 (16)	20 (40)	17 (34)	45 (30)	14 (28)	04 (08)	16 (32)	34 (22.67)	<b>79</b> <b>(26.33)</b>
c.	Rented	02 (04)	08 (16)	02 (04)	12 (08)	04 (08)	04 (08)	14 (28)	22 (14.67)	<b>34</b> <b>(11.33)</b>
<b>Total No. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.2.1: House Ownership Wise Distribution of the Selected Farmers**



Source: Survey Data

### Inferences

The findings indicate that most of the respondents (62.33%) are living in their own house whereas 26.33 percent respondents are residing in paternal houses. However, 11.33 percent respondents are tenants or paying rent for the house. All selected districts excepting Jhalawar (28 % of respondents are a tenant) do not have so much difference in the number of respondents about house ownership.

### 5.2.2. Farm Ownership Wise Distribution

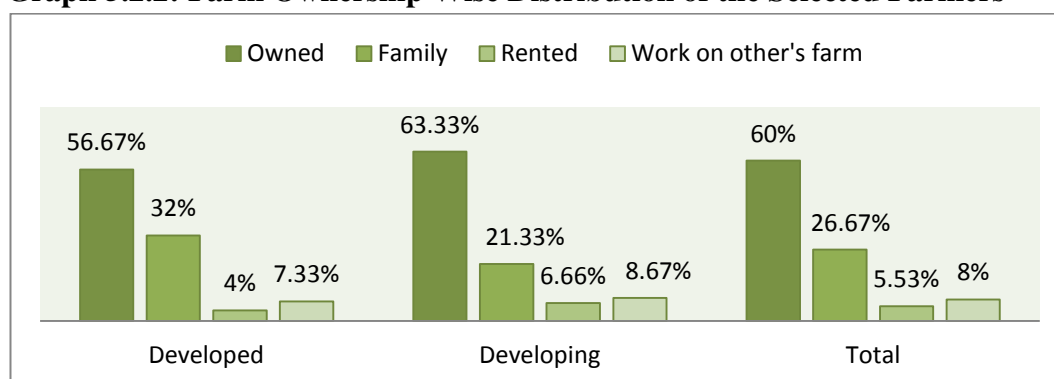
The agricultural land or farm owned by a person is an important factor to evaluate the economic status of the person in the society. The respondents are categorized into four groups viz. owned, rented, family and work on other's land.

**Table 5.2.2: Farm Ownership Wise Distribution of the Selected Farmers**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Owned	34 (68)	24 (48)	27 (54)	85 (56.67)	26 (52)	42 (84)	27 (54)	95 (63.33)	<b>180</b> <b>(60)</b>
b.	Family	08 (16)	20 (40)	20 (40)	48 (32)	18 (36)	02 (04)	12 (24)	32 (21.33)	<b>80</b> <b>(26.67)</b>
c.	Rented	04 (08)	00	02 (04)	06 (04)	02 (04)	04 (08)	04 (08)	10 (6.66)	<b>16</b> <b>(05.33)</b>
d.	Work on other's farm	04 (08)	06 (12)	01 (02)	11 (07.33)	04 (08)	02 (04)	07 (14)	13 (08.67)	<b>24</b> <b>(08)</b>
<b>Total No. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.2.2: Farm Ownership Wise Distribution of the Selected Farmers**



Source: Survey Data

### Inferences

The findings indicate that most of the respondents (60%) have their own farm for cultivation whereas 26.67 percent farmers are cultivating at paternal agricultural land. However, 05.33 percent of respondents are paying rent for land while 08 percent respondents are working on other's farm and receiving wages or sharing profit. All selected districts excepting Tonk (84 % of respondents have their own farms) do not have so much difference in the number of respondents about farm ownership.

### 5.2.3. Annual Income Wise Distribution

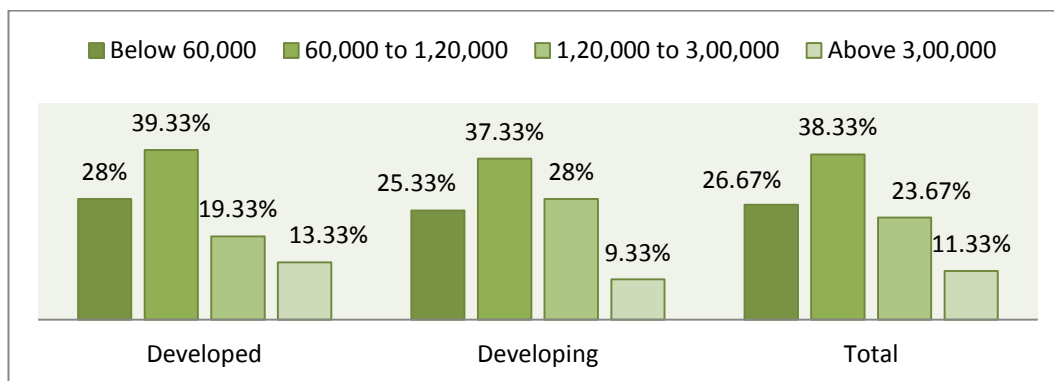
A strong financial position empowers and motivates the farmers to adopt modern and new technologies in farm business efficiently. Here class interval technique has been opted to determine the annual income of the farmers and the respondents were categorized into four groups as shown in the table 5.2.3.

**Table 5.2.3: Annual Income Wise Distribution of the Selected Farmers (Income in Rs.)**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Below 60,000	24 (48)	02 (04)	16 (32)	42 (28)	08 (16)	20 (40)	10 (20)	38 (25.33)	<b>80</b> <b>(26.67)</b>
b.	60,000 to 1,20,000	10 (20)	20 (40)	29 (58)	59 (39.33)	20 (40)	14 (28)	22 (44)	56 (37.33)	<b>115</b> <b>(38.33)</b>
c.	1,20,000 to 3,00,000	10 (20)	16 (32)	03 (06)	29 (19.33)	16 (32)	12 (24)	14 (28)	42 (28)	<b>71</b> <b>(23.67)</b>
d.	Above 3,00,000	06 (12)	12 (24)	02 (04)	20 (13.33)	06 (12)	04 (08)	04 (08)	14 (9.33)	<b>34</b> <b>(11.33)</b>
<b>Total No. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.2.3: Annual Income Wise Distribution of the Selected Farmers (Income in Rs.)**



Source: Survey Data

### Inferences

The finding reveals that most of the respondents (38.33%) earn between Rs. 60,000 and Rs. 1, 20,000 per annum and 26.67 percent respondents earn below Rs. 60,000 per annum. While 23.67 percent respondents have an annual income between Rs. 1,20,000 and Rs. 3, 00,000 followed by 11.33 percent respondent who earn above Rs. 3, 00,000 annually. In all the selected districts there do not have so much difference in the number of respondents about annual income.

### 5.2.4. Vehicle owned by the Selected Farmers

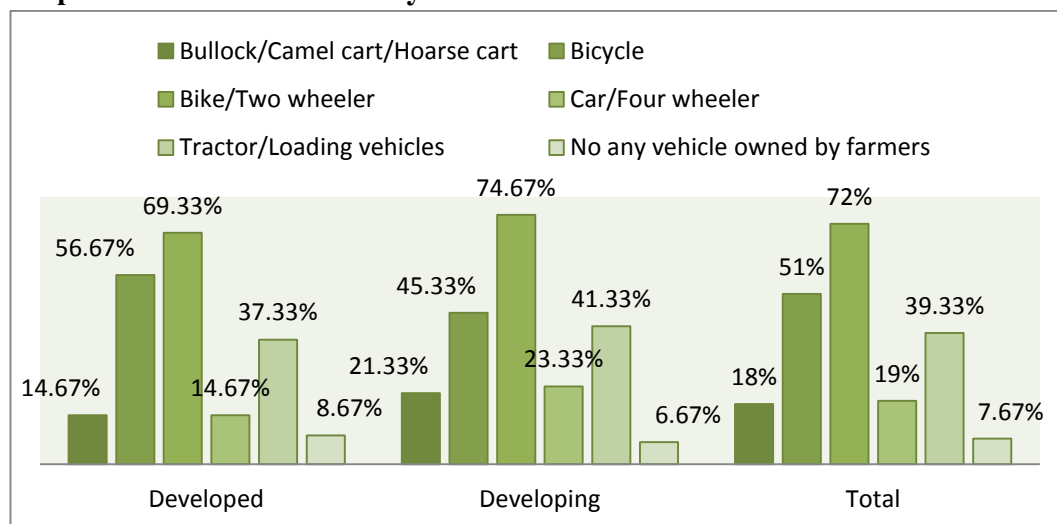
In the present scenario, own vehicle is an essential mode of transportation for saving time. It is also a status symbol for a person in society. The respondents are classified into six categories as shown in table 5.2.4 and the number of farmers who responded 'yes' for a particular mode of transportation is analyzed.

**Table 5.2.4: Vehicle Owned by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Bullock Camel cart Hoarse cart	04 (08)	16 (32)	02 (04)	22 (14.67)	04 (08)	18 (36)	10 (20)	32 (21.33)	<b>54</b> <b>(18)</b>
b.	Bicycle	35 (70)	36 (72)	14 (28)	85 (56.67)	10 (20)	26 (52)	32 (64)	68 (45.33)	<b>153</b> <b>(51)</b>
c.	Bike/Two wheeler	40 (80)	32 (64)	32 (64)	104 (69.33)	34 (68)	44 (88)	34 (68)	112 (74.67)	<b>216</b> <b>(72)</b>
d.	Car/Four wheeler	04 (08)	12 (24)	06 (12)	22 (14.67)	10 (20)	13 (26)	12 (24)	35 (23.33)	<b>57</b> <b>(19)</b>
e.	Tractor/ Loading vehicles	16 (32)	30 (60)	10 (20)	56 (37.33)	12 (24)	26 (52)	24 (48)	62 (41.33)	<b>118</b> <b>(39.33)</b>
f.	No any vehicle	04 (08)	02 (04)	07 (14)	13 (08.67)	08 (16)	00	02 (04)	10 (6.67)	<b>23</b> <b>(7.67)</b>
<b>Total No. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.2.4: Vehicle Owned by the Selected Farmers**



Source: Survey Data

### Inferences

The findings highlighted that most of the respondents (72 %) owned bikes/ two-wheelers and 51 percent respondents used bicycles as the mode of transportation.

Cars/ four-wheelers are possessed by only 19 percent respondents whereas tractors/loading vehicles are owned by 39.33 percent respondents. In Kota, the number of tractor owners is the highest in all six districts while the lowest percentage of tractor owners is in the Sawaimadhapur district. Therefore, the percentage of respondents who do not have any type of vehicle is 7.67 % while 92.33 percent respondents owned transportation mode in the state.

### 5.2.5. Electronic Media Used by the Selected Farmers

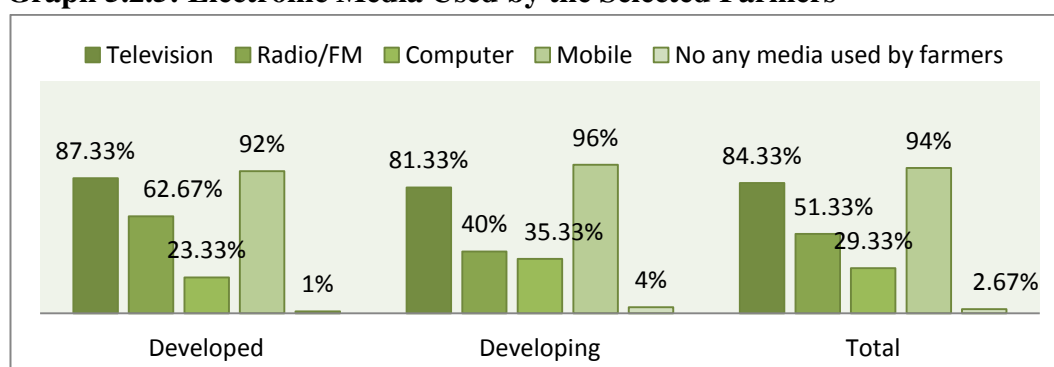
The respondents who used different types of electronic media were assessed from the data collected and it is presented in table 5.2.5.

**Table 5.2.5: Electronic Media Used by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Television	44 (88)	46 (92)	41 (82)	131 (87.33)	38 (76)	44 (88)	40 (80)	122 (81.33)	<b>253</b> <b>(84.33)</b>
b.	Radio /FM	27 (54)	46 (92)	21 (42)	94 (62.67)	14 (28)	20 (40)	26 (52)	60 (40)	<b>154</b> <b>(51.33)</b>
c.	Computer	16 (32)	12 (24)	07 (14)	35 (23.33)	15 (30)	26 (52)	12 (24)	53 (35.33)	<b>88</b> <b>(29.33)</b>
d.	Mobile	50 (100)	42 (84)	46 (92)	138 (92)	46 (92)	50 (100)	48 (96)	144 (96)	<b>282</b> <b>(94)</b>
e.	No any media used	00	00	02 (04)	02 (1.33)	04 (08)	00	02 (04)	06 (04)	<b>08</b> <b>(2.67)</b>
<b>Total No. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.2.5: Electronic Media Used by the Selected Farmers**



Source: Survey Data

### Inferences

The findings indicated that majority of the respondents (nearly 97 percent) were using at least one media and only about 2.67 percent respondents were not using

any type of media (exhibited in Graph 5.2.5). Mobile is the most popular media with 97 % respondents followed by television with 84.33 percent respondents. Radio sets are used by 51.33 % respondents whereas computers are used by only 29.33 percent respondents. The percentage of radio users is higher in the Kota district than in other districts. 100 percent respondents had mobiles in Jaipur and Tonk.

### 5.3. Internet Competency of the Selected Farmers

To know the status of farmers about competency with the internet technology three tables were prepared. The first table exhibits the number of selected farmers who have knowledge of internet; the second table reveals the number of selected farmer’s frequency for using internet, and the third table describes the reasons for not using internet by farm community.

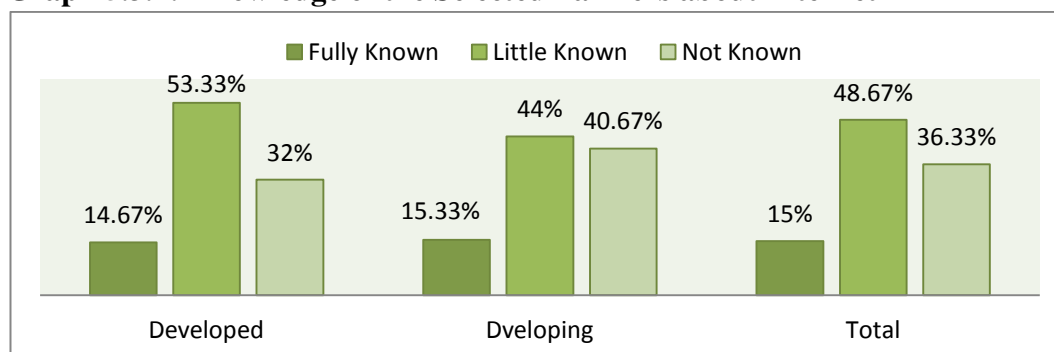
#### 5.3.1. Knowledge of the Selected Farmers about Internet

**Table 5.3.1: Knowledge of the Selected Farmers about Internet**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Known	10 (20)	08 (16)	04 (08)	22 (14.67)	09 (18)	08 (16)	06 (12)	23 (15.33)	<b>45</b> <b>(15)</b>
b.	Little Known	24 (48)	32 (64)	24 (48)	80 (53.33)	19 (38)	24 (48)	23 (46)	66 (44)	<b>146</b> <b>(48.67)</b>
c.	Not Known	16 (32)	10 (20)	22 (44)	48 (32)	22 (44)	18 (36)	21 (42)	61 (40.67)	<b>109</b> <b>(36.33)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.3.1: Knowledge of the Selected Farmers about Internet**



Source: Survey Data

## Inferences

Thus, the findings revealed that most of the respondents (48.67 percent) have little knowledge of the internet whereas only 15 % of the respondents are well versed with internet. Hence 36.33% respondents don't have any type of basic knowledge of internet. The percentage of respondents who have knowledge of internet is higher in Kota and Jaipur. The percentage of respondents who do not have any knowledge of internet is higher in developing districts than in developed districts.

### 5.3.2. Internet Usage

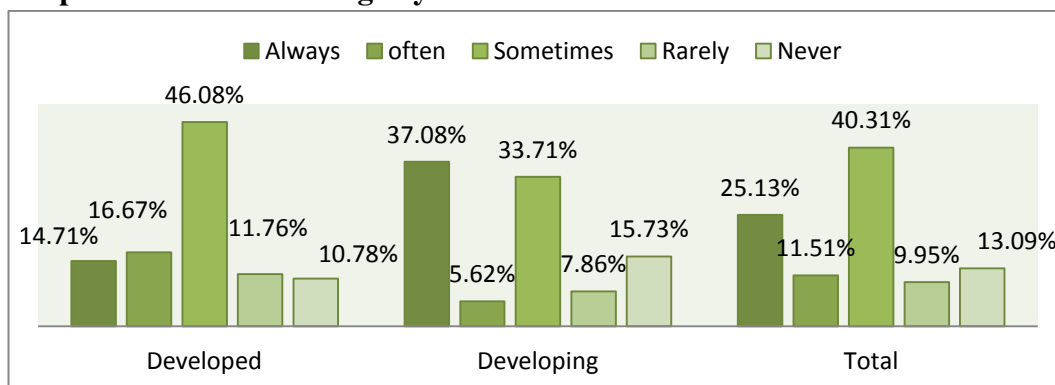
On the basis of the frequency of internet used by farmers, the respondents (who responded positively about internet knowledge in the table 5.3.1) are classified into five groups in table 5.3.2 as always, often, sometimes, rarely and never using internet.

**Table 5.3.2: Internet Usage by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing(1)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	10 (29.41)	02 (05)	03 (10.71)	15 (14.71)	09 (32.14)	14 (43.75)	10 (34.48)	33 (37.08)	<b>48</b> <b>(25.13)</b>
b.	Often	06 (17.64)	06 (15)	05 (17.86)	17 (16.67)	01 (3.57)	02 (06.25)	02 (06.9)	05 (5.62)	<b>22</b> <b>(11.51)</b>
c.	Some-times	13 (38.23)	22 (55)	12 (42.86)	47 (46.08)	08 (28.57)	10 (31.25)	12 (41.38)	30 (33.71)	<b>77</b> <b>(40.31)</b>
d.	Rarely	03 (08.82)	04 (10)	05 (17.86)	12 (11.76)	02 (7.14)	02 (06.25)	03 (10.34)	07 (7.86)	<b>19</b> <b>(09.95)</b>
e.	Never	02 (05.89)	06 (15)	03 (10.71)	11 (10.78)	08 (28.57)	04 (12.5)	02 (06.9)	14 (15.73)	<b>25</b> <b>(13.09)</b>
<b>Total no. of respondents</b>		<b>34</b>	<b>40</b>	<b>28</b>	<b>102</b>	<b>28</b>	<b>32</b>	<b>29</b>	<b>89</b>	<b>191</b>

Source: Survey Data

**Graph 5.3.2: Internet Usage by the Selected Farmers**



Source: Survey Data

## Inferences

The finding revealed that about 40.31% respondents used internet sometimes, 25.13 percent respondents used it regularly, 9.95% respondents used it rarely and 11.51 percent respondents used it often while 13.09 percent respondents never used internet. On the basis of the survey data percentage of regular internet users are the highest in Tonk (43.75%) and the lowest in Kota (5%) while the number of respondents who never used internet is the highest in Sikar (28.57%).

### 5.3.3. Reasons for Not Using Internet by the Selected Farmers

Table 5.3.3 provides information about issues and problems which are responsible for holding farmers back from adopting the technology in the state. In Table 5.3.3 the respondents (who chose often, sometimes, rarely or never from given options about the frequency of internet usage in table 5.3.2) were analyzed to know the reasons for not using internet.

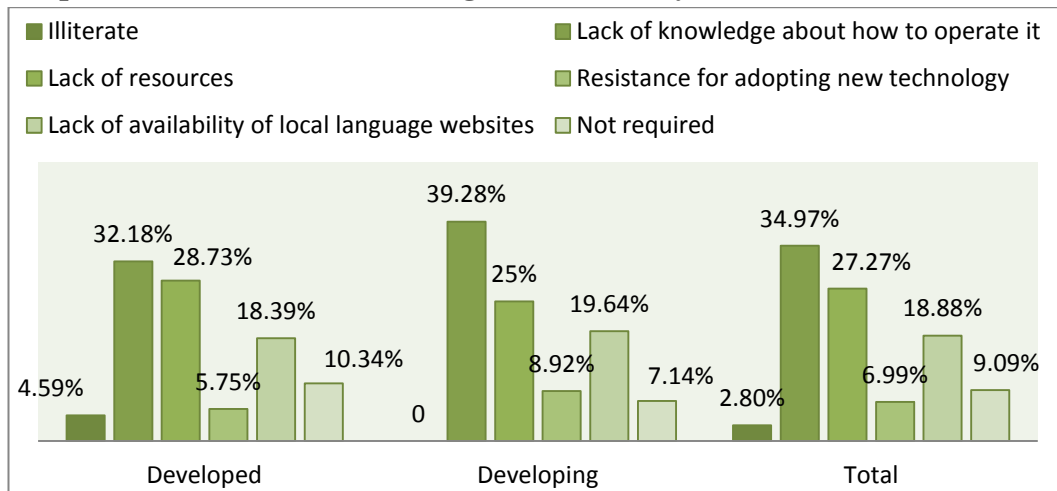
**Table 5.3.3: Reason for Not Using Internet by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Illiterate	02 (08.33)	02 (5.26)	00	04 (4.59)	00	00	00	00	<b>04 (2.80)</b>
b.	Lack of knowledge about how to operate it	06 (25)	14 (36.84)	08 (32)	28 (32.18)	08 (42.10)	10 (55.56)	04 (21.05)	22 (39.28)	<b>50 (34.97)</b>
c.	Lack of resources	10 (41.67)	02 (5.26)	13 (52)	25 (28.73)	02 (10.52)	04 (22.22)	08 (42.10)	14 (25)	<b>39 (27.27)</b>
d.	Resistance for adopting new technology	00	04 (10.52)	01 (04)	05 (5.75)	01 (5.26)	00	04 (21.05)	05 (08.92)	<b>10 (6.99)</b>
e.	Lack of availability of local language websites	06 (25)	08 (21.04)	02 (08)	16 (18.39)	04 (21.05)	04 (22.22)	03 (15.79)	11 (19.64)	<b>27 (18.88)</b>
f.	Not required	00	08 (21.04)	01 (04)	09 (10.34)	04 (21.05)	00	00	04 (07.14)	<b>13 (9.09)</b>
<b>Total no. of Respondents</b>		<b>24</b>	<b>38</b>	<b>25</b>	<b>87</b>	<b>19</b>	<b>18</b>	<b>19</b>	<b>56</b>	<b>143</b>

Source: Survey Data



**Graph 5.3.3: Reason for Not Using the Internet by the Selected Farmers**



Source: Survey Data

### Inferences

It is revealed from the table 5.3.3. that approximately 34.97% respondents are unable to use internet due to lack of knowledge about its operations and 27.27 percent respondents can't use the technology because of lack of resources as poor internet connectivity or unavailability of proper devices such as smartphones, personal computers or cyber shops. Unavailability of local language websites is another important factor for 18.88 percent respondents as they have not so much interest in the technology. About 6.99 percent respondents don't want to adopt the new technology due to fear of losing their traditional method of farming and 9.09 percent respondents admit that the technology is not required for their jobs. About 2.80 percent respondents are not capable of using this amazing technology due to illiteracy. There is no considerable difference between the number of respondents of developed and those of developing districts.

### 5.4. Availability of Basic Facilities

Rural infrastructure constituting transportation, electricity, and irrigation facilities etc. has a direct impact on farmer's living status and agriculture development. Adequate infrastructure plays a vital role in improving the quality of human life and phenomenally accelerates the pace of agricultural development. The central and state government have made huge investments in every five years plans to improve infrastructure and achieve a faster rate of economic growth. The satisfaction level of respondents towards availabilities of basic facilities as

transportation, water, electricity for home, telecommunication and banking in their villages or towns is explored and described and the respondents are classified into five categories as fully satisfied, satisfied, dissatisfied, and fully dissatisfied and can't (neutral) say on the basis of their opinion.

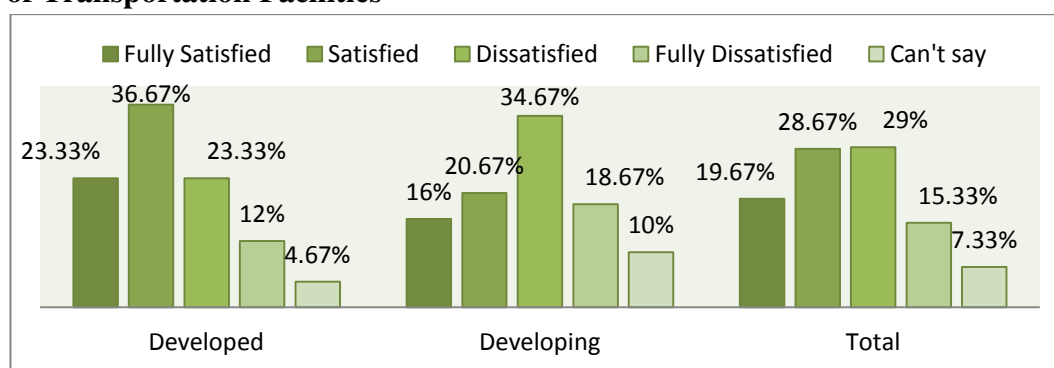
#### 5.4.1. Transportation

**Table 5.4.1: Satisfaction Level of the Selected Farmers towards Availability of Transportation Facilities**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	12 (24)	14 (28)	09 (18)	35 (23.33)	10 (20)	08 (16)	06 (12)	24 (16)	<b>59</b> <b>(19.67)</b>
b.	Satisfied	12 (24)	18 (36)	25 (50)	55 (36.67)	08 (16)	11 (22)	12 (24)	31 (20.67)	<b>86</b> <b>(28.67)</b>
c.	Dissatisfied	10 (20)	16 (32)	09 (18)	35 (23.33)	20 (40)	14 (28)	18 (36)	52 (34.67)	<b>87</b> <b>(29)</b>
d.	Fully Dissatisfied	12 (24)	02 (04)	04 (08)	18 (12)	08 (16)	12 (24)	08 (16)	28 (18.67)	<b>46</b> <b>(15.33)</b>
e.	Can't say	04 (08)	00	03 (06)	07 (4.67)	04 (08)	05 (10)	06 (12)	15 (10)	<b>22</b> <b>(07.33)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.4.1: Satisfaction Level of the Selected Farmers towards Availability of Transportation Facilities**



Source: Survey Data

#### Inferences

Around 28.67 percent respondents are satisfied while 19.67 percent respondents, maximum in Kota (28%) and minimum in Jhalawar (12%) are highly satisfied with the facility in their districts or cities. The percentage of respondents who are dissatisfied and fully dissatisfied is 29% and 15.33 % respectively. The Graph

5.4.1 exhibits that the respondents are more satisfied (fully satisfied + satisfied) in developed districts (60%) in comparison to developing districts (36.67%). When comparing districts, it may be clearly stated that selected districts don't have so much difference among the number of respondents.

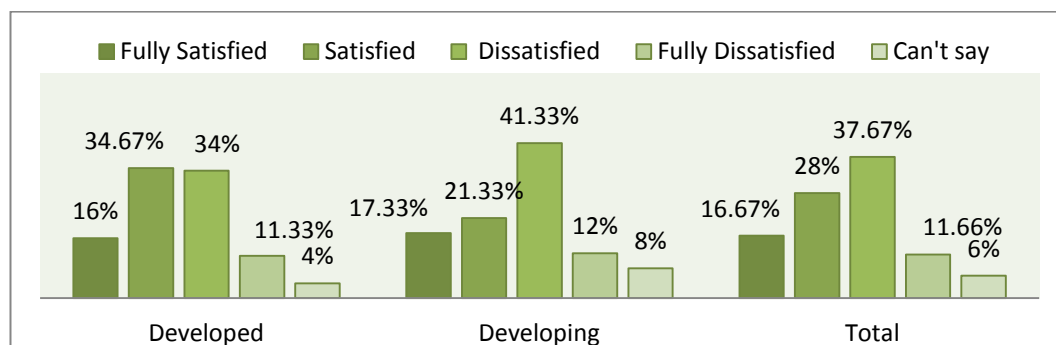
#### 5.4.2. Water Facility

**Table 5.4.2: Satisfaction Level of the Selected Farmers towards Availability of Water Facilities**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	09 (18)	12 (24)	03 (06)	24 (16)	08 (16)	10 (20)	08 (16)	26 (17.33)	<b>50</b> <b>(16.67)</b>
b.	Satisfied	22 (44)	08 (16)	22 (44)	52 (34.67)	14 (28)	10 (20)	08 (16)	32 (21.33)	<b>84</b> <b>(28)</b>
c.	Dissatisfied	14 (28)	20 (40)	17 (34)	51 (34)	20 (40)	20 (40)	22 (44)	62 (41.33)	<b>113</b> <b>(37.67)</b>
d.	Fully Dissatisfied	03 (06)	08 (16)	06 (12)	17 (11.33)	04 (08)	08 (16)	06 (12)	18 (12)	<b>35</b> <b>(11.66)</b>
e.	Can't say	02 (04)	02 (04)	02 (04)	06 (04)	04 (08)	02 (04)	06 (12)	12 (08)	<b>18</b> <b>(06)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.4.2: Satisfaction Level of the Selected Farmers towards Availability of Water Facilities**



Source: Survey data

#### Inferences

The findings depicted that about 37.67% respondents are viewed as dissatisfied at the availability of the drinking water facility and irrigation facility in their areas and 28 percent are satisfied while almost 16.67% respondents are fully satisfied at the facility. Nearly 11.66% respondents are fully dissatisfied. The Graph 5.4.2 exhibits that the respondents are more satisfied (fully satisfied + satisfied) in

developed districts (50.67%) in comparison to developing districts (38.66%). When comparing districts, it may be clearly stated that selected districts don't have so much difference among the number of respondents for the same.

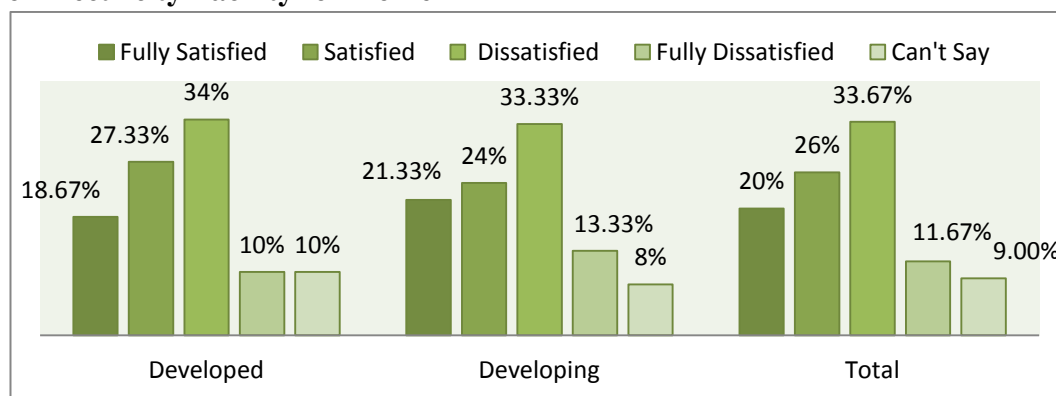
### 5.4.3. Electricity for Home

**Table 5.4.3: Satisfaction Level of the Selected Farmers towards Availability of Electricity Facility for Home**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	17 (34)	08 (16)	03 (06)	28 (18.67)	12 (24)	14 (28)	06 (12)	32 (21.33)	<b>60</b> <b>(20)</b>
b.	Satisfied	16 (32)	10 (20)	15 (30)	41 (27.33)	12 (24)	20 (40)	04 (08)	36 (24)	<b>77</b> <b>(25.67)</b>
c.	Dissatisfied	11 (22)	18 (36)	22 (44)	51 (34)	20 (40)	10 (20)	20 (40)	50 (33.33)	<b>101</b> <b>(33.67)</b>
d.	Fully Dissatisfied	04 (08)	06 (12)	05 (10)	15 (10)	04 (08)	04 (08)	12 (24)	20 (13.33)	<b>35</b> <b>(11.67)</b>
e.	Can't say	02 (04)	08 (16)	05 (10)	15 (10)	02 (04)	02 (04)	08 (16)	12 (08)	<b>27</b> <b>(09)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>1 50</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.4.3: Satisfaction Level of the Selected Farmers towards Availability of Electricity Facility for Home**



Source: Survey Data

### Inferences

The findings state that about 33.67% respondents are dissatisfied at this facility in the state whereas the percentages of fully satisfied and satisfied respondents are 20 % and 25.67 percent respectively. Around 11.67 percent respondents in the state are fully dissatisfied with the facility. When comparing districts, it may be clearly stated that selected districts don't have so much difference among the

numbers of respondents except those in Jhalawar (24% respondents are fully dissatisfied).

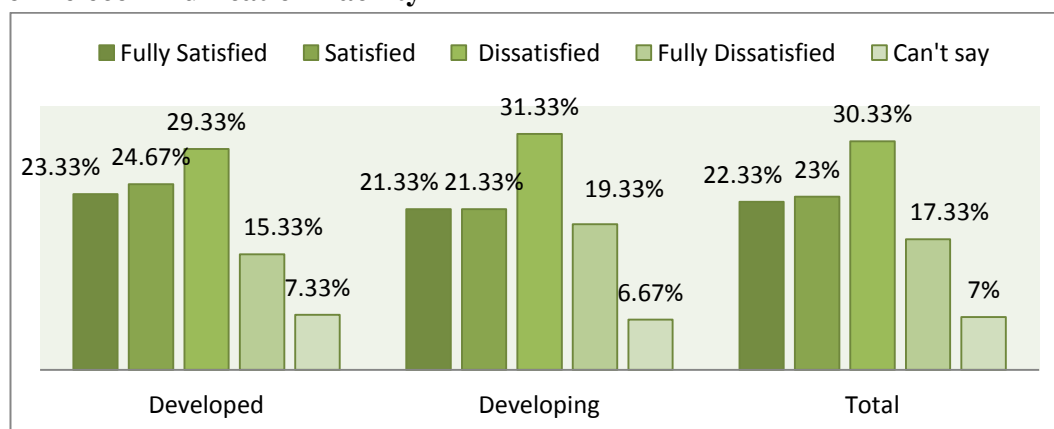
#### 5.4.4. Telecommunication Facility

**Table 5.4.4: Satisfaction Level of the Selected Farmers towards Availability of Telecommunication Facility**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	12 (24)	20 (40)	03 (06)	35 (23.33)	06 (12)	20 (40)	06 (12)	32 (21.33)	<b>67</b> <b>(22.33)</b>
b.	Satisfied	19 (38)	06 (12)	12 (24)	37 (24.67)	08 (16)	14 (28)	10 (20)	32 (21.33)	<b>69</b> <b>(23)</b>
c.	Dissatisfied	13 (26)	16 (32)	15 (30)	44 (29.33)	18 (36)	09 (18)	20 (40)	47 (31.33)	<b>91</b> <b>(30.33)</b>
d.	Fully Dissatisfied	04 (08)	08 (16)	11 (22)	23 (15.33)	14 (28)	05 (10)	10 (20)	29 (19.33)	<b>52</b> <b>(17.33)</b>
e.	Can't say	02 (04)	00	09 (18)	11 (07.33)	04 (08)	02 (04)	04 (08)	10 (06.67)	<b>21</b> <b>(07)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>	

Source: Survey Data

**Graph 5.4.4: Satisfaction Level of the Selected Farmers towards Availability of Telecommunication Facility**



Source: Survey Data

#### Inferences

On the basis of the table 5.4.4, nearly 30.33% respondents are dissatisfied with the facility in the state. Around 23% respondents are satisfied and 22.33% respondents are fully satisfied while nearly 17.33% respondents are fully dissatisfied with the availability of the facility. The dissatisfaction level is higher than satisfaction level among respondents in both the strata.

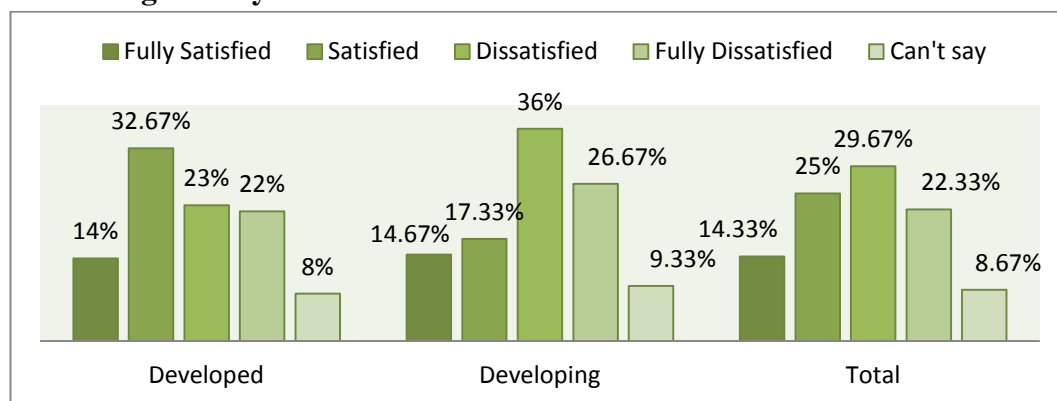
### 5.4.5. Banking Facility

**Table 5.4.5: Satisfaction Level of the Selected Farmers towards Availability of Banking Facility**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	14 (28)	04 (08)	03 (06)	21 (14)	06 (12)	12 (24)	04 (08)	22 (14.67)	<b>43</b> <b>(14.33)</b>
b.	Satisfied	14 (28)	13 (26)	22 (44)	49 (32.67)	08 (16)	10 (20)	08 (16)	26 (17.33)	<b>75</b> <b>(25)</b>
c.	Dissatisfied	08 (16)	13 (26)	14 (28)	35 (23)	14 (28)	16 (32)	24 (48)	54 (36)	<b>89</b> <b>(29.67)</b>
d.	Fully Dissatisfied	12 (24)	12 (24)	09 (18)	33 (22)	20 (40)	06 (12)	08 (16)	34 (26.67)	<b>67</b> <b>(22.33)</b>
e.	Can't say	02 (04)	08 (16)	02 (04)	12 (08)	02 (04)	06 (12)	06 (12)	14 (09.33)	<b>26</b> <b>(08.67)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>	

Source: Survey Data

**Graph 5.4.5: Satisfaction Level of the Selected Farmers towards Availability of Banking Facility**



Source: Survey Data

### Inferences

According to the table 5.4.5, finding reveals that almost 29.67 % respondents are dissatisfied the highest in Jhalawar (48%), around 25% respondents are satisfied the maximum in Sawaimadhopur (44%), approximately 14.33 percent are fully satisfied the highest in Jaipur (28%) and almost 22.33 percent are fully dissatisfied the maximum in Sikar (40%) with availability of this facility in their area. Graph 5.4.5 exhibits that the satisfaction level of respondents (fully satisfied + satisfied) is higher in developed districts (46.67%) than in developing districts (32%).

## 5.5. Supply of Agriculture Input

A timely and sufficient supply of modern and advanced agriculture input at reasonable price leads to ample production of farm produce. It also affects the quality of farm produce to a great extent. The supply of the farm input in time at the least cost to the farmers of all class depends on government's policies to a certain extent. The satisfaction level of farmers towards the timely and adequate supply of agriculture inputs as seeds, pesticides, fertilizers, electric power, petrol or diesel and farm equipment and machinery are analyzed in section 5.5.

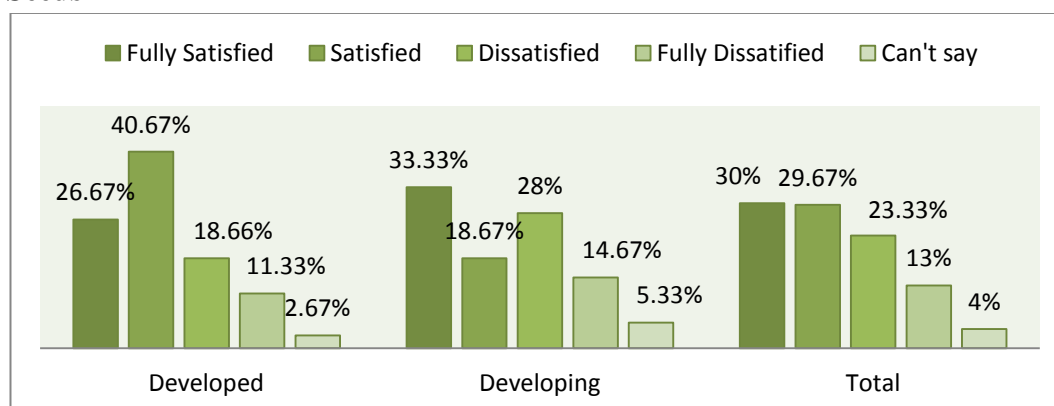
### 5.5.1. Supply of Seeds

**Table 5.5.1: Satisfaction Level of the Selected Farmers towards Supply of Seeds**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully satisfied	12 (24)	14 (28)	14 (28)	40 (26.67)	08 (16)	34 (68)	08 (16)	50 (33.33)	<b>90</b> <b>(30)</b>
b.	Satisfied	20 (40)	24 (48)	17 (34)	61 (40.67)	12 (24)	10 (20)	06 (12)	28 (18.67)	<b>89</b> <b>(29.67)</b>
c.	Dissatisfied	08 (16)	12 (24)	08 (16)	28 (18.66)	16 (32)	04 (08)	22 (44)	42 (28)	<b>70</b> <b>(23.33)</b>
d.	Fully Dissatisfied	08 (16)	00	09 (18)	17 (11.33)	12 (24)	02 (04)	08 (16)	22 (14.67)	<b>39</b> <b>(13)</b>
e.	Can't say	02 (04)	00	02 (04)	04 (2.67)	02 (04)	00	06 (12)	08 (5.33)	<b>12</b> <b>(04)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.5.1: Satisfaction Level of the Selected Farmers towards Supply of Seeds**



Source: Survey Data

## Inferences

About 30 percent respondents are fully satisfied whereas nearly 29.67 percent respondents are satisfied. Almost 23.33% and 13 % respondents are dissatisfied and fully dissatisfied respectively. The percentage of fully satisfied farmers is the highest in Tonk while the lowest percentage is in Sikar (16%) and Jhalawar (16%). The percentage of respondents who stated that they are dissatisfied with the seeds supply is higher in Sikar (24%) and Sawaimadhapur (12%) than other in the selected districts.

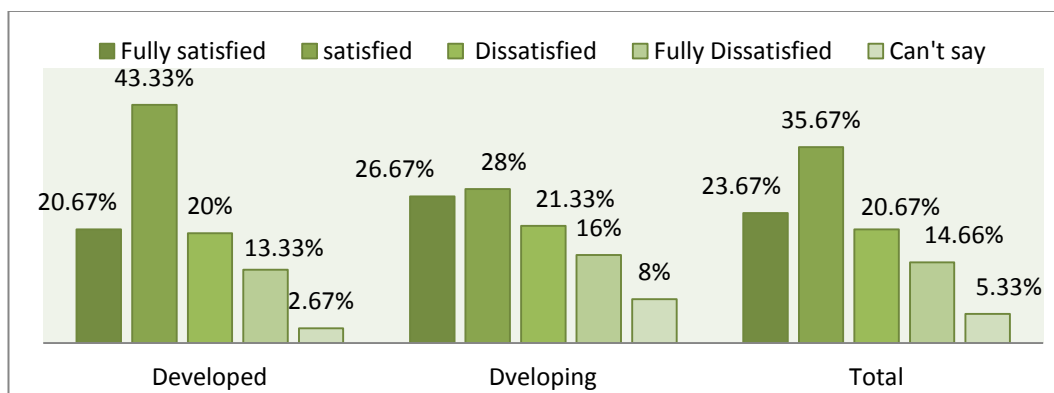
### 5.5.2. Supply of Fertilizers

**Table 5.5.2: Satisfaction Level of the Selected Farmers towards Supply of Fertilizers**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully satisfied	08 (16)	10 (20)	13 (26)	31 (20.67)	08 (16)	26 (52)	06 (12)	40 (26.67)	<b>71</b> <b>(23.67)</b>
b.	Satisfied	23 (46)	21 (42)	21 (42)	65 (43.33)	16 (32)	18 (36)	08 (16)	42 (28)	<b>107</b> <b>(35.67)</b>
c.	Dissatisfied	08 (16)	14 (28)	08 (16)	30 (20)	12 (24)	04 (08)	16 (32)	32 (21.33)	<b>62</b> <b>(20.67)</b>
d.	Fully Dissatisfied	10 (20)	04 (08)	06 (12)	20 (13.33)	10 (20)	00	14 (28)	24 (16)	<b>44</b> <b>(14.66)</b>
e.	Can't say	01 (02)	01 (02)	02 (04)	04 (2.67)	04 (08)	02 (04)	06 (12)	12 (08)	<b>16</b> <b>(05.33)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.5.2: Satisfaction Level of the Selected Farmers towards Supply of Fertilizers**



Source: Survey Data



## Inferences

The percentages of the total respondents who are fully satisfied, satisfied, dissatisfied, and fully dissatisfied with the supply of fertilizers are approximately 23.67 %, 35.67%, 20.67 %, and 14.66% respectively. The highest percentages of fully satisfied, satisfied, and dissatisfied respondents are in Tonk (52%), Jaipur (46%) and Jhalawar (32%) respectively. In Jhalawar, around 28 % respondents are fully satisfied with the supply of fertilizers. Graph 5.5.2 exhibits that the satisfaction level of respondents (fully satisfied + satisfied) is higher in developed districts (64%) than in developing districts (54.67 %).

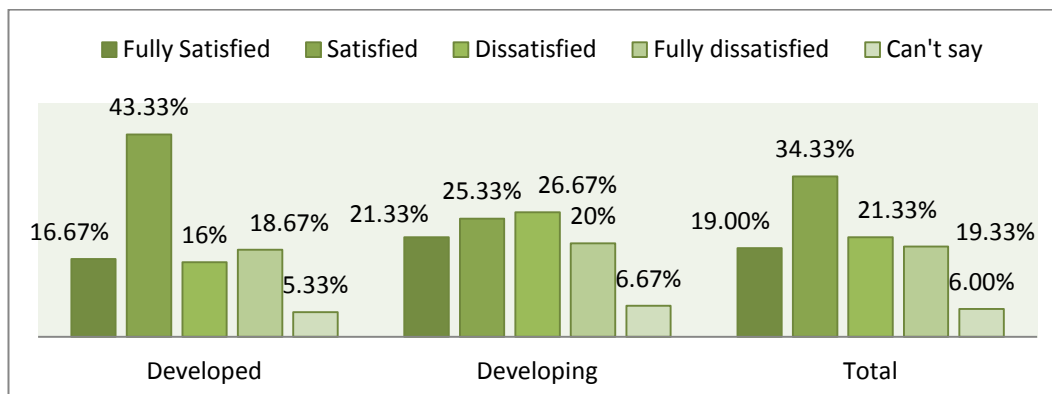
### 5.5.3. Supply of Pesticides

**Table 5.5.3: Satisfaction Level of the Selected Farmers towards Supply of Pesticides**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully satisfied	06 (12)	06 (12)	13 (26)	25 (16.67)	06 (12)	20 (40)	06 (12)	32 (21.33)	<b>57 (19)</b>
b.	Satisfied	24 (48)	24 (48)	17 (34)	65 (43.33)	14 (28)	18 (36)	06 (12)	38 (25.33)	<b>103 (34.33)</b>
c.	Dissatisfied	06 (12)	12 (24)	06 (12)	24 (16)	10 (20)	08 (16)	22 (44)	40 (26.67)	<b>64 (21.33)</b>
d.	Fully Dissatisfied	10 (20)	06 (12)	12 (24)	28 (18.67)	18 (36)	02 (04)	10 (20)	30 (20)	<b>58 (19.33)</b>
e.	Can't say	04 (08)	02 (04)	02 (04)	08 (5.33)	02 (04)	02 (04)	06 (12)	10 (6.67)	<b>18 (06)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.5.3: Satisfaction Level of the Selected Farmers towards Supply of Pesticides**



Source: Survey data

## Inferences

About 19 %, 34.33 %, and 21.33 respondents are fully satisfied, satisfied and dissatisfied respectively. The percentage of fully dissatisfied respondents is 19.33% the maximum in Sikar (36%). Graph 5.5.3 exhibits that the satisfaction level of respondents (fully satisfied + satisfied) is higher in developed districts (60%) than in developing districts (46.66 %).

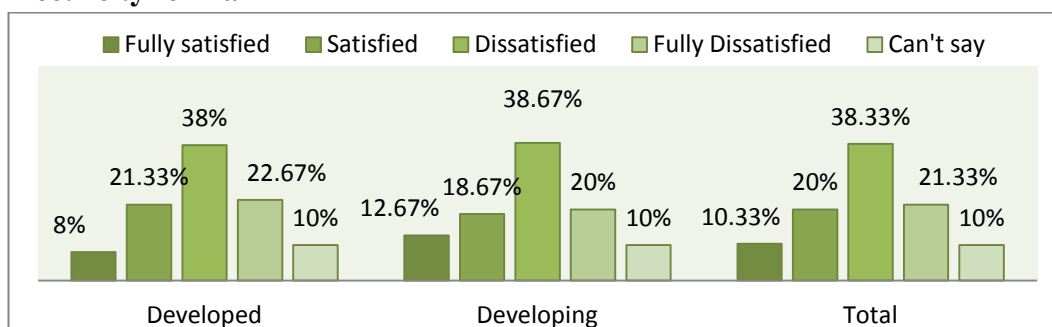
### 5.5.4. Supply of Electricity for Farm

**Table 5.5.4: Satisfaction Level of the Selected Farmers towards Supply of Electricity for Farm**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully satisfied	09 (18)	00	03 (06)	12 (08)	06 (12)	07 (14)	06 (12)	19 (12.67)	<b>31</b> <b>(10.33)</b>
b.	Satisfied	12 (24)	12 (24)	08 (16)	32 (21.33)	06 (12)	16 (32)	06 (12)	28 (18.67)	<b>60</b> <b>(20)</b>
c.	Dissatisfied	16 (32)	22 (44)	19 (38)	57 (38)	20 (40)	18 (36)	20 (40)	58 (38.67)	<b>115</b> <b>(38.33)</b>
d.	Fully Dissatisfied	08 (16)	10 (20)	16 (32)	34 (22.67)	12 (24)	06 (12)	12 (24)	30 (20)	<b>64</b> <b>(21.33)</b>
e.	Can't say	05 (10)	06 (12)	04 (08)	15 (10)	06 (12)	03 (06)	06 (12)	15 (10)	<b>30</b> <b>(10)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.5.4: Satisfaction Level of the Selected Farmers towards Supply of Electricity for Farm**



Source: Survey Data

## Inferences

About 38.33% and 21.33% respondents are dissatisfied and fully dissatisfied with this facility in the state whereas the percentage of fully satisfied and satisfied respondents is nearly 10.33 % and 20 % respectively. There is no considerable

difference between the number of respondents of developed and developing districts.

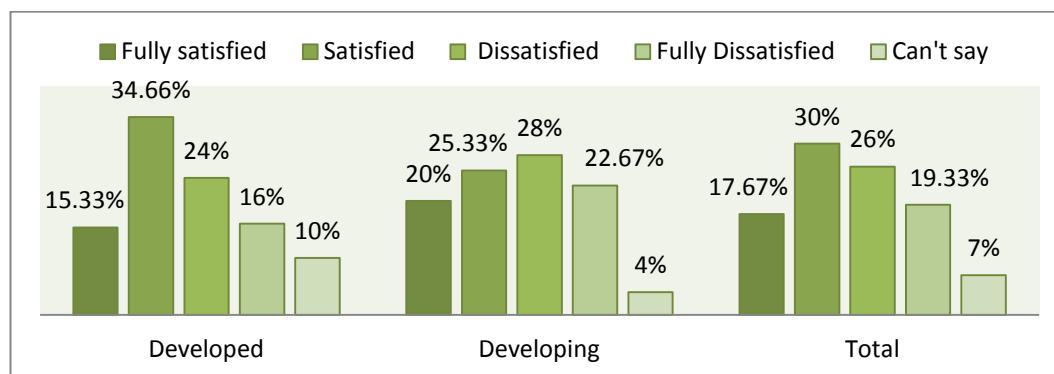
### 5.5.5. Supply of Petrol and Diesel

**Table 5.5.5: Satisfaction Level of the Selected Farmers towards Supply of Petrol and Diesel**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully satisfied	06 (12)	14 (28)	03 (06)	23 (15.33)	08 (16)	18 (36)	04 (08)	30 (20)	<b>53</b> <b>(17.67)</b>
b.	Satisfied	18 (36)	10 (20)	24 (48)	52 (34.66)	12 (24)	14 (28)	12 (24)	38 (25.33)	<b>90</b> <b>(30)</b>
c.	Dissatisfied	12 (24)	18 (36)	06 (12)	36 (24%)	10 (20)	10 (20)	22 (44)	42 (28)	<b>78</b> <b>(26)</b>
d.	Fully Dissatisfied	12 (24)	04 (08)	08 (16)	24 (16%)	18 (36)	08 (16)	08 (16)	34 (22.67)	<b>58</b> <b>(19.33)</b>
e.	Can't say	02 (04)	04 (08)	09 (18)	15 (10)	02 (04)	00	04 (08)	06 (04)	<b>21</b> <b>(07)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.5.5: Satisfaction Level of the Selected Farmers towards Supply of Petrol and Diesel**



Source: Survey Data

### Inferences

Most of the respondents responded positively as fully satisfied (17.67%) and satisfied (30 %) whereas about 26% and 19.33% respondents are dissatisfied and fully dissatisfied with the supply of the facility. When comparing districts, it may be clearly stated that selected districts don't have so much difference among the numbers of respondents for the same.

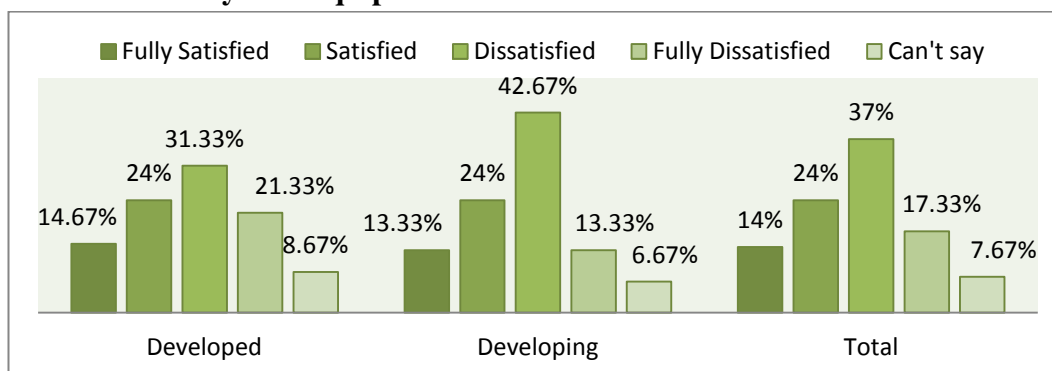
### 5.5.6. Farm Machinery and Equipment

**Table 5.5.6: Satisfaction Level of the Selected Farmers towards Supply of Farm Machinery and Equipment**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully satisfied	16 (32)	04 (08)	02 (04)	22 (14.67)	04 (08)	10 (20)	06 (12)	20 (13.33)	<b>42</b> <b>(14)</b>
b.	Satisfied	10 (20)	04 (08)	22 (44)	36 (24)	12 (24)	16 (32)	08 (16)	36 (24)	<b>72</b> <b>(24)</b>
c.	Dissatisfied	08 (16)	26 (52)	13 (26)	47 (31.33)	20 (40)	18 (36)	26 (52)	64 (42.67)	<b>111</b> <b>(37)</b>
d.	Fully Dissatisfied	12 (24)	10 (20)	10 (20)	32 (21.33)	10 (20)	04 (08)	06 (12)	20 (13.33)	<b>52</b> <b>(17.33)</b>
e.	Can't say	04 (08)	06 (12)	03 (06)	13 (8.67)	04 (08)	02 (04)	04 (08)	10 (6.67)	<b>23</b> <b>(07.67)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.5.6: Satisfaction Level of the Selected Farmers towards Supply of Farm Machinery and Equipment**



Source: Survey Data

#### Inferences

About 14%, 24%, 37% and 17.33% respondents are fully satisfied, satisfied, dissatisfied, and fully dissatisfied respectively. When comparing districts, it may be clearly stated that selected districts don't have so much difference among the numbers of respondents for the same.

### 5.6. Source of Market Information in Agriculture Sector

For smooth and efficient operations of agriculture trade, the farmers require timely substantial knowledge and information about improved farming practices, pricing strategy, market betterments, and new policies regarding agriculture

technology etc. Therefore, various sources as print media, electronic media, internet, govt, agencies reports and bulletins, panchayat, govt. officials, broker, relatives, and friends etc. are available for providing these types of information to farmers. Two tables have been prepared and the first table reveals the number of selected farmer's frequency for accessing information through the particular source of information, and the second table highlights the satisfaction level of farmers towards the source of information by which the government provides information to them.

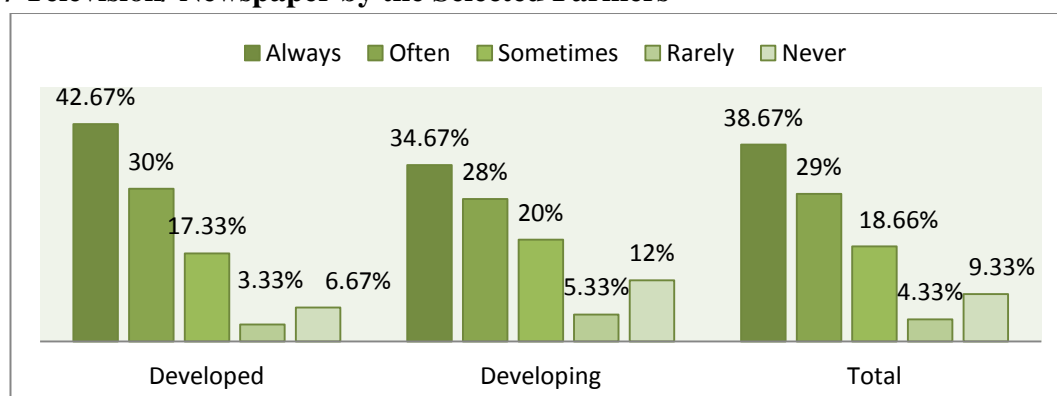
### 5.6.1. Radio/Television/Newspaper

**Table 5.6.1: Frequency of Accessing the Market Information through Radio / Television/ Newspaper by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	25 (50)	24 (48)	15 (30)	64 (42.67)	12 (24)	26 (52)	14 (28)	52 (34.67)	<b>116</b> <b>(38.67)</b>
b.	Often	12 (24)	18 (36)	15 (30)	45 (30)	16 (32)	10 (20)	16 (32)	42 (28)	<b>87</b> <b>(29)</b>
c.	Sometimes	08 (16)	06 (12)	12 (30)	26 (17.33)	12 (28)	07 (16)	11 (32)	30 (20)	<b>56</b> <b>(18.66)</b>
d.	Rarely	02 (04)	00	03 (06)	05 (3.33)	02 (04)	01 (02)	05 (10)	08 (5.33)	<b>13</b> <b>(4.33)</b>
e.	Never	03 (06)	02 (04)	05 (10)	10 (6.67)	08 (16)	06 (12)	04 (08)	18 (12)	<b>28</b> <b>(9.33)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.6.1: Frequency of Accessing the Market Information through Radio / Television/ Newspaper by the Selected Farmers**



Source: Survey Data

## Inferences

About 38.67% respondents admit that radio, T.V. and newspaper is “always” a source of information for them predominantly in Jaipur, Kota and Tonk districts while about 29% find them useful most of the time (Often), for around 18.66 % of the respondents “sometimes” is found useful sources and nearly 9.33% think these are never important sources of information. About 4.33 % respondents use it rarely.

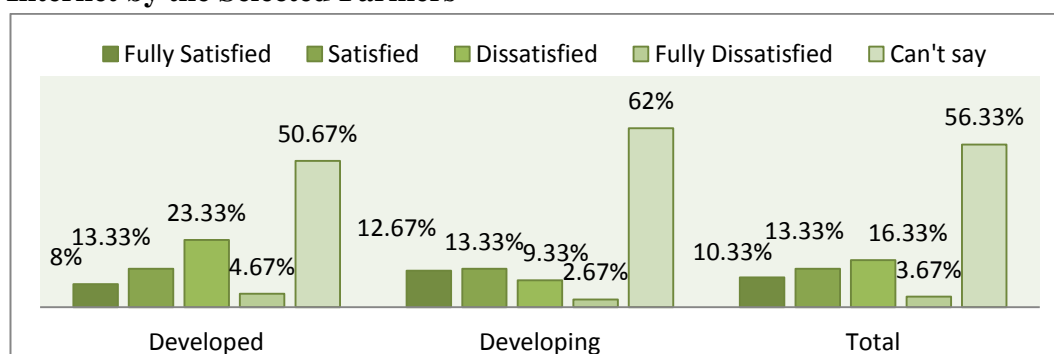
### 5.6.2. Internet

**Table 5.6.2: Frequency of Accessing the Market Information through Internet by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	04 (08)	06 (12)	02 (04)	12 (08)	04 (08)	12 (24)	03 (06)	19 (12.67)	<b>31</b> <b>(10.33)</b>
b.	Often	06 (12)	12 (24)	02 (04)	20 (13.33)	04 (08)	04 (08)	12 (24)	20 (13.33)	<b>40</b> <b>(13.33)</b>
c.	Sometimes	15 (36)	06 (16)	14 (32)	35 (23.33)	04 (08)	03 (08)	07 (20)	14 (9.33)	<b>49</b> <b>(16.33)</b>
d.	Rarely	03 (06)	02 (04)	02 (04)	07 (4.67)	00	01 (02)	03 (06)	04 (2.67)	<b>11</b> <b>(3.67)</b>
e.	Never	22 (44)	24 (48)	30 (60)	76 (50.67)	38 (76)	30 (60)	25 (50)	93 (62)	<b>169</b> <b>(56.33)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.6.2: Frequency of Accessing the Market Information through Internet by the Selected Farmers**



Source: Survey Data

## Inferences

Almost 20 percent respondents use internet sometimes while about 56.33% respondents never use internet to get information. The maximum users of internet

are in Jaipur and Kota for the purpose. The number of internet user (always + Often + Sometimes + rarely) is high in the developed districts (49.33%) in comparison to the developing districts (38%).

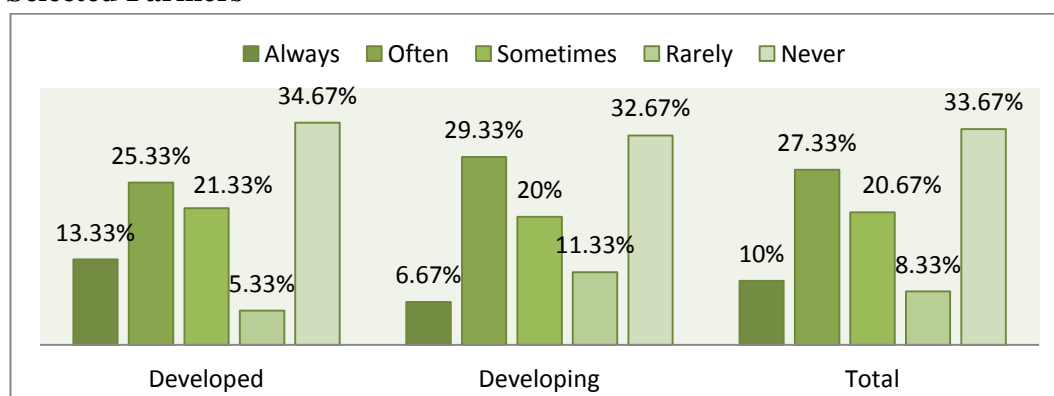
### 5.6.3. Government Agencies Reports, Bulletins, Brochures and Pamphlets

**Table 5.6.3: Frequency of Accessing the Market Information through the Government Agencies Reports, Bulletins, Brochures and Pamphlets by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	02 (04)	02 (04)	16 (32)	20 (13.33)	02 (04)	04 (08)	04 (08)	10 (6.67)	<b>30</b> <b>(10)</b>
b.	Often	08 (16)	20 (40)	10 (20)	38 (25.33)	06 (12)	26 (52)	12 (24)	44 (29.33)	<b>82</b> <b>(27.33)</b>
c.	Sometimes	12 (24)	09 (18)	11 (22)	32 (21.33)	11 (22)	10 (20)	09 (18)	30 (20)	<b>62</b> <b>(20.67)</b>
d.	Rarely	02 (04)	01 (02)	05 (10)	08 (5.33)	03 (06)	06 (12)	08 (16)	17 (11.33)	<b>25</b> <b>(8.33)</b>
e.	Never	26 (52)	18 (36)	08 (16)	52 (34.67)	28 (56)	04 (08)	17 (34)	49 (32.67)	<b>101</b> <b>(33.67)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.6.3: Frequency of Accessing the Market Information through the Government Agencies Reports, Bulletins, Brochures and Pamphlets by the Selected Farmers**



Source: Survey Data

### Inferences

Nearly 10% respondents which are maximum in Sawaimadhopur (32%), consider it as a useful source and they always get the market information through it. Almost 27.33% respondents generally (often) obtain information via this

(Maximum in Tonk (52%), and Kota (40%) and approximately one-third of studied group (33.67%) consider it that they never get the information by the source. The above Graph exhibits that there is no considerable difference between the number of respondents of developed and developing groups for the same.

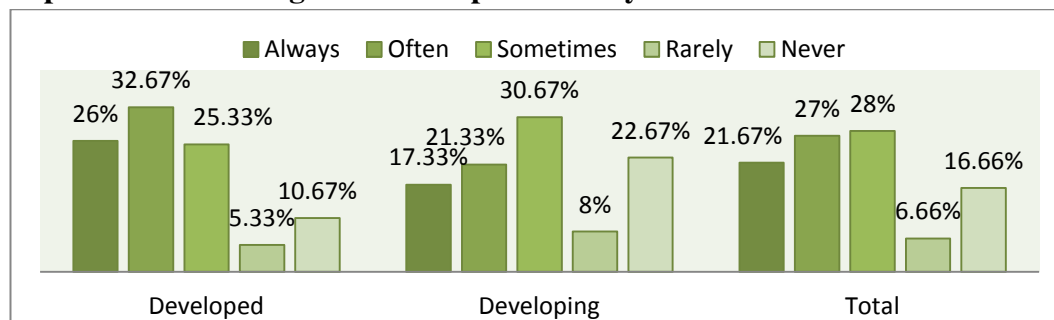
#### 5.6.4. Representatives of Agriculture Department

**Table5.6.4: Frequency of Accessing the Market Information through the Representatives of Agriculture Department by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	14 (28)	02 (04)	23 (46)	39 (26)	08 (16)	08 (16)	10 (20)	26 (17.33)	<b>65</b> <b>(21.67)</b>
b.	Often	12 (24)	24 (48)	13 (26)	49 (32.67)	12 (24)	12 (24)	08 (16)	32 (21.33)	<b>81</b> <b>(27)</b>
c.	Sometimes	16 (32)	15 (30)	07 (14)	38 (25.33)	12 (24)	18 (36)	16 (32)	46 (30.67)	<b>84</b> <b>(28)</b>
d.	Rarely	04 (08)	03 (06)	01 (02)	08 (05.33)	02 (04)	06 (12)	04 (08)	12 (08)	<b>20</b> <b>(6.66)</b>
e.	Never	04 (08)	06 (12)	06 (12)	16 (10.67)	16 (32)	06 (12)	12 (24)	34 (22.67)	<b>50</b> <b>(16.66)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.6.4: Frequency of Accessing the Market Information through the Representatives of Agriculture Department by the Selected Farmers**



Source: Survey Data

#### Inferences

About 21.67% respondents which are the highest in Sawaimadhapur (46%) admit that the officers and their subordinates of agriculture department are always helpful to them. Almost 27 percent respondents find them often supportive, which is the maximum in Kota. Approximately 28% think that they are sometimes useful and 16.67 % of them, the highest in Sikar (32%), feel they are never useful.



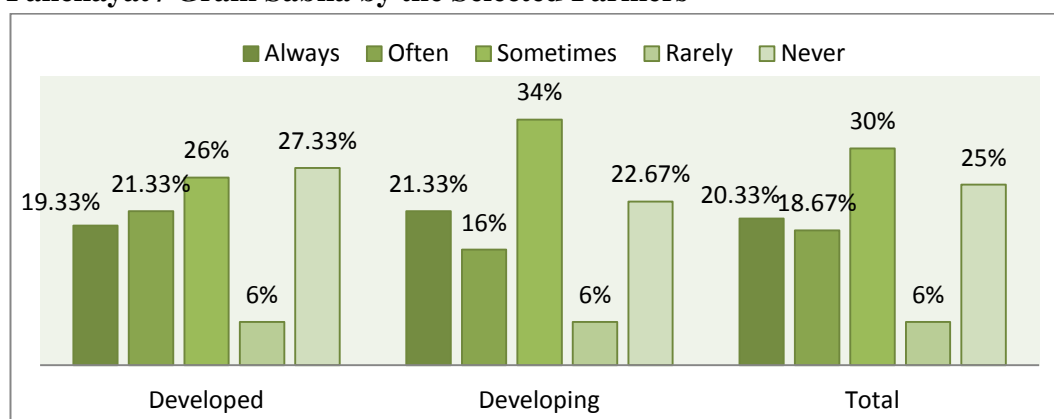
### 5.6.5. Panchayat / Gram Sabha

**Table 5.6.5: Frequency of Accessing the Market Information through the Panchayat / Gram Sabha by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	16 (32)	00	13 (26)	29 (19.33)	10 (20)	10 (20)	12 (24)	32 (21.33)	<b>61</b> <b>(20.33)</b>
b.	Often	16 (32)	02 (04)	14 (28)	32 (21.33)	06 (20)	12 (24)	06 (12)	24 (16)	<b>56</b> <b>(18.67)</b>
c.	Sometimes	09 (18)	20 (40)	10 (20)	39 (26)	16 (32)	24 (48)	11 (22)	51 (34)	<b>90</b> <b>(30)</b>
d.	Rarely	01 (02)	06 (12)	02 (04)	09 (6)	02 (04)	04 (08)	03 (06)	09 (6)	<b>18</b> <b>(06)</b>
e.	Never	08 (16)	22 (44)	11 (22)	41 (27.33)	16 (32)	00	18 (36)	34 (22.67)	<b>75</b> <b>(25)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.6.5: Frequency of Accessing the Market Information through the Panchayat / Gram Sabha by the Selected Farmers**



Source: Survey Data

### Inference

Most of the respondents (30%) sometimes get the knowledge through ‘panchayat’ or ‘gram sabha’ while around 20.33 respondents are updated regularly by them. About 25 percent respondents think that they never obtain information from them. The respondents in Jaipur find it very useful while in Kota almost 44 percent farmers find it hardly useful.

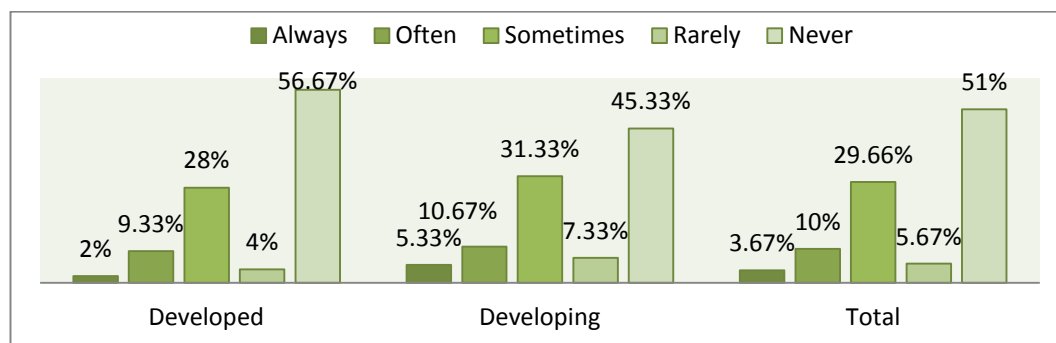
### 5.6.6. Don't Come to Know

**Table 5.6.6: Status of the Selected Farmers who don't come to Know about Market Information**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	02 (04)	00	01 (02)	03 (02)	02 (04)	02 (04)	04 (08)	08 (5.33)	<b>11</b> <b>(3.67)</b>
b.	Often	10 (20)	00	04 (08)	14 (9.33)	06 (12)	04 (08)	06 (12)	16 (10.67)	<b>30</b> <b>(10)</b>
c.	Sometimes	16 (32)	19 (38)	07 (14)	42 (28)	07 (14)	23 (46)	17 (34)	47 (31.33)	<b>89</b> <b>(29.66)</b>
d.	Rarely	02 (04)	03 (06)	01 (02)	06 (04)	01 (02)	07 (14)	03 (06)	11 (7.33)	<b>17</b> <b>(5.67)</b>
e.	Never	20 (40)	28 (56)	37 (74)	85 (56.67)	34 (68)	14 (28)	20 (40)	68 (45.33)	<b>153</b> <b>(51)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.6.6: Status of the Selected Farmers who don't come to Know about Market Information**



Source: Survey data

### Inferences

Most of the respondents (51%) responded that they are always aware of happenings in the market through any of the above sources whereas about 3.67 percent respondents never receive any feed about changes and developments in the agriculture market.

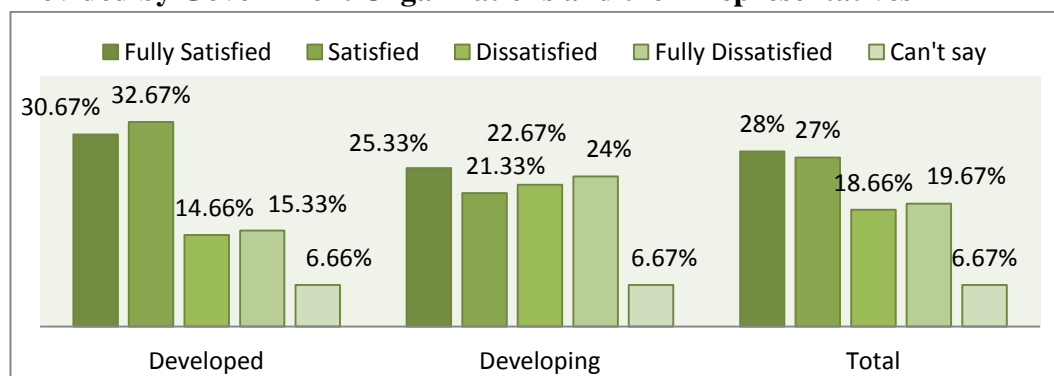
### 5.6.7. Satisfaction Level of the Selected Farmers towards Government Efforts for Providing Timely and Accurate Market Information

**Table 5.6.7: Satisfaction Level of the Selected Farmers towards Information Provided by Government Organizations and their Representatives**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully satisfied	18 (36)	09 (18)	19 (38)	46 (30.67)	12 (24)	18 (36)	08 (16)	38 (25.33)	<b>84</b> <b>(28)</b>
b.	Satisfied	16 (32)	16 (32)	17 (34)	49 (32.67)	08 (16)	12 (24)	12 (24)	32 (21.33)	<b>81</b> <b>(27)</b>
c.	Dissatisfied	08 (16)	08 (16)	06 (12)	22 (14.66)	06 (12)	12 (24)	16 (32)	34 (22.67)	<b>56</b> <b>(18.66)</b>
d.	Fully Dissatisfied	02 (04)	14 (28)	07 (14)	23 (15.33)	18 (36)	08 (16)	10 (20)	36 (24)	<b>59</b> <b>(19.67)</b>
e.	Can't say	06 (24)	03 (06)	01 (02)	10 (6.67)	06 (24)	00	04 (08)	10 (6.67)	<b>20</b> <b>(6.67)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.6.7: Satisfaction Level of the Selected Farmers towards Information Provided by Government Organizations and their Representatives**



Source: Survey Data

#### Inferences

Almost 55% respondents are satisfied up to some extent out of which 28% are fully satisfied and 27% are satisfied while 18.66% are dissatisfied and about 19.67% are fully dissatisfied with almost similar trends for all variables in all the districts. In the developed districts 63.34 percent respondents are satisfied (fully satisfied+ satisfied) with this source whereas only 46.66 percent respondents replied positively (satisfied+ fully satisfied) towards this source in developing districts.

### 5.7. Satisfaction Level of the Selected Farmers towards Minimum Supporting Price Decided By the Government

Minimum Support Price is the price at which government purchases crops from the farmers, whatever may be the price for the crops. Minimum Support Price is an important part of India's agricultural price policy. The MSP helps to incentivize the framers and thus ensures adequate food grains production in the country. The minimum support prices are announced by the Government of India at the beginning of the sowing season for certain crops on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP). Support prices generally affect farmers' decisions indirectly, regarding land allocation to crops, and the quantity of the crops to be produced etc. It is from this angle that the MSP becomes a big incentive for the farmers to produce more quantity (Jose, 2015).

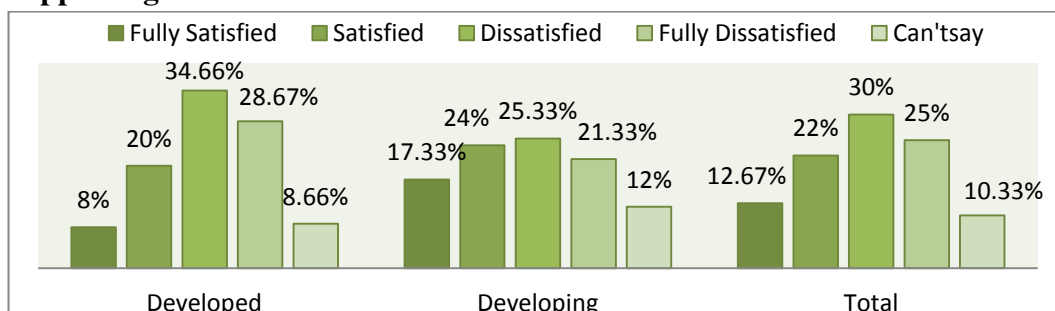
As of now, CACP recommends MSPs of 23 commodities, which comprise 7 cereals (paddy, wheat, maize, sorghum, pearl millet, barley and ragi), 5 pulses (gram, tur, moong, urad, lentil), 7 oilseeds (groundnut, rapeseed-mustard, soybean, sesamum, sunflower, safflower, niger seed), and 4 commercial crops (copra, sugarcane, cotton and raw jute) (Jose, 2015).

**Table 5.7: Satisfaction Level of the Selected Farmers towards Minimum Supporting Price**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully satisfied	04 (08)	04 (08)	04 (08)	12 (08)	02 (04)	18 (36)	06 (12)	26 (17.33)	<b>38</b> <b>(12.67)</b>
b.	Satisfied	18 (36)	04 (08)	08 (16)	30 (20)	10 (20)	16 (32)	10 (20)	36 (24)	<b>66</b> <b>(22)</b>
c.	Dissatisfied	08 (16)	26 (52)	18 (36)	52 (34.66)	10 (20)	06 (12)	22 (44)	38 (25.33)	<b>90</b> <b>(30)</b>
d.	Fully Dissatisfied	16 (32)	12 (24)	15 (30)	43 (28.67)	18 (36)	08 (16)	06 (12)	32 (21.33)	<b>75</b> <b>(25)</b>
e.	Can't say	04 (08)	04 (08)	05 (10)	13 (8.66)	10 (20)	02 (04)	06 (12)	18 (12)	<b>31</b> <b>(10.33)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.7: Satisfaction Level of the Selected Farmers towards Minimum Supporting Price**



Source: Survey Data

### Inferences

About 12.67% respondents are fully satisfied, 22% respondents are satisfied, and 30% respondents are dissatisfied, while 25% respondents are fully dissatisfied with MSP system. The number of satisfied respondents (fully satisfied+ satisfied) is higher in developing districts (41.33%) than in developed districts (28%).

### 5.8. Preference to Sell or Dispose of Farm Produce

Five sections are prepared to assess the preference and satisfaction level of the selected farmers for disposal of their farm produce to government purchase centers or agencies and 'Krishi Upaj Mandi' and the reason for not selling their farm produce to government purchase centers or agencies.

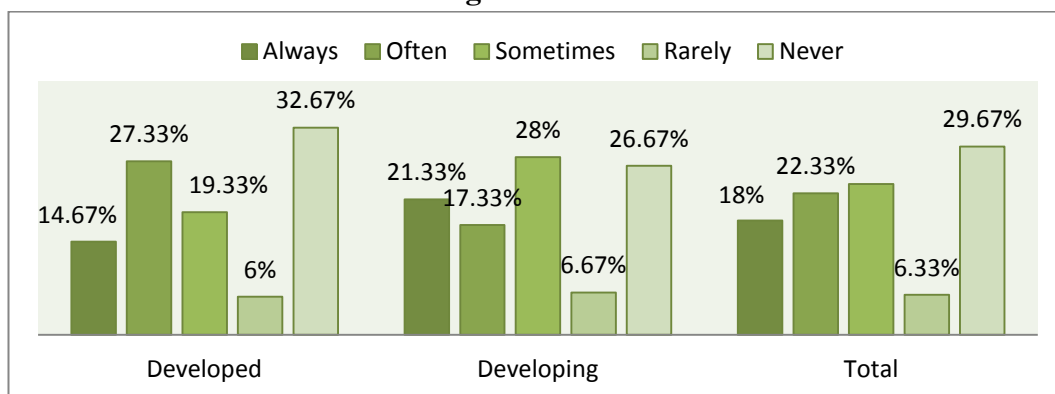
#### 5.8.1. Government Purchase Centres /Government Agencies

**Table 5.8.1: Preference for Disposal of Farm Produce to Government Purchase Centres /Government Agencies**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	06 (12)	00	16 (32)	22 (14.67)	04 (08)	20 (40)	08 (16)	32 (21.33)	<b>54 (18)</b>
b.	Often	02 (04)	31 (62)	08 (16)	41 (27.33)	04 (08)	08 (16)	14 (28)	26 (17.33)	<b>67 (22.33)</b>
c.	Sometimes	11 (22)	08 (16)	10 (20)	29 (19.33)	14 (28)	13 (26)	15 (30)	42 (28)	<b>71 (23.67)</b>
d.	Rarely	03 (06)	05 (10)	01 (02)	09 (06)	02 (04)	03 (06)	05 (10)	10 (6.67)	<b>19 (6.33)</b>
e.	Never	28 (56)	06 (12)	15 (30)	49 (32.67)	26 (52)	06 (12)	08 (16)	40 (26.67)	<b>89 (29.67)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.8.1: Preference for Disposal of Farm Produce to Government Purchase Centres /Government Agencies**



Source: Survey Data

### Inferences

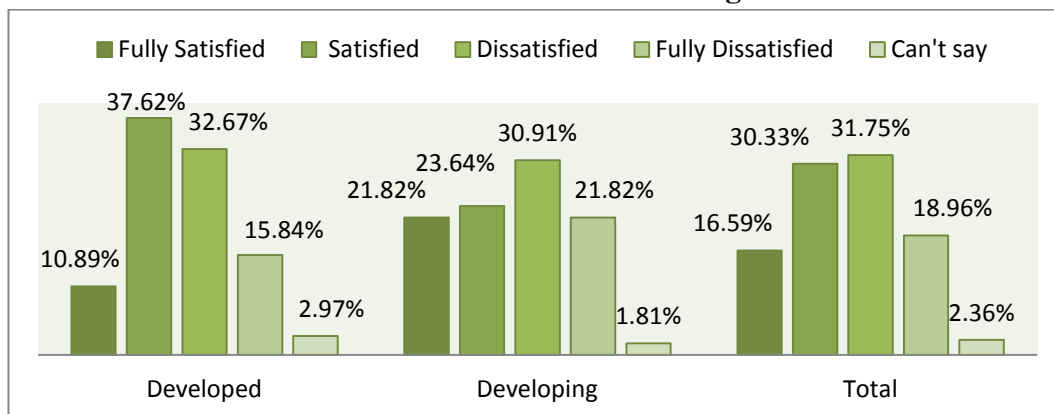
Around 18% of total respondents always sell their goods to Government Purchase Centres or Government Agencies which have the lowest data in the above table. About 22.33% of total respondents (which includes a great proportion of Kota where 62% respondents) often sell their produce to Government Purchase Centres or Government Agencies. We have a small difference between sometimes 23.67% and never 29.67% which shows a clear understanding that they do not need sell their goods to them but sometimes for better pricing or less demand in the market, they sell their goods. Especially in Jaipur, about 56% respondents never sell their farm produce to Government Purchase Centres or Government Agencies.

**Table 5.8.1.1: Satisfaction Level of the Selected Farmers towards Selling of Farm Produce to Government Purchase Centres or Agencies**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	04 (18.18)	02 (04.55)	05 (14.29)	11 (10.89)	02 (08.33)	18 (40.91)	04 (09.52)	24 (21.82)	<b>35 (16.59)</b>
b.	Satisfied	06 (22.27)	14 (31.82)	18 (51.43)	38 (37.62)	06 (25)	14 (31.82)	06 (14.29)	26 (23.64)	<b>64 (30.33)</b>
c.	Dissatisfied	06 (22.27)	18 (40.91)	09 (25.71)	33 (32.67)	08 (33.33)	06 (13.64)	20 (47.62)	34 (30.91)	<b>67 (31.75)</b>
d.	Fully Dissatisfied	04 (18.18)	10 (22.73)	02 (5.71)	16 (15.84)	06 (25)	06 (13.64)	12 (28.57)	24 (21.82)	<b>40 (18.96)</b>
e.	Can't say	02 (09.09)	00	01 (02.86)	03 (2.97)	02 (08.33)	00	00	02 (1.81)	<b>05 (2.36)</b>
<b>Total no. of respondents</b>		<b>22</b>	<b>44</b>	<b>35</b>	<b>101</b>	<b>24</b>	<b>44</b>	<b>42</b>	<b>110</b>	<b>211</b>

Source: Survey Data

**Graph 5.8.1.1: Satisfaction Level of the Selected Farmers towards Selling of their Produce to Government Purchase Centres or Agencies**



Source: Survey Data

### Inferences

Most of the respondents are dissatisfied (31.75%) and satisfied (30.33%) whereas almost 16.59% respondents are fully satisfied and about 18.96% respondents are fully dissatisfied. The number of fully satisfied respondents is higher in developing districts (21.82%) than in developed districts (10.89%).

### 5.8.1.2. Reason for Not Selling Farm Produce to Government Purchase Centres or Agencies

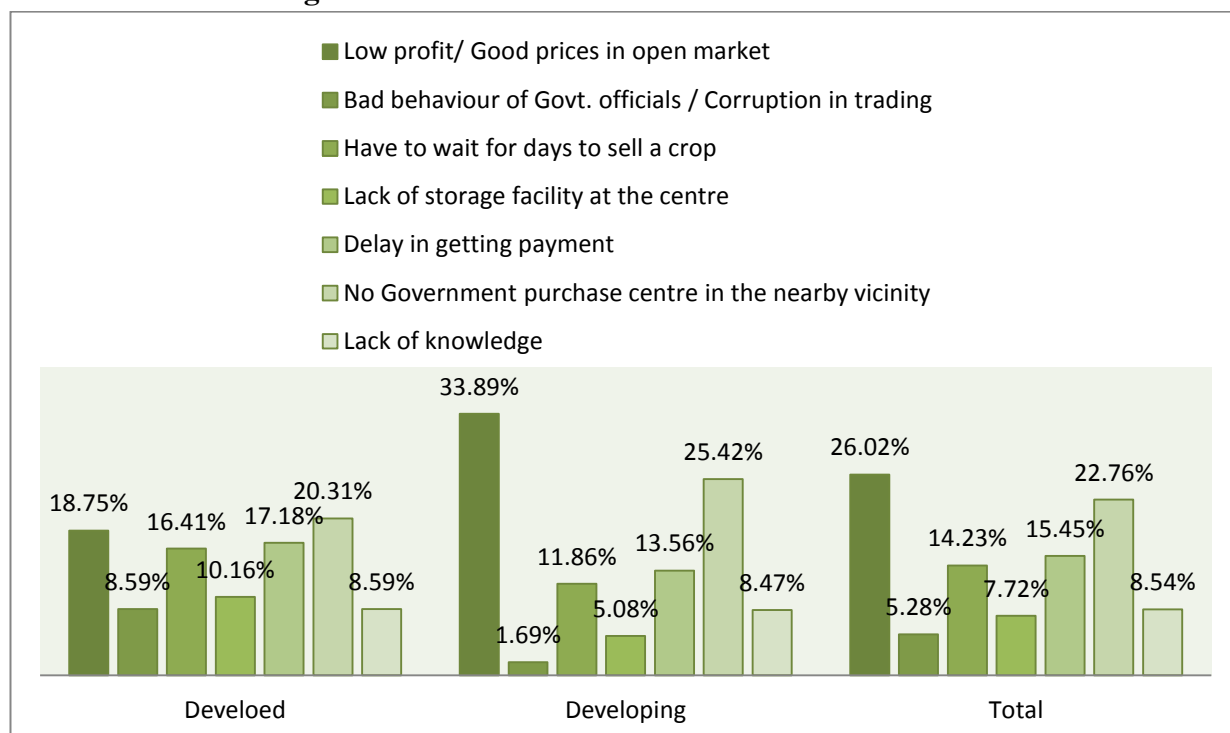
The table 5.8.1.2 provides information about issues and problems which are responsible for holding farmers back from availing the facility in the state. The respondents (who chose often, sometimes, rarely or never from given options about Government Purchase Centres or Agencies in the table 5.8.1) were analyzed to know the reasons for not selling the farm produce to these centers.

**Table 5.8.1.2: Reason for Not Selling Their Farm Produce to Government Purchase Centre or Agencies**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a	Low profit/ Good prices in open market	10 (22.73)	06 (12)	08 (23.53)	24 (18.75)	20 (43.48)	10 (33.33)	10 (23.80)	40 (33.89)	<b>64</b> <b>(26.02)</b>
b	Bad behaviour of Govt. officials / Corruption in trading	04 (09.09)	06 (12)	01 (02.94)	11 (08.59)	00	00	02 (04.76)	02 (1.69)	<b>13</b> <b>(5.28)</b>
c	Have to wait for days to sell a crop	06 (13.64)	08 (16)	07 (20.59)	21 (16.41)	00	10 (33.33)	04 (9.52)	14 (11.86)	<b>35</b> <b>(14.23)</b>
d	Lack of storage facility at the centre	01 (02.27)	12 (24)	00	13 (10.16)	00	00	06 (14.29)	06 (05.08)	<b>19</b> <b>(7.72)</b>
e	Delay in getting payment	06 (13.64)	10 (20)	06 (17.65)	22 (17.18)	02 (04.35)	02 (06.66)	12 (28.57)	16 (13.56)	<b>38</b> <b>(15.45)</b>
f	No Government purchase centre in the nearby vicinity	13 (29.55)	06 (12)	07 (20.59)	26 (20.31)	20 (43.48)	04 (13.33)	06 (14.29)	30 (25.42)	<b>56</b> <b>(22.76)</b>
g	Lack of knowledge	04 (09.09)	02 (04)	05 (14.71)	11 (08.59)	04 (08.7)	04 (13.33)	02 (4.76)	10 (08.47)	<b>21</b> <b>(8.54)</b>
<b>Total no. of respondents</b>		<b>44</b>	<b>50</b>	<b>34</b>	<b>128</b>	<b>46</b>	<b>30</b>	<b>42</b>	<b>118</b>	<b>246</b>

Source: Survey Data

**Graph 5.8.1.2: Reason for Not Selling Their Farm Produce to Government Purchase Centre or Agencies**



Survey Data



## Inferences

Almost 26.02% respondents don't sell the farm produce to the centers because they get good prices in open the market or are making a good profit from other places in comparison to these centers. Almost 22.67 percent respondents don't sell their farm produce as these purchase centers are situated very far away from their vicinity. Some respondents are not willing to sell their products due to misconducts in the centres as delay in payment (15.45%), bad behaviour or corruption by the Government official during the trading (05.28% ) and nearly 14.23 percent respondents don't sell their farm produce because they have to wait for several days to sell their outputs. Lack of Storage facilities in these centers is another considerable factor for almost 7.72 percent respondents and approximately 8.45% respondents are not well informed about this. When comparing districts, it is clearly stated that there is no major difference among the number of respondents.

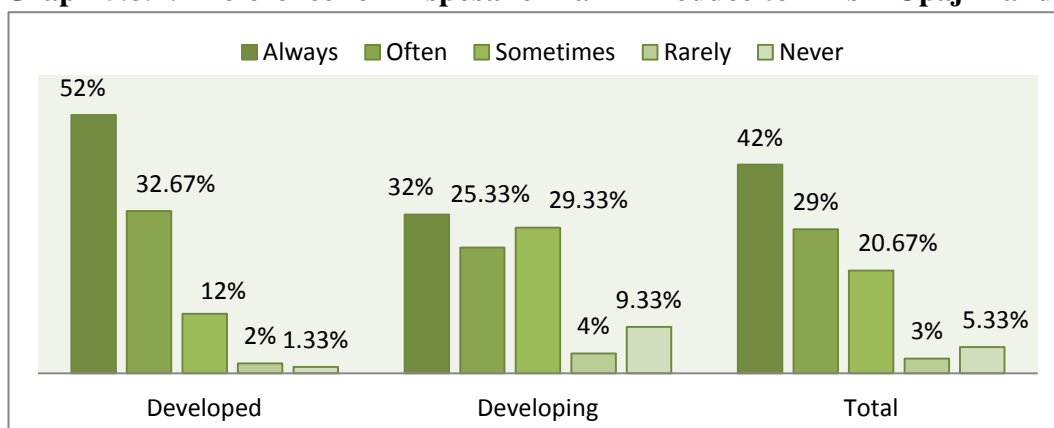
### 5.8.2. Krishi Upaj Mandi

**Table 5.8.2: Preference for Disposal of Farm Produce to Krishi Uapj Mandi**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	26 (52)	16 (32)	36 (72)	78 (52)	10 (20)	26 (52)	12 (24)	48 (32)	<b>126</b> <b>(42)</b>
b.	Often	18 (36)	22 (44)	09 (18)	49 (32.67)	10 (20)	16 (32)	12 (24)	38 (25.33)	<b>87</b> <b>(29)</b>
c.	Sometimes	05 (10)	10 (20)	03 (06)	18 (12)	17 (34)	07 (14)	20 (40)	44 (29.33)	<b>62</b> <b>(20.67)</b>
d.	Rarely	01 (02)	02 (04)	00	03 (02)	03 (06)	01 (02)	02 (04)	06 (04)	<b>09</b> <b>(03)</b>
e.	Never	00	00	02 (04)	02 (1.33)	10 (20)	00	04 (08)	14 (9.33)	<b>16</b> <b>(05.33)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.8.2: Preference for Disposal of Farm Produce to Krishi Upaj Mandi**



Source: Survey Data

### Inferences

From the Graph 5.8.4, it is clearly deduced that most of the respondents prefer to sell their farm produce in Krishi Upaj Mandis. The finding reveals that a large proportion of respondents viz 42% always, 29% often, 20.67% sometimes and 3% rarely prefer it to sell their produce. So 94.67% of total respondents use Krishi Upaj Mandis as their place of trade. Comparatively a low percentage of respondents (5.33%) never prefer Krishi Upaj Mandis to sell their farm produce. In the developing districts 9.33 percent respondents never prefer Krishi Upaj Mandis for selling their crops while in the developed districts only 1.33 respondents never prefer to sell their products in the market.

#### 5.8.2.1. Satisfaction Level towards Amenities in Krishi Upaj Mandis

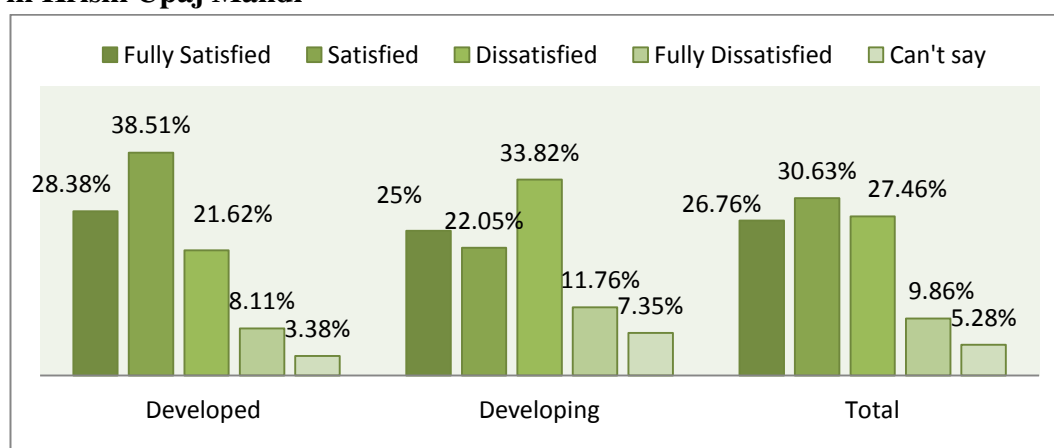
The satisfaction level of respondents (they prefer Krishi Upaj Mandis for selling their farm produce as always, often, sometimes and rarely shown in the table 5.8.2) towards amenities such as display platform for auction, storage facilities, stall for merchants, electricity, internet, canteen, transportation, and telecommunication in Krishi Upaj Mandis are examined in the table 5.8.2.1.

**Table 5.8.2.1: Satisfaction Level of the Selected Farmers towards Amenities in Krishi Upaj Mandi**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	14 (28)	18 (36)	10 (20.83)	42 (28.38)	08 (20)	18 (36)	08 (17.39)	34 (25)	<b>76</b> <b>(26.76)</b>
b.	Satisfied	14 (28)	20 (40)	23 (47.92)	57 (38.51)	04 (10)	16 (32)	10 (21.74)	30 (22.05)	<b>87</b> <b>(30.63)</b>
c.	Dissatisfied	12 (24)	10 (20)	10 (20.83)	32 (21.62)	16 (40)	16 (32)	14 (30.43)	46 (33.82)	<b>78</b> <b>(27.46)</b>
d.	Fully Dissatisfied	08 (16)	02 (04)	02 (04.17)	12 (08.11)	06 (15)	00	10 (21.74)	16 (11.76)	<b>28</b> <b>(09.86)</b>
e.	Can't say	02 (04)	00	03 (06.25)	5 (03.38)	06 (15)	00	04 (08.70)	10 (07.35)	<b>15</b> <b>(05.28)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>48</b>	<b>148</b>	<b>40</b>	<b>50</b>	<b>46</b>	<b>136</b>	<b>284</b>

Source: Survey Data

**Graph 5.8.2.1: Satisfaction Level of the Selected Farmers towards Amenities in Krishi Upaj Mandi**



Source: Survey Data

### Inferences

About 57.39% respondents as fully satisfied (26.76%) and Satisfied (30.63%) are happy with the facilities available for the farmers in the market. Only 37 percent respondents are not satisfied with the same. In the developing districts, the dissatisfaction level is higher than in the developed districts. The most satisfying amenities such as display platform for auction, storage facilities, and stall for merchants, electricity, canteen, and telecommunication and availability of transportation and internet facility are not satisfactory.

## 5.9. Storage of Farm Produce

There are three ways adopted by farmers to store farm products as they store their produce on their own basis, or store farm produce in private warehouses owned by individuals, wholesalers, or large business houses and they pay for it. Besides this they can store their produce in public warehouses owned by the government and its charges are regulated by the government. They can avail of the loan facility against farm produce stored in the warehouses.

The response of farmers on storage was assessed and presented in table 5.9. Three tables are prepared and the first table shows the number of sample farmers who prefer warehouses of government for storing the farm produce, the second table reveals the level of satisfaction of respondents towards amenities provided in these warehouses and the third table highlights the reasons for not using government warehouses for storing the surplus by sample farmers.

### 5.9.1. Preference to Store their Farm Produce in Government Owned/Hired Warehouses

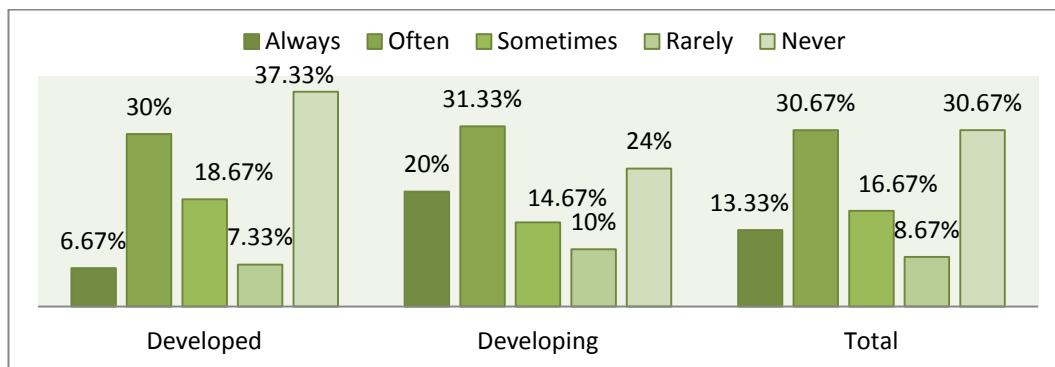
In the table, the respondents are classified into five groups as always, often, sometimes, rarely and never based on their frequency of using the particular warehouses.

**Table 5.9.1: Preference of the Selected Farmers to Store Farm Produce in Government Owned/Hired Warehouses**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	07 (14)	00	03 (06)	10 (6.67)	04 (08)	22 (44)	04 (08)	30 (20)	<b>40</b> <b>(13.33)</b>
b.	Often	15 (30)	30 (60)	10 (20)	45 (30)	09 (18)	18 (36)	20 (40)	47 (31.33)	<b>92</b> <b>(30.67)</b>
c.	Sometimes	06 (12)	19 (38)	03 (06)	28 (18.67)	09 (18)	05 (10)	8 (16)	22 (14.67)	<b>50</b> <b>(16.67)</b>
d.	Rarely	04 (08)	03 (06)	04 (08)	11 (7.33)	04 (08)	5 (10)	6 (12)	15 (10)	<b>26</b> <b>(8.67)</b>
e.	Never	18 (36)	08 (16)	30 (60)	56 (37.33)	24 (48)	00 (00)	12 (24)	36 (24)	<b>92</b> <b>(30.67)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.9.1: Preference of the Selected Farmers to Store Farm Produce in Government Owned/Hired Warehouses**



Source: Survey Data

### Inferences

Findings revealed that nearly 30.67% respondents never use the government warehouses. Only 13.33 respondents always store their farm products in these warehouses and about 30.67 percent respondents generally (often) avail of the facility. Approximately 16.67 percent respondents use these warehouses sometimes not regularly. It is to be noticed from the table that respondents in Kota 60% respondents often use government warehouses but in Sikar, 60% respondents never use these warehouses. In developed districts, only 6.67 percent respondents always use the warehouses while in developing districts about 20 percent respondents always use these warehouses. Nearly 37.33 respondents never availed of the facility in the developed districts whereas only 24 % respondents never use the warehouses in the developing districts.

### 5.9.2. Satisfaction Levels of the Selected Farmers towards Amenities in Government Warehouses

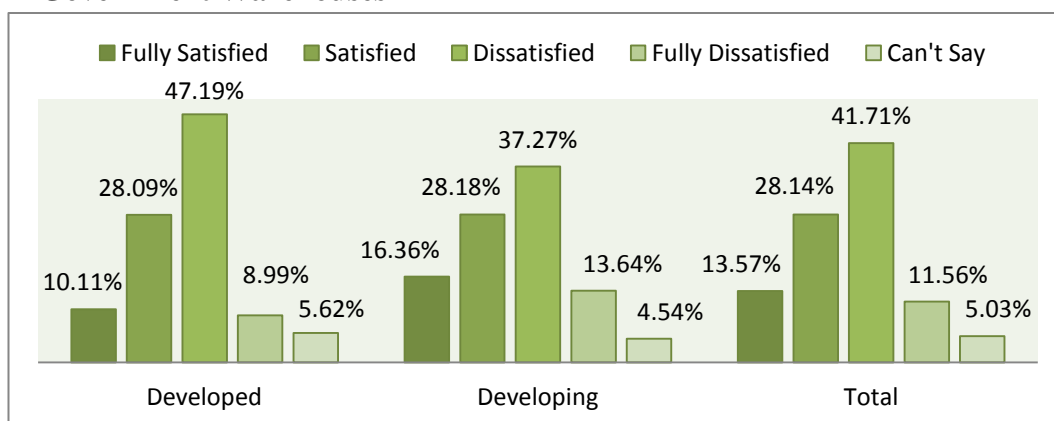
The satisfaction level of respondents (they prefer public warehouses for storing farm produce as always, often, sometimes and rarely in table 5.9.1) towards amenities such as staff, weighing, grading, sampling, handling, transportation for movement of goods, security from theft, fire, pests, and insects provided in the government warehouses, are examined in table 5.9.2.

**Table: 5.9.2: Satisfaction Levels of Selected Farmers towards Amenities in Government Warehouses**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	07 (23.33)	00	02 (5.88)	09 (10.11)	02 (8.33)	10 (20)	06 (16.67)	18 (16.36)	<b>27</b> <b>(13.57)</b>
b.	Satisfied	13 (43.33)	08 (19.05)	04 (23.52)	25 (28.09)	05 (20.83)	18 (36)	08 (22.22)	31 (28.18)	<b>56</b> <b>(28.14)</b>
c.	Dissatisfied	04 (13.33)	32 (76.19)	06 (35.29)	42 (47.19)	11 (45.83)	20 (40)	10 (27.78)	41 (37.27)	<b>83</b> <b>(41.71)</b>
d.	Fully Dissatisfied	05 (16.67)	00 (00)	03 (17.65)	08 (08.99)	05 (20.8)	00	10 (27.78)	15 (13.64)	<b>23</b> <b>(11.56)</b>
e.	Can't say	01 (03.33)	02 (4.76)	02 (11.76)	05 (05.62)	01 (4.17)	02 (04)	02 (05.56)	5 (04.54)	<b>10</b> <b>(5.03)</b>
<b>Total no. of respondents</b>		<b>30</b>	<b>42</b>	<b>17</b>	<b>89</b>	<b>24</b>	<b>50</b>	<b>36</b>	<b>110</b>	<b>199</b>

Source: Survey Data

**Graph 5.9.2: Satisfaction Levels of the Selected Farmers towards Amenities in Government Warehouses**



Source: Survey Data

### Inferences

Most of the respondents (53.27 %) are not satisfied with the amenities or facilities provided by the government in their warehouses. In which about 41.71 percent respondents are dissatisfied and almost 11.56 percent respondents are fully dissatisfied. Only 13.57 percent respondents are fully satisfied with these facilities. In developed districts, the dissatisfaction level is higher than in developing districts for the same.

### 5.9.3. Reason for Not Storing Their Farm Produce in the Government Warehouses

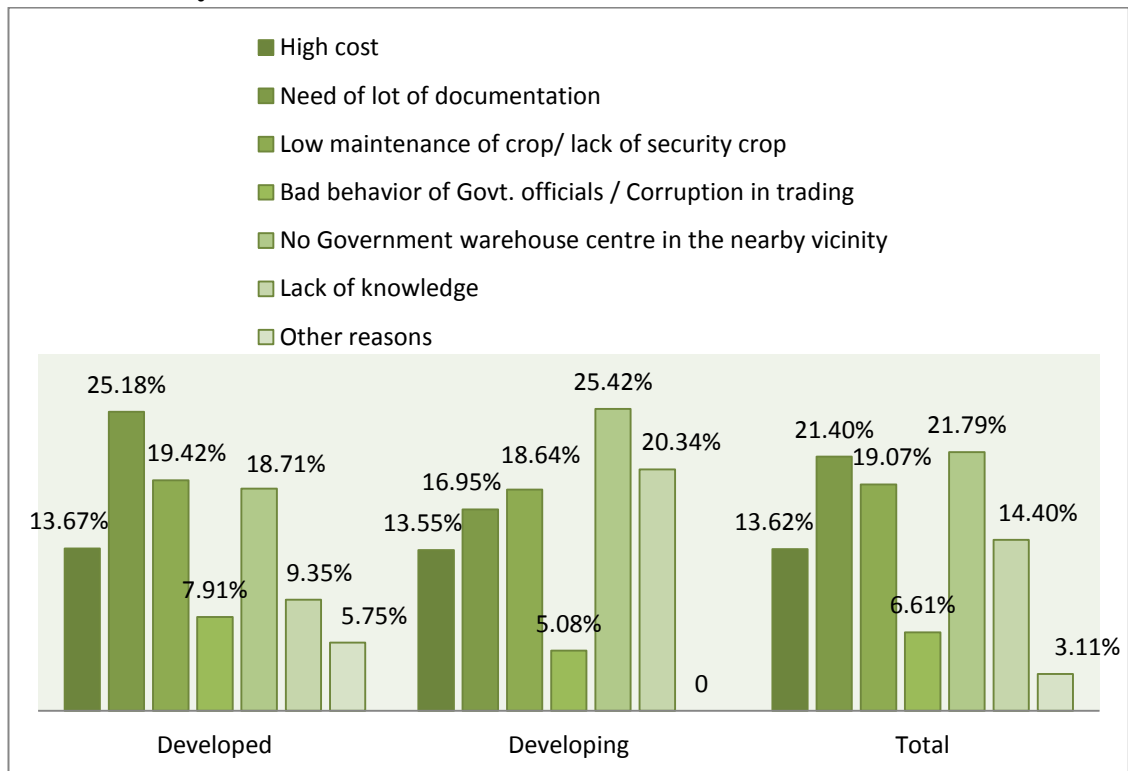
The table 5.9.3 provides information about issues and problems which are responsible for holding farmers back from availing of the facility in the state. In the table 5.9.3, the respondents (who chose often, sometimes, rarely or never from given options about the Government warehouses in the table 5.9.1) were analyzed to know the reasons for not storing the farm produce in these centers.

**Table 5.9.3: Reason for Not Storing Farm Produce in the Government Warehouses by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
<b>a</b>	High cost	06 (14.29)	12 (24)	01 (2.13)	19 (13.67)	02 (4.35)	10 (38.46)	04 (08.70)	16 (13.55)	<b>35</b> <b>(13.62)</b>
<b>b</b>	Need of lot of documentation	14 (33.33)	12 (24)	09 (19.15)	35 (25.18)	02 (4.35)	04 (15.38)	14 (30.43)	20 (16.95)	<b>55</b> <b>(21.40)</b>
<b>c</b>	Low maintenance of crop/ lack of security crop	08 (19.05)	10 (20)	09 (19.15)	27 (19.42)	06 (13.04)	04 (15.38)	12 (26.09)	22 (18.64)	<b>49</b> <b>(19.07)</b>
<b>d</b>	Bad behavior of Govt. officials / Corruption in trading	02 (04.76)	08 (16)	01 (2.13)	11 (7.91)	02 (4.35)	00	04 (8.70)	06 (5.08)	<b>17</b> <b>(6.61)</b>
<b>e</b>	No Government warehouse center in the nearby vicinity	12 (28.57)	00	14 (29.79)	26 (18.71)	18 (39.13)	06 (23.08)	06 (13.04)	30 (25.42)	<b>56</b> <b>(21.79)</b>
<b>f</b>	Lack of knowledge	00	02 (04)	11 (23.40)	13 (9.35)	16 (34.78)	02 (7.69)	06 (13.04)	24 (20.34)	<b>37</b> <b>(14.40)</b>
<b>g</b>	Other reasons	00	06 (12)	02 (4.26)	08 (5.75)	00	00	00	00	<b>8</b> <b>(3.11)</b>
<b>Total no. of respondents</b>		<b>42</b>	<b>50</b>	<b>47</b>	<b>139</b>	<b>46</b>	<b>26</b>	<b>46</b>	<b>118</b>	<b>257</b>

Source: Survey Data

**Graph 5.9.3: Reason for Not Storing Farm Produce in the Government Warehouses by the Selected Farmers**



Source: Survey Data

### Inferences

Most of the respondents (21.79%) don't avail of the facility due to non availability of government warehouses in the nearby vicinity. If they store their goods in these warehouses, it may increase transportation cost. The requirement of a lot of documentation in the procedure, about 21.40% respondents don't avail of the facilities. About 19.07% respondents hold back from the facility due to low maintenance or lack of security of the warehouses. Almost 13.62% and 14.40% respondents generally do not store their farm produce in government warehouses due to high cost and lack of knowledge. Only 6.61 percent respondents don't use the warehouses due to corruption or bad behaviors of office staff in the warehouses. In the developed districts, most of the sample farmers (25.18%) don't avail of the facility due to the need of a lot of documentation or complexity in procedure while in the developing districts, most of the respondents (25.42%) don't store the goods due to non-availability of centers nearby their vicinity.



## 5.10. Agricultural Credit

Timely availability of agricultural credit is essential for efficient agricultural production. The responses of farmers on taking credit from institutional sources like Gramin Bank, Cooperative Bank, Commercial Bank, Regional Rural Bank, SHG, Cooperative credit Societies were assessed and presented in table 5.10. The three tables are prepared and the first table shows the number of sample farmers who prefer institutional sources for taking finance, the second table reveals the level of satisfaction of respondents towards benefits provided by institutional sources, the third table highlights the reasons for not taking credit from the sources by sample farmers,

### 5.10.1. Preference of the Selected Farmers for Institutional Credit

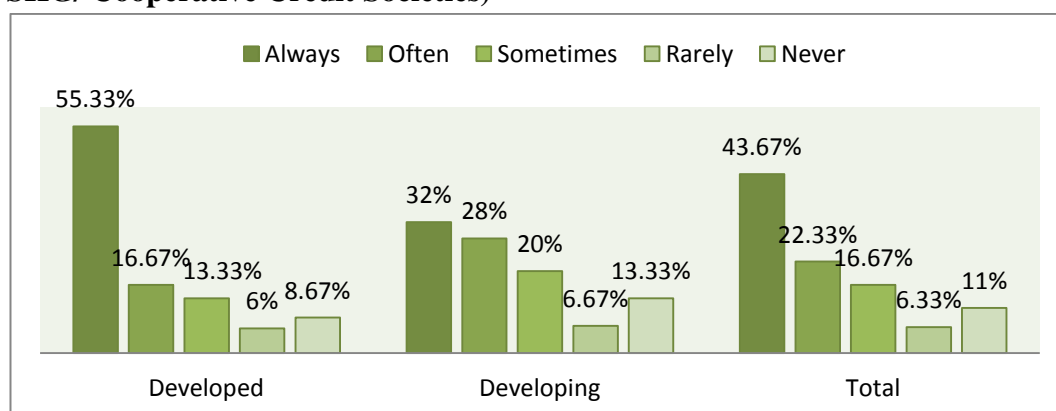
The preference for institutional credit by the selected farmers are explored and described in the table 5.10.1. Hence, respondents are classified into five groups as always, often, sometimes, rarely and never based on their frequency of taking finance from institutional sources.

**Table 5.10.1: Preference of the Selected Farmers for Institutional Credit (Gramin Bank/ Cooperative Bank/ Commercial Bank/ Regional Rural Bank/ SHG/ Cooperative Credit Societies)**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	20 (40)	34 (68)	29 (58)	83 (55.33)	14 (28)	24 (48)	10 (20)	48 (32)	<b>131</b> <b>(43.67)</b>
b.	Often	10 (20)	10 (20)	05 (10)	25 (16.67)	16 (32)	08 (16)	18 (36)	42 (28)	<b>67</b> <b>(22.33)</b>
c.	Sometimes	10 (20)	02 (04)	08 (16)	20 (13.33)	08 (16)	10 (20)	12 (24)	30 (20)	<b>50</b> <b>(16.67)</b>
d.	Rarely	04 (08)	04 (08)	01 (02)	09 (06)	04 (08)	02 (04)	04 (08)	10 (6.67)	<b>19</b> <b>(6.33)</b>
e.	Never	06 (12)	00	07 (14)	13 (8.67%)	08 (16)	06 (12)	06 (12)	20 (13.33)	<b>33</b> <b>(11)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.10.1: Preference of the Selected Farmers for Institutional Credit (Gramin Bank/ Cooperative Bank/ Commercial Bank/ Regional Rural Bank/ SHG/ Cooperative Credit Societies)**



Source: Survey Data

### Inferences

About 43.67% respondents always prefer to take institutional credit. About 22.33% respondents often and about 16.67% respondents sometimes avail of the facility. Approximately 11% respondents never take finances from these sources and 6.33% respondents avail of the facility rarely. It is to be noticed from the table that farmers in Kota 68% respondents always prefer institutional credit but in Jhalawar only 20% selected respondents always prefer to avail of the facility. In the developed districts, about 55.33 percent respondents always prefer it whereas in the developing districts, only 32 percent respondents always prefer to have institutional credit.

#### 5.10.1. Satisfaction Level of the Selected Farmers towards Benefits of Loans from Institutional Credit

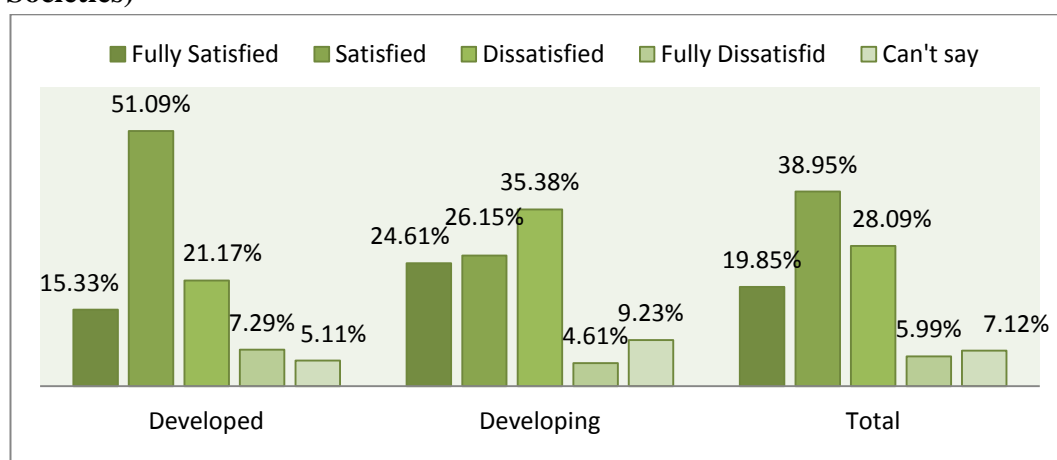
The satisfaction level of respondents (they prefer to take institutional credit as always, often, sometimes and rarely in the table 5.10.1.) towards benefits of loans from institutional credit, are examined in the table 5.10.2.

**Table 5.10.2: Satisfaction Level of the Selected Farmers towards Benefits of Loans from Institutional Credit (Gramin Bank/ Cooperative Bank/ Commercial Bank/ Regional Rural Bank / SHG/ Cooperative Credit Societies)**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	16 (36.36)	00	05 (11.63)	21 (15.33)	08 (19.05)	18 (40.91)	06 (13.64)	32 (24.61)	<b>53</b> <b>(19.85)</b>
b.	Satisfied	20 (45.45)	22 (44)	28 (65.12)	70 (51.09)	06 (14.29)	16 (36.36)	12 (27.27)	34 (26.15)	<b>104</b> <b>(38.95)</b>
c.	Dissatisfied	04 (9.09)	20 (40)	05 (11.63)	29 (21.17)	20 (47.62)	10 (22.73)	16 (36.36)	46 (35.38)	<b>75</b> <b>(28.09)</b>
d.	Fully Dissatisfied	02 (4.55)	04 (08)	04 (9.30)	10 (7.29)	04 (9.52)	00	02 (4.55)	06 (4.61)	<b>16</b> <b>(5.99)</b>
e.	Can't say	02 (4.55)	04 (08)	01 (2.32)	07 (5.11)	04 (9.52)	00	08 (18.18)	12 (9.23)	<b>19</b> <b>(7.12)</b>
<b>Total no. of respondents</b>		<b>44</b>	<b>50</b>	<b>43</b>	<b>137</b>	<b>42</b>	<b>44</b>	<b>44</b>	<b>130</b>	<b>267</b>

Source: Survey Data

**Graph 5.10.2: Satisfaction Level of the Selected Farmers towards Benefits of Loans from Institutional Credit (Gramin Bank/ Cooperative Bank/ Commercial Bank/ Regional Rural Bank / SHG/ Cooperative Credit Societies)**



Source: Survey Data

### Inferences

From the above table, finding reveals that about 38.95 % respondents are satisfied with the benefits of the institutional credit. About 28.09 percent respondents are dissatisfied and almost 5.99 percent respondents are fully dissatisfied. Only 19.85 percent respondents are fully satisfied with these facilities. In developed districts, the satisfaction level is higher than in developing districts for the same.

### 5.10.3. Reasons for Not Taking Loans from Institutional Sources

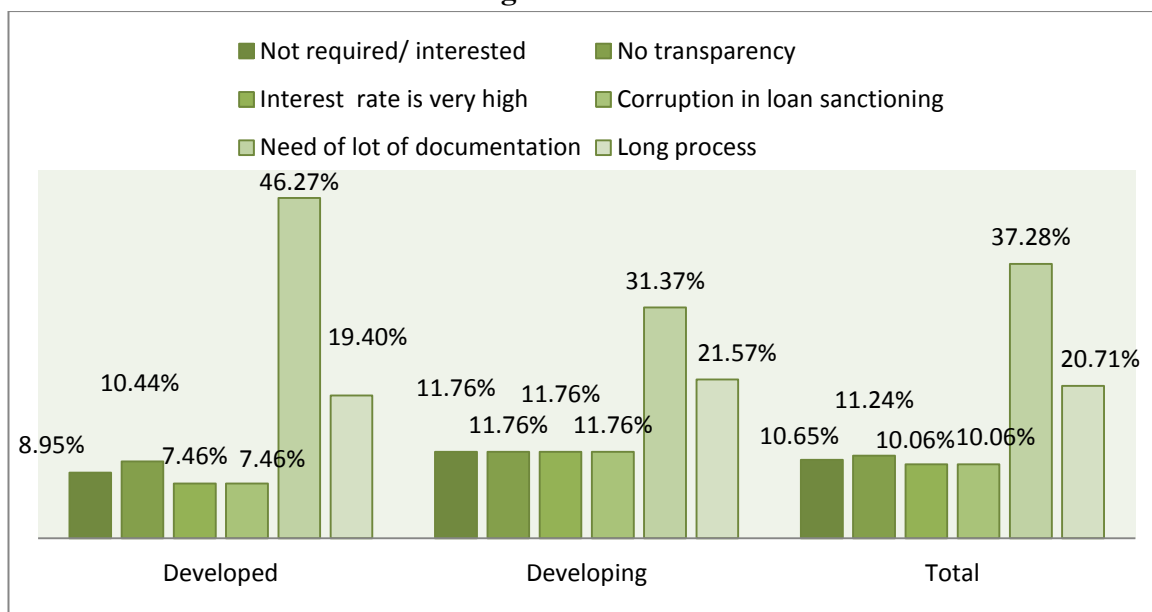
The table 5.10.3 provides information about issues and problems which are responsible for holding farmers back from availing of the facility in the state. In The table 5.10.1, the respondents (who chose often, sometimes, rarely or never from given options about institutional sources in the table 5.10.1.) were analyzed to know the reasons for not preferring the sources to take agricultural finance.

**Table 5.10.3: Reasons for Not Taking Loans from Institutional Sources**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a	Not required/ interested	02 (06.66)	02 (12.5)	02 (9.52)	06 (8.95)	04 (11.11)	02 (7.69)	06 (15)	12 (11.76)	<b>18</b> <b>(10.65)</b>
b	No transparency	02 (06.66)	04 (25)	01 (4.76)	07 (10.44)	02 (5.56)	02 (7.69)	08 (20)	12 (11.76)	<b>19</b> <b>(11.24)</b>
c	Interest rate is very high	02 (06.66)	00	03 (14.28)	05 (7.46)	04 (11.11)	04 (15.38)	04 (10)	12 (11.76)	<b>17</b> <b>(10.06)</b>
d	Corruption in loan sanctioning	02 (06.66)	02 (12.5)	01 (4.76)	05 (7.46)	04 (11.11)	06 (23.08)	02 (05)	12 (11.76)	<b>17</b> <b>(10.06)</b>
e	Need of a lot of documentation	18 (60)	06 (37.5)	07 (33.33)	31 (46.27)	12 (33.33)	08 (30.77)	12 (30)	32 (31.37)	<b>63</b> <b>(37.28)</b>
f	Long process	04 (13.33)	02 (12.5)	07 (33.33)	13 (19.40)	10 (27.78)	04 (15.38)	08 (20)	22 (21.57)	<b>35</b> <b>(20.71)</b>
<b>Total no. of respondents</b>		<b>30</b>	<b>16</b>	<b>21</b>	<b>67</b>	<b>36</b>	<b>26</b>	<b>40</b>	<b>102</b>	<b>169</b>

Sources: Survey Data

**Table 5.10.3: Reasons for not Taking Loans from Institutional Sources**



Source: Survey Data

## Inferences

Most of the respondents (37.28% and 20.71%) don't avail of the facility due to the need for a lot of documentation and long procedure respectively. About 11.24 % respondents hold back from the facility due to lack of transparency in the procedure. Almost 10.06% and 10.06% respondents generally do not prefer it due to high-interest rates and corruption is done by the officials. Almost 10.65 percent respondents don't have interest to avail of the facility. There is not a major difference in the number of respondents between both the groups for the same.

### 5. 11. Kisan Credit Card

The government has launched Kisan Credit Card scheme in August 1988. Now the scheme has converted into ATM enabled the debit card to facilitate its operations through ATM. The main objectives of the scheme are to provide timely short-term credit for farm operation such as cultivation of crops, satisfying consumption needs of farmers household, post-harvest expenses, farm asset maintenance, and livestock requirement.

The response of the selected farmers about Kisan Credit Card was assessed and presented in the table 5.11. Three tables are prepared and the first table shows the number of sample farmers who have Kisan Credit Card in the state, the second table reveals the level of satisfaction of respondents towards benefits provided by it, and the third table highlights the reasons of not having Kisan Credit Card yet by sample farmers.

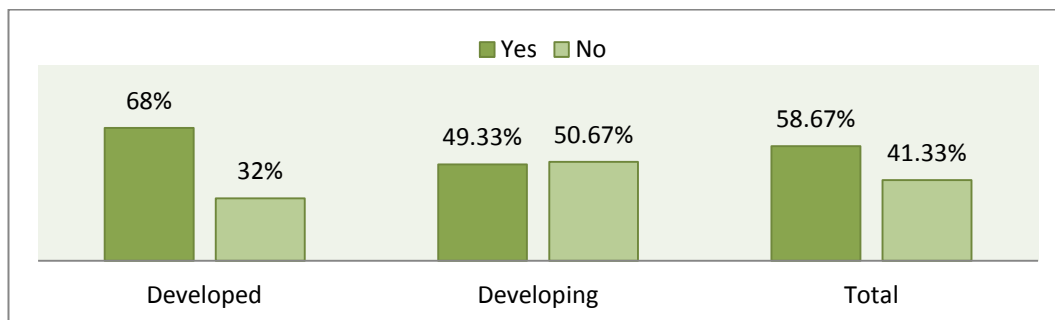
#### 5.11.1. Status of Kisan Credit Card

**Table 5.11.1: Status of the Selected Farmers Who Had Kisan Credit Card**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Yes	27 (54)	38 (76)	37 (74)	102 (68)	26 (52)	26 (52)	22 (44)	74 (49.33)	<b>176</b> <b>(58.67)</b>
b.	No	23 (46)	12 (24)	13 (26)	48 (32)	24 (48)	24 (48)	28 (56)	76 (50.67)	<b>124</b> <b>(41.33)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey data

**Graph 5.11.1: Status of the Selected Farmers Kisan Credit Card Who Had Kisan Credit Card**



Source: Survey Data

### Inferences

About 58.67% farmers have Kisan Credit Card while nearly 41.33% farmers do not have Kisan Credit Card. In the developed districts, about 68 percent respondents have Kisan Credit Card whereas only 49.33 percent have it in the developing district.

### 5.11.2. Satisfaction Level of the Selected Farmers towards Benefits of Kisan Credit Card Scheme

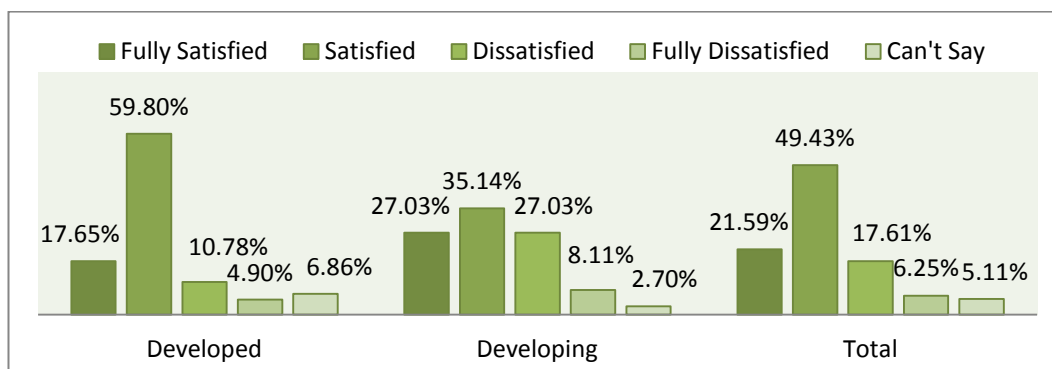
The satisfaction level of respondents (they responded 'yes' in the table 5.11.1) towards benefits of Kisan Credit Card Scheme, is examined in table 5.11.2.

**Table 5.11.2: Satisfaction Level of the Selected Farmers towards Benefits of Kisan Credit Card Scheme**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	07 (25.92)	02 (5.26)	09 (24.32)	18 (17.65)	06 (23.08)	12 (46.15)	02 (9.09)	20 (27.03)	<b>38</b> <b>(21.59)</b>
b.	Satisfied	12 (44.44)	28 (73.68)	21 (56.76)	61 (59.80)	04 (15.38)	10 (38.46)	12 (54.55)	26 (35.14)	<b>87</b> <b>(49.43)</b>
c.	Dissatisfied	04 (14.81)	04 (10.53)	03 (8.11)	11 (10.78)	12 (46.15)	04 (15.38)	04 (18.18)	20 (27.03)	<b>31</b> <b>(17.61)</b>
d.	Fully Dissatisfied	02 (7.40)	02 (5.26)	01 (2.70)	05 (4.90)	04 (15.38)	00 (00)	02 (9.09)	06 (8.11)	<b>11</b> <b>(6.25)</b>
e.	Can't say	02 (7.40)	02 (5.26)	03 (8.11)	07 (6.86)	00 (00)	00 (00)	02 (9.09)	02 (2.70)	<b>09</b> <b>(5.11)</b>
<b>Total no. of respondents</b>		<b>27</b>	<b>38</b>	<b>37</b>	<b>102</b>	<b>26</b>	<b>26</b>	<b>22</b>	<b>74</b>	<b>176</b>

Source: Survey Data

**Graph 5.11.2: Satisfaction Level of Farmers towards Benefits of Kisan Credit Card Scheme**



Source: Survey Data

### Inferences

Most of the respondents (49.43%) are satisfied with the benefits of the scheme. About 21.59% respondents are fully satisfied with it. Nearly 17.61 percent respondents are dissatisfied and 6.25 percent respondents are fully dissatisfied with the scheme. The satisfaction level of the scheme is higher in the developed districts than in the developing districts.

### 5.11.3. Reasons for Not Having Kisan Credit Cards by the Selected Farmers

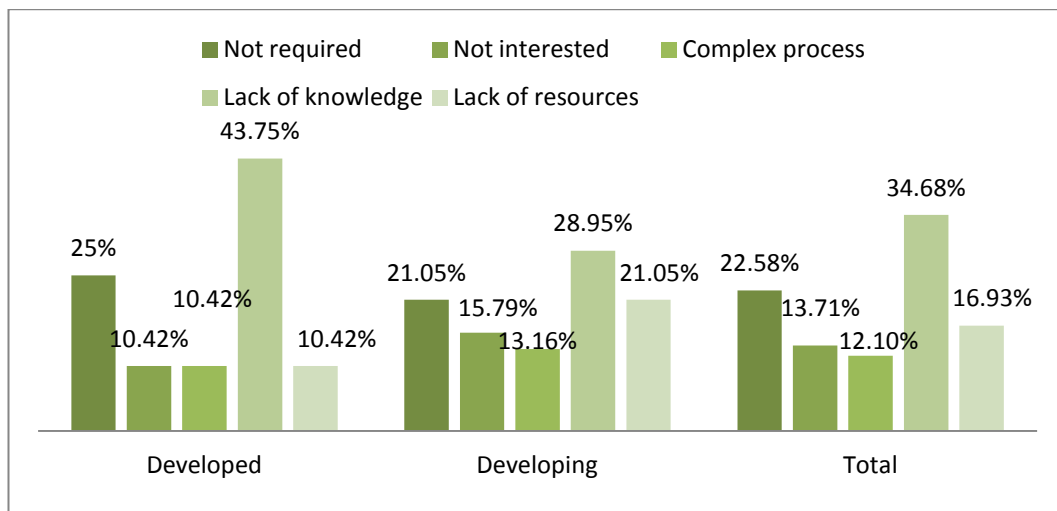
In the table 5.11.3, the respondents (who chose 'No' from given options about having Kisan Credit Card in the table 5.11.1) were analyzed to know the reasons for not availing of the facility.

**Table 5.11.3: Reasons for Not Having Kisan Credit Card by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Not required	08 (34.78)	02 (16.67)	02 (15.38)	12 (25)	06 (25)	06 (25)	04 (14.28)	16 (21.05)	<b>28</b> <b>(22.58)</b>
b.	Not interested	03 (13.04)	02 (16.67)	00	05 (10.42)	02 (8.33)	06 (25)	04 (14.28)	12 (15.79)	<b>17</b> <b>(13.71)</b>
c.	Complex process	02 (8.70)	02 (16.67)	01 (7.69)	05 (10.42)	02 (8.33)	00	08 (28.57)	10 (13.16)	<b>15</b> <b>(12.10)</b>
d.	Lack of knowledge	10 (43.48)	04 (33.33)	07 (53.85)	21 (43.75)	10 (41.67)	06 (25)	06 (21.43)	22 (28.95)	<b>43</b> <b>(34.68)</b>
e.	Lack of resources	00	02 (16.67)	03 (23.08)	05 (10.42)	04 (16.67)	06 (25)	06 (21.43)	16 (21.05)	<b>21</b> <b>(16.93)</b>
<b>Total no. of Respondents</b>		<b>23</b>	<b>12</b>	<b>13</b>	<b>48</b>	<b>24</b>	<b>24</b>	<b>28</b>	<b>76</b>	<b>124</b>

Source: Survey Data

**Graph 5.11.3: Reasons for Not Having Kisan Credit Card by the Selected Farmers**



**Source: Survey Data**

### **Inferences**

The finding reveals that most of the respondents (34.68%) don't have Kisan Credit Cards due to lack of knowledge about it and nearly 22.58% respondents feel that they have no need of it. About 13.71 percent respondent do not show any interest in having it. About 12.10% and 16.93 % respondents don't have it due to the complex or long procedure and lack of resources respectively.

### **5.12. Crop Insurance**

The crop insurance provides financial security to farmers against loss of crops due to natural calamity or diseases. The responses of selected farmers to crop insurance were assessed and presented in the table 5.12. Three tables are prepared and the first table shows the number of sample farmers who get insured their crops in the state, the second table reveals the level of satisfaction of respondents towards benefits provided by it, and the third table highlights the reasons for not getting crop insurance by sample farmers.

#### **5.12.1. Status of the Selected Farmers Who Get Insured Their Crops**

The respondents are classified into five groups as always, often, sometimes, rarely and never based on their frequency of getting crop insurance.

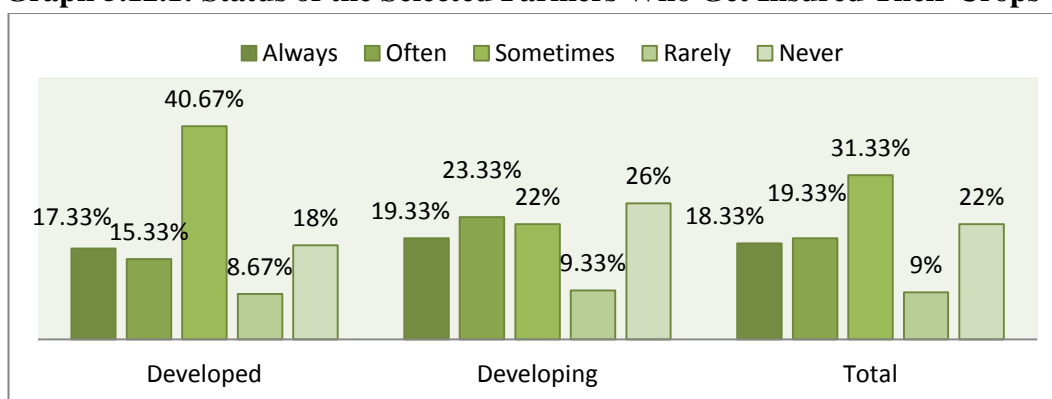


**Table 5.12.1: Status of the Selected Farmers Who Get Insured Their Crops**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	11 (22)	02 (04)	13 (26)	26 (17.33)	08 (16)	15 (30)	06 (12)	29 (19.33)	<b>55</b> <b>(18.33)</b>
b.	Often	07 (14)	08 (16)	08 (16)	23 (15.33)	08 (16)	15 (30)	12 (24)	35 (23.33)	<b>58</b> <b>(19.33)</b>
c.	Sometimes	21 (42)	30 (60)	10 (20)	61 (40.67)	9 (218)	15 (30)	9 (18)	33 (22)	<b>94</b> <b>(31.33)</b>
d.	Rarely	05 (10)	04 (08)	04 (08)	13 (08.67)	5 (10)	04 (08)	5 (10)	14 (9.33)	<b>27</b> <b>(09)</b>
e.	Never	06 (12)	06 (12)	15 (30)	27 (18)	20 (40)	01 (02)	18 (36)	39 (26)	<b>66</b> <b>(22)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.12.1: Status of the Selected Farmers Who Get Insured Their Crops**



Source: Survey Data

### Inferences

Insurance of crops is an essential part of farming but only 18.33 percent of respondents always have insurance on their crops while 22% respondents never insured their crops. In the developed districts, about 18 percent respondents never insure their crop and almost 26 percent respondents never avail of the facility in the developing districts which are a huge proportion and the risk of loss is very high. In Sikar and Tonk, the number of respondents is the highest who always insure their crops whereas, in Kota, the number of respondents is the lowest for the same.

### 5.12.2. Satisfaction level of the Selected Farmers towards Benefits of Crop Insurance

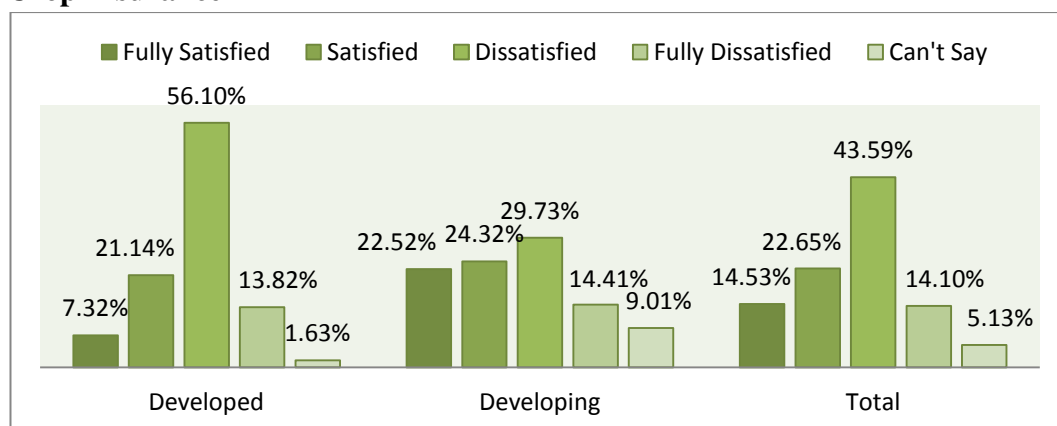
The satisfaction level of respondents (they prefer to have crop insurance as always, often, sometimes and rarely in the table 5.12.1.) towards benefits of crop insurance, is examined in the table 5.12.2.

**Table 5.12.2: Satisfaction level of the Selected Farmers towards Benefits of Crop Insurance**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	04 (9.09)	00	05 (14.29)	09 (7.32)	05 (16.67)	16 (32.65)	04 (12.5)	25 (22.52)	<b>34</b> <b>(14.53)</b>
b.	Satisfied	14 (31.82)	06 (13.64)	06 (17.14)	26 (21.14)	07 (23.33)	14 (28.57)	06 (18.75)	27 (24.32)	<b>53</b> <b>(22.65)</b>
c.	Dissatisfied	15 (34.09)	34 (77.27)	20 (57.14)	69 (56.10)	11 (36.67)	10 (20.41)	12 (37.5)	33 (29.73)	<b>102</b> <b>(43.59)</b>
d.	Fully Dissatisfied	10 (22.73)	04 (9.09)	03 (8.57)	17 (13.82)	03 (10)	07 (14.29)	06 (18.75)	16 (14.41)	<b>33</b> <b>(14.10)</b>
e.	Can't say	01 (02.27)	00	01 (2.86)	02 (1.63)	04 (13.33)	02 (4.08)	04 (12.5)	10 (9.01)	<b>12</b> <b>(5.13)</b>
<b>Total no. of respondents</b>		<b>44</b>	<b>44</b>	<b>35</b>	<b>123</b>	<b>30</b>	<b>49</b>	<b>32</b>	<b>111</b>	<b>234</b>

Source: Survey Data

**Graph 5.12.2: Satisfaction level of the Selected Farmers towards Benefits of Crop Insurance**



Source: Survey Data

The findings revealed that only 14.53% respondents are fully satisfied. Most of the respondents (43.59%) are dissatisfied with the crop insurance specifically in Kota 77.27% and Sikar 57.14 % of total respondents. About 14.10 percent respondents are fully dissatisfied. In the developed districts, the dissatisfaction level with 56.15 % dissatisfied and 13.82 % fully dissatisfied respondents is

higher than in developing districts where only 29.73% and 14.41 % respondents are dissatisfied and fully dissatisfied respectively.

### 5.12.3. Reason for Not Insuring Their Crops by the Selected Farmers

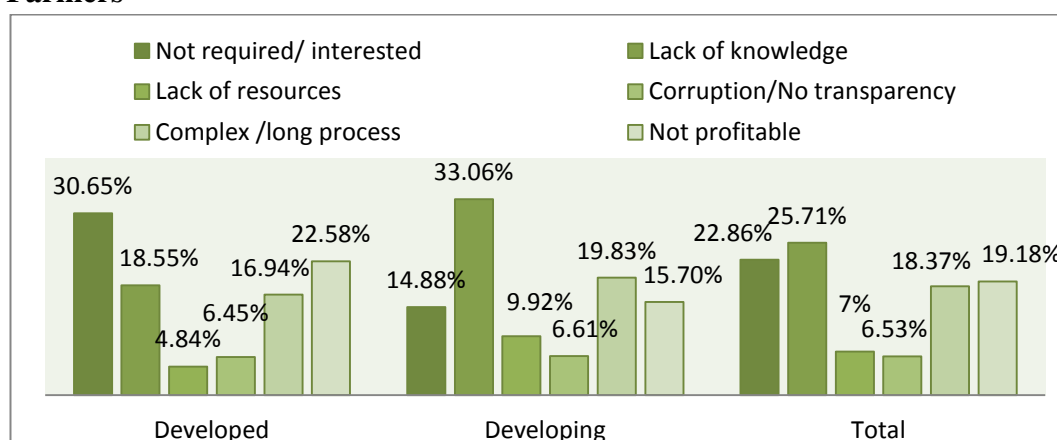
The table 5.12.3 provides information about issues and problems which are responsible for holding farmers back from availing of the facility in the state. In the table 5.12.1, the respondents (who chose often, sometimes, rarely and never from given options about having crop insurance in the table 5.12.1) were analyzed to know the reasons for not availing of the facility.

**Table 5.12.3: Reason for Not Insuring the Farm Produce by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing(2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a	Not required/ Interested	10 (25.64)	18 (37.5)	10 (27.03)	38 (30.65)	04 (09.52)	08 (22.86)	06 (13.64)	18 (14.88)	<b>56</b> <b>(22.86)</b>
b	Lack of knowledge	07 (17.94)	08 (16.67)	08 (21.62)	23 (18.55)	18 (42.86)	10 (28.57)	12 (27.27)	40 (33.06)	<b>63</b> <b>(25.71)</b>
c	Lack of resources	04 (10.26)	00	02 (05.41)	06 (04.84)	02 (04.76)	04 (11.43)	06 (13.64)	12 (9.92)	<b>18</b> <b>(7.35)</b>
d	Corruption/No transparency	02 (05.13)	04 (08.33)	02 (05.41)	08 (06.45)	02 (04.76)	00	06 (13.64)	08 (6.61)	<b>16</b> <b>(6.53)</b>
e	Complex / Long process	06 (15.38)	10 (20.83)	05 (13.51)	21 (16.94)	10 (23.81)	06 (17.14)	08 (18.18)	24 (19.83)	<b>45</b> <b>(18.37)</b>
f	Not profitable	10 (25.64)	08 (16.67)	10 (27.03)	28 (22.58)	06 (14.29)	07 (20)	06 (13.64)	19 (15.70)	<b>47</b> <b>(19.18)</b>
<b>Total no. of respondents</b>		<b>39</b>	<b>48</b>	<b>37</b>	<b>124</b>	<b>42</b>	<b>35</b>	<b>44</b>	<b>121</b>	<b>245</b>

Source: Survey Data

**Graph 5.12.3: Reason for Not Insuring the Farm Produce by the Selected Farmers**



Source: Survey Data

## Inferences

Most of the respondents (25.71%) don't insure the crop because they have no knowledge about it while around 22.86% respondents are not interested to have crop insurance. About 18.37 % and 19.18 % respondents hold back from availing of the facility due to complexity in the procedure and less profitability. Sometimes they don't get claim or compensation against loss of crops after paying the premium due to the complexity of the procedure and corruption done by an official of the insurance company. About 6.53 % respondents don't get crop insurance due to corruption. In the developed districts, most of the respondents don't insure the crops due to lack of interest or non requirement whereas in developing districts, most of the respondents don't get insurance because they have no enough knowledge about it.

### 5.13. Agriculture-Based Programmes, Broadcasting on Electronic Media

To know the status of such programmes, two tables have been prepared. The first table reveals the frequency of respondents for watching such types of the shows and the second table highlights the number of the respondents who follow the advice and guidance in their farm operation which is provided in the programs.

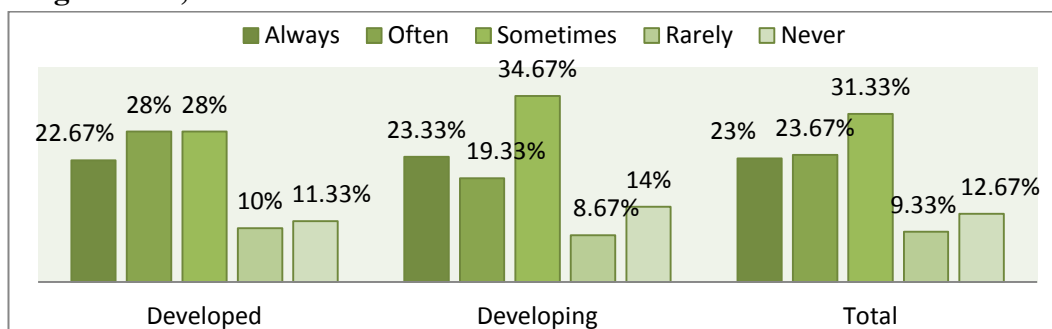
#### 5.13.1. Status of the Selected Farmers Who Following Agriculture Based Programmes, Broadcasting on Electronic Media

**Table 5.13.1: Status of the Selected Farmers Who Follow Agriculture Based Programmes, Broadcasted on Electronic Media**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	15 (30)	06 (12)	13 (26)	34 (22.67)	08 (16)	16 (32)	11 (22)	35 (23.33)	<b>69</b> <b>(23)</b>
b.	Often	06 (12)	27 (54)	09 (18)	42 (28)	04 (08)	10 (20)	15 (30)	29 (19.33)	<b>71</b> <b>(23.67)</b>
c.	Sometimes	20 (40)	05 (10)	17 (34)	42 (28)	21 (42)	18 (36)	13 (26)	52 (34.67)	<b>94</b> <b>(31.33)</b>
d.	Rarely	05 (10)	06 (12)	04 (08)	15 (10)	05 (10)	04 (08)	04 (08)	13 (8.67)	<b>28</b> <b>(9.33)</b>
e.	Never	04 (08)	06 (12)	07 (14)	17 (11.33)	12 (24)	02 (04)	07 (14)	21 (14)	<b>38</b> <b>(12.67)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.13.1: Status of the Selected Farmers Who Follow Agriculture Based Programmes, Broadcasted on Electronic Media**



Source: Survey data

### Inferences

Almost 12.67% respondents never follow agriculture-based programmes, broadcasted on electronic media while 87.33% regularly, often, sometimes and rarely follow these programmes. There is no considerable difference between the numbers of respondents of both the groups.

### 5.13.2. Status of the Selected Farmers Who Follow the Advice, Given in Agriculture Based Programmes

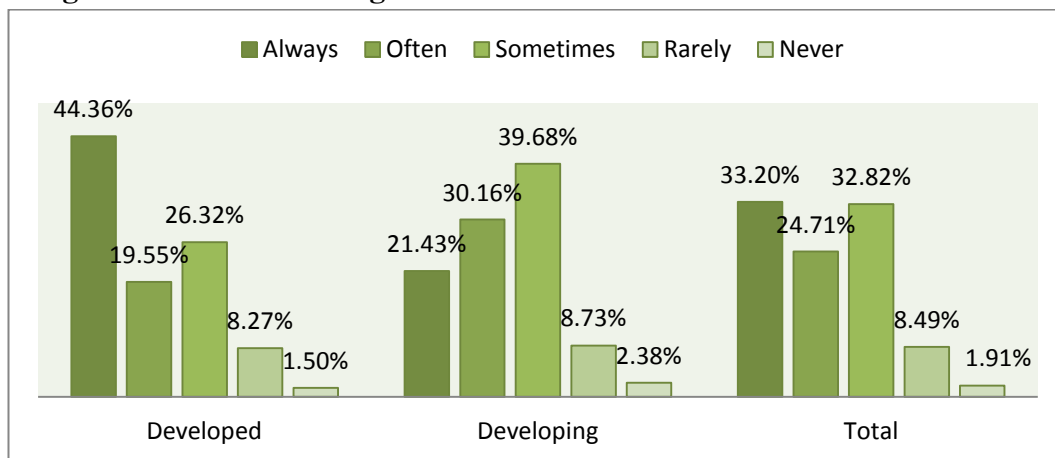
The respondents (who responded always, often, sometimes or rarely in the table 5.13.1) are classified into five groups as always, often, sometimes, rarely and never based on their frequency of following advice or guidelines provided in the agriculture-based shows.

**Table 5.13.2: Status of the Selected Farmers Who Follow the Advice, Given in Agriculture Related Programmes Broadcasted on Electronic Media**

S. N .	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	12 (26.08)	30 (68.18)	17 (39.53)	59 (44.36)	06 (16.67)	13 (27.08)	08 (19.05)	27 (21.43)	<b>86</b> <b>(33.20)</b>
b.	Often	08 (17.39)	04 (09.09)	14 (32.56)	26 (19.55)	07 (19.44)	15 (31.25)	16 (38.09)	38 (30.16)	<b>64</b> <b>(24.71)</b>
c.	Sometimes	20 (43.48)	07 (15.91)	08 (18.60)	35 (26.32)	20 (55.55)	16 (33.33)	14 (33.33)	50 (39.68)	<b>85</b> <b>(32.82)</b>
d.	Rarely	4 (08.69)	03 (06.82)	04 (09.30)	11 (08.27)	03 (08.33)	04 (8.33)	4 (09.52)	11 (08.73)	<b>22</b> <b>(08.49)</b>
e.	Never	02 (04.35)	00	00	02 (01.50)	02 (5.26)	00	01 (02.32)	03 (2.38)	<b>05</b> <b>(1.91)</b>
<b>Total no. of respondents</b>		<b>46</b>	<b>44</b>	<b>43</b>	<b>133</b>	<b>38</b>	<b>48</b>	<b>43</b>	<b>129</b>	<b>262</b>

Source: Survey Data

**Graph 5.13.2: Status of the Selected Farmers Who Follow the Advice, Given in Agriculture Related Programmes Broadcasted on Electronic Media**



Source: Survey data

### Inferences

Nearly 98.09% respondents (Always 33.20%, often, 24.71 %, sometimes 32.82 %, and rarely 8.49 %) follow the advice given in such programmes while only 1.91 % respondents never follow advice. In Kota, about 68.18% respondents always follow the advice given in such programmes. The number of respondents who always follow the advice is higher in developed districts than in developing districts.

### 5.14. Kisan Call Centre

Kisan Call Centres are established to provide information and expert advice to farmers in the state. To know the status of Kisan Call Centres in the state, four tables have been prepared and the first table exhibited the number of selected farmers who have knowledge of the organization, the second table reveals the number of selected farmers who ever called up the centres, the third table highlights the satisfaction level of farmers towards availing of the service and the fourth table describes the reasons for not using the service by the farm community.

#### 5.14.1. Knowledge of Selected Farmers about Kisan Call Centres

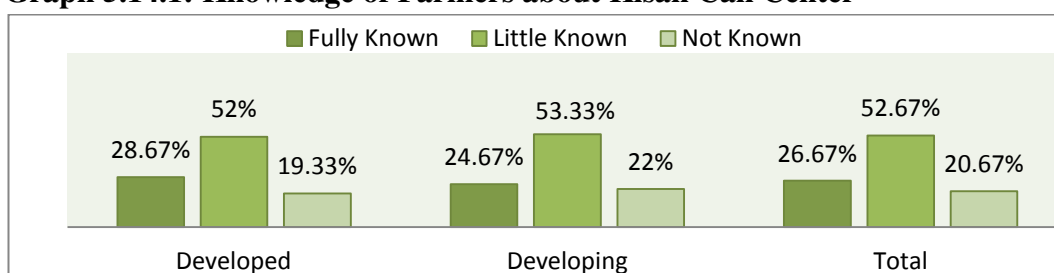
To know the degree of knowledge of farmers about Kisan Call Centers, the respondents are classified into three groups as fully known, little known and not known in table 5.14.1.

**Table 5.14.1: Knowledge of Farmers about Kisan Call Center**

S. N.	Variables	Developed				Total	Developing			Total	Total
		Jaipur	Kota	Sikar	Total		SWM	Tonk	JWR		
a.	Fully Known	14 (28)	08 (16)	21 (42)	43 (28.67)	08 (16)	18 (36)	11 (22)	37 (24.67)	<b>80</b> <b>(26.67)</b>	
b.	Little Known	26 (52)	32 (64)	20 (40)	78 (52)	28 (56)	26 (52)	26 (52)	80 (53.33)	<b>158</b> <b>(52.67)</b>	
c.	Not Known	10 (20)	10 (20)	09 (18)	29 (19.33)	14 (28)	06 (12)	13 (26)	33 (22)	<b>62</b> <b>(20.67)</b>	
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>	

Source: Survey Data

**Graph 5.14.1: Knowledge of Farmers about Kisan Call Center**



Source: Survey Data

### Inferences

Almost 26.67% respondents are fully aware of KCCs, while around 52.67% think that they have little knowledge and nearly 20.67% don't have any knowledge. There is no considerable difference between the number of respondents of both the groups.

### 5.14.2. Number of the Selected Farmers Who Called Up at Kisan Call Centre

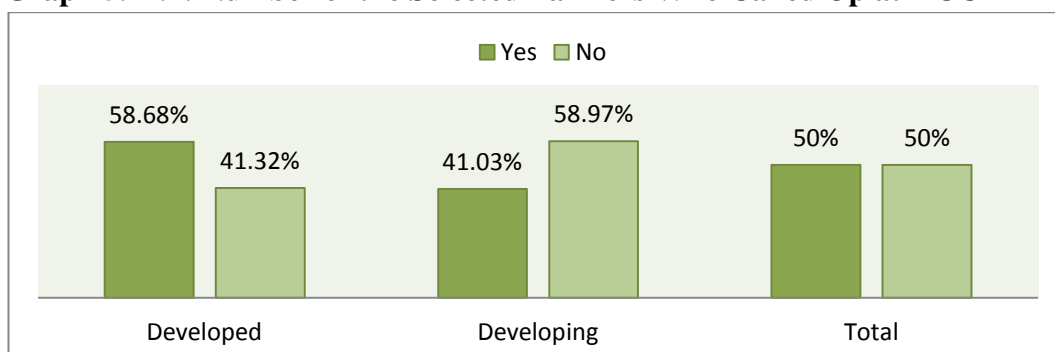
To know the number of selected farmers who availed of the service of Kisan Call Centers, the respondents (they are fully known and little known about KCC in the table 5.14.1) are assessed in the table 5.14.2.

**Table 5.14.2: Number of the Selected Farmers Who Called Up at KCC**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Yes	22 (55)	30 (75)	19 (46.34)	71 (58.68)	08 (22.22)	23 (52.27)	17 (45.95)	48 (41.03)	<b>119</b> <b>(50)</b>
b.	No	18 (45)	10 (25)	22 (53.66)	50 (41.32)	28 (77.78)	21 (47.73)	20 (54.05)	69 (58.97)	<b>119</b> <b>(50)</b>
<b>Total no. of respondents</b>		<b>40</b>	<b>40</b>	<b>41</b>	<b>121</b>	<b>36</b>	<b>44</b>	<b>37</b>	<b>117</b>	<b>238</b>

Source: Survey Data

**Graph 5.14.2: Number of the Selected Farmers Who Called Up at KCC**



Source: Survey data

### Inferences

The findings indicated that Out of 238 respondents (79.33%) have some knowledge about KCC, 50% of them accepted that they used it. The numbers of the user are maximum in Kota (75%) and minimum in Sawaimadhopur (22.22%). About 50% users admitted that they haven't availed of the service yet. In the developed districts, the number of users is higher than in developing districts.

### 5.14.3. Satisfaction Level of the Selected Farmers towards KCC Services

The satisfaction level of respondents (they called up KCC in table 5.14.2) towards KCC service are examined in table 5.14.3.

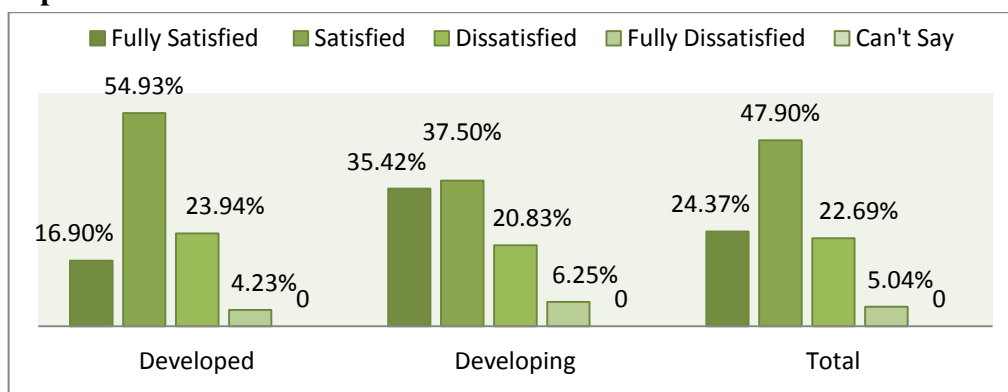
**Table 5.14.3: Satisfaction Level of Selected Farmers towards Kisan Call Services**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	10 (45.45)	00	02 (10.57)	12 (16.90)	02 (25)	15 (65.22)	00	17 (35.42)	<b>29 (24.37)</b>
b.	Satisfied	06 (27.27)	18 (60)	15 (78.95)	39 (54.93)	02 (25)	06 (26.09)	10 (58.82)	18 (37.5)	<b>57 (47.9)</b>
c.	Dissatisfied	04 (18.18)	12 (40)	01 (5.26)	17 (23.94)	04 (50)	02 (8.69)	04 (23.53)	10 (20.83)	<b>27 (22.69)</b>
d.	Fully Dissatisfied	02 (9.09)	00	01 (5.26)	03 (4.23)	00	00	03 (17.65)	03 (6.25)	<b>06 (5.04)</b>
e.	Can't say	00	00	00	00	00	00	00	00	<b>00</b>
<b>Total no. of respondents</b>		<b>22</b>	<b>30</b>	<b>19</b>	<b>71</b>	<b>08</b>	<b>23</b>	<b>17</b>	<b>48</b>	<b>119</b>

Source: Survey Data



**Graph 5.14.3: Satisfaction Level of the Selected Farmers towards KCC**



Source: Survey Data

### Inferences

The percentage of fully satisfied and satisfied respondents is around 24.37 %, and 47.9% respectively. The percentages of fully dissatisfied and dissatisfied respondents are 5.04 % and 22.69 % respectively. The number of respondents is almost the same in both the groups.

#### 5.14.4. Reason for Not Using KCC Services by the Selected Farmers

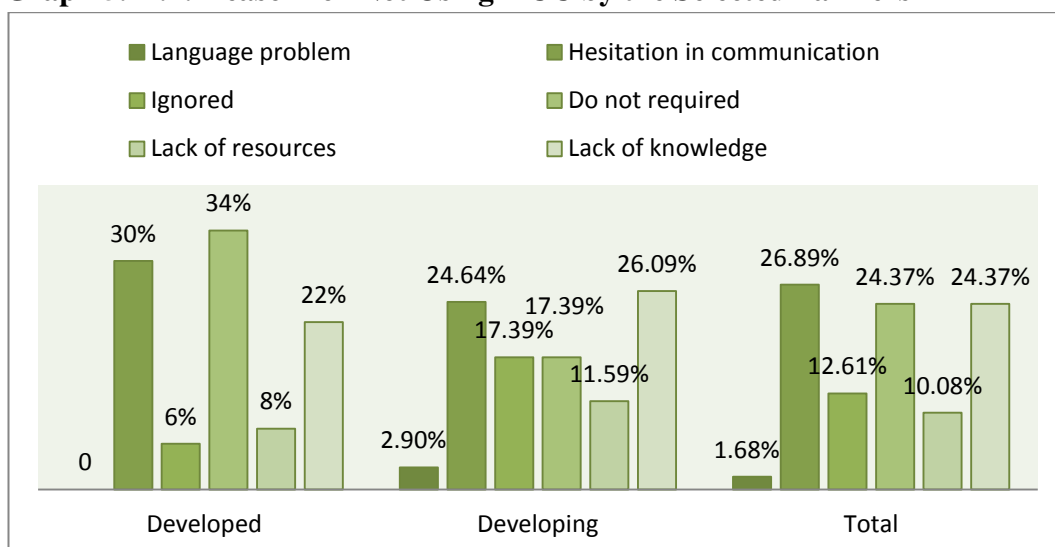
The table 5.14.4 provides information about issues and problems which are responsible for holding farmers back from availing of the service in the state. In the table 5.14.4, the respondents (who chose 'no' from given options in table 5.14.2) are analyzed to know the reason for not using the services of the KCC.

**Table 5.14.4: Reason for Not Using KCC Services by the Selected Farmers**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Language problem	00	00	00	00	02 (7.14)	00	00	02 (2.90)	<b>02 (1.68)</b>
b.	Hesitation in talking	06 (33.33)	05 (50)	04 (18.18)	15 (30)	06 (21.43)	07 (33.33)	04 (20)	17 (24.64)	<b>32 (26.89)</b>
c.	Ignored	02 (11.11)	00	01 (4.55)	03 (06)	02 (7.14)	04 (19.05)	06 (30)	12 (17.39)	<b>15 (12.61)</b>
d.	Do not required	04 (22.22)	02 (20)	11 (50)	17 (34)	06 (21.43)	04 (19.05)	02 (10)	12 (17.39)	<b>29 (24.37)</b>
e.	Lack of resources	00	02 (20)	02 (9.09)	04 (08)	04 (14.29)	02 (9.52)	02 (10)	08 (11.59)	<b>12 (10.08)</b>
f.	Lack of knowledge	06 (33.33)	01 (10)	04 (18.18)	11 (22)	08 (28.57)	04 (19.05)	06 (30)	18 (26.09)	<b>29 (24.37)</b>
<b>Total no. of Respondents</b>		<b>18</b>	<b>10</b>	<b>22</b>	<b>50</b>	<b>28</b>	<b>21</b>	<b>20</b>	<b>69</b>	<b>119</b>

Source: Survey Data

**Graph 5.14.4: Reason for Not Using KCC by the Selected Farmers**



Source: Survey Data

### Inferences

In the table 5.14.4, the finding reveals that 119 respondents say that they have never used it in the table 5.14.2, almost 26.89 % don't call up because of hesitation in communication, around 24.37% respondents don't have any requirement and similar numbers of respondents don't use it reason being lack of knowledge like KCC call number. About 10.08% respondents give the reason of lack of resources as unavailability of the telephone connection, mobile connectivity. Only 1.68 percent respondents don't call up the center because of the language problem and 12.61 percent respondents ignore the service.

### 5.15. Awareness and Satisfaction Level of the Selected Farmers about Programs/Policies/Schemes Run by the Government

To know the level of awareness of selected farmers about the policies, schemes, or programmes run by the central and state government for promoting agricultural marketing in the state, 17 schemes or projects are analyzed and the respondents are classified into three groups in the following tables. The first group related that respondents who are aware of the government's initiatives and the second group related those respondents who don't have any knowledge about it whereas the respondents don't have any clear views, so they are classified into the third group as "can't say".

The satisfaction level of sample farmers towards the endeavors made by the Government are explored and described in the following tables and respondents are classified into five categories as fully satisfied, satisfied, neutral, and dissatisfied and can't say on the basis of their opinion.

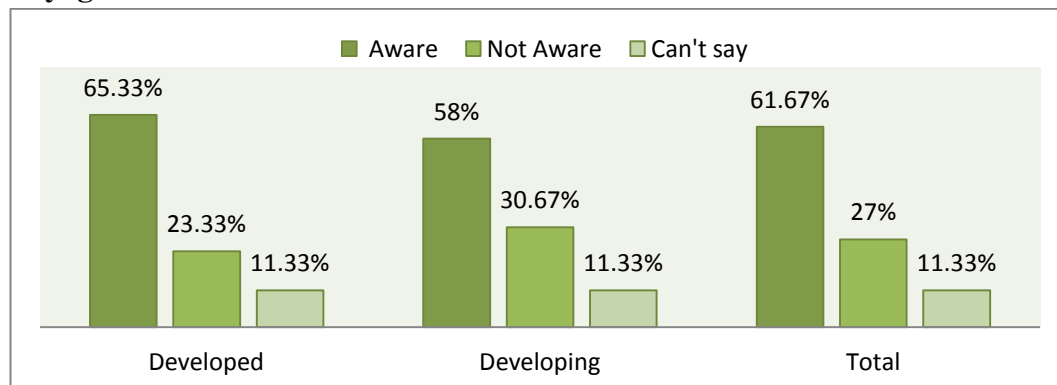
### 5.15.1. Rajasthan Kisan Aayog

**Table 5.15.1.1: Knowledge of the Selected Farmers about Rajasthan Kisan Aayog**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	30 (60)	46 (92)	22 (44)	98 (65.33)	28 (56)	34 (68)	25 (50)	87 (58)	<b>185</b> <b>(61.67)</b>
b.	Not Aware	15 (30)	02 (04)	18 (36)	35 (23.33)	19 (38)	12 (24)	15 (30)	46 (30.67)	<b>81</b> <b>(27)</b>
c.	Can't say	05 (10)	02 (04)	10 (20)	17 (11.33)	03 (06)	04 (08)	10 (20)	17 (11.33)	<b>34</b> <b>(11.33)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.1.1: Knowledge of the Selected Farmers about Rajasthan Kisan Aayog**



Source: Survey Data

### Inferences

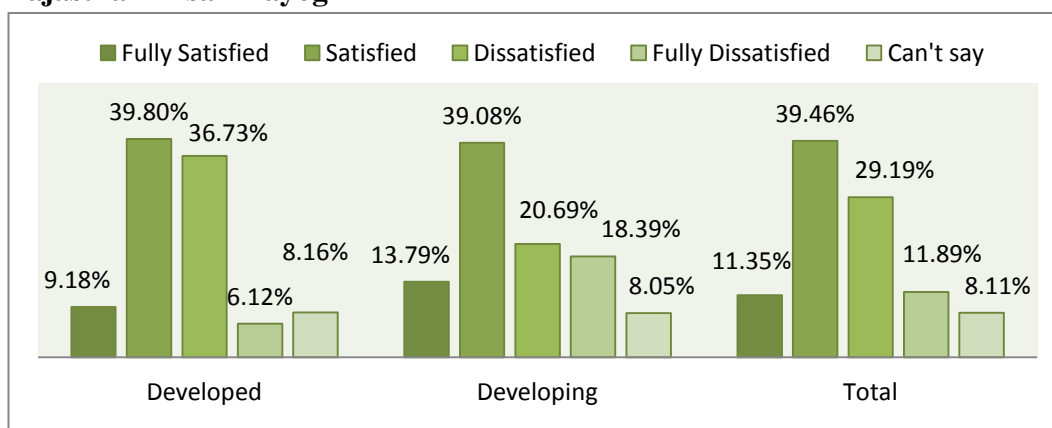
The findings depicted in the table 5.15.1 that most of the respondents (61.67 %) have knowledge about the organization which is maximum in Kota (92%). 27 percent respondents don't have any knowledge of it. About 11.33 % respondents don't share any views. In Sikar (38%) and Sawaimadhopur (36%), the percentage of respondents who don't have any knowledge is higher than in other districts. There is a similar trend in the number of respondents in both the groups.

**Table 5.15.1.2: Satisfaction Level of the Selected Farmers towards Rajasthan Kisan Aayog**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	04 (13.33)	03 (06.52)	02 (09.09)	09 (09.18)	02 (07.14)	08 (23.53)	02 (08)	12 (13.79)	<b>21</b> <b>(11.35)</b>
b.	Satisfied	10 (33.33)	23 (50)	06 (27.27)	39 (39.80)	10 (35.71)	12 (35.29)	12 (48)	34 (39.08)	<b>73</b> <b>(39.46)</b>
c.	Dissatisfied	12 (40)	14 (30.43)	10 (45.45)	36 (36.73)	09 (32.14)	04 (11.76)	05 (20)	18 (20.69)	<b>54</b> <b>(29.19)</b>
d.	Fully Dissatisfied	02 (06.67)	02 (4.34)	02 (09.09)	06 (06.12)	03 (10.71)	08 (23.53)	05 (20)	16 (18.39)	<b>22</b> <b>(11.89)</b>
e.	Can't say	02 (06.67)	04 (08.70)	02 (09.09)	08 (08.16)	04 (14.29)	02 (5.88)	01 (04)	07 (8.05)	<b>15</b> <b>(8.11)</b>
<b>Total no. of respondents</b>		<b>30</b>	<b>46</b>	<b>22</b>	<b>98</b>	<b>28</b>	<b>34</b>	<b>25</b>	<b>87</b>	<b>185</b>

Source: Survey Data

**Graph 5.15.1.2: Satisfaction Level of the Selected Farmers towards Rajasthan Kisan Aayog**



Source: Survey Data

### Inferences

According to the table, Most of the respondents (39.46%) are satisfied, maximum in Kota (50%) and almost 11.35 respondents are fully satisfied, maximum in Tonk (23.53%) whereas 29.19 percent respondents are dissatisfied, maximum in Sikar (45.45%) and around 11.89 percent respondents are fully dissatisfied, maximum in Tonk (23.53%) with the benefits of Rajasthan Kisan Aayog. The number of dissatisfied respondents is higher in developed districts than in developing districts.

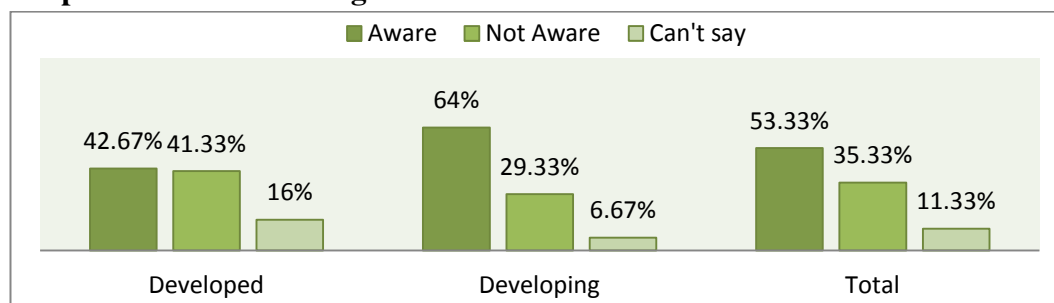
### 5.15.2. Agriculture Technology Management Agency (ATMA)

**Table 5.15.2.1: Knowledge of the Selected Farmers about ATMA**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	22 (44)	26 (52)	16 (32)	64 (42.67)	36 (72)	40 (80)	20 (40)	96 (64)	<b>160</b> <b>(53.33)</b>
b.	Not Aware	16 (32)	18 (36)	28 (56)	62 (41.33)	11 (22)	08 (16)	25 (50)	44 (29.33)	<b>106</b> <b>(35.33)</b>
c.	Can't say	12 (24)	06 (12)	06 (12)	24 (16)	03 (06)	02 (04)	05 (10)	10 (6.67)	<b>34</b> <b>(11.33)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.2.1: Knowledge of the Selected Farmers about ATMA**



Source: Survey Data

### Inferences

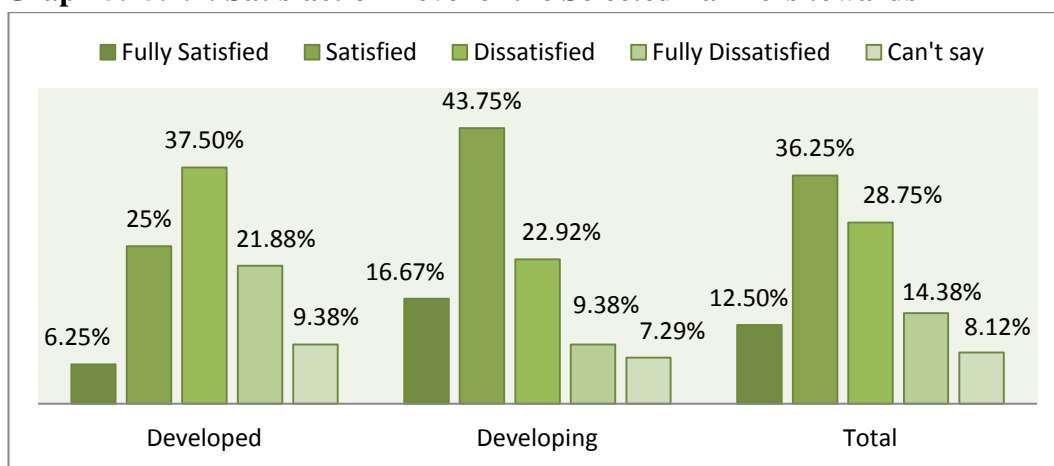
Almost 53.33% respondents are aware and around 35.33% respondents are not aware of the central government-sponsored setup. The awareness level of respondents is higher in developing district than in developed districts.

**Table 5.15.2.2: Satisfaction Level of the Selected Farmers towards ATMA**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	04 (18.18)	00	00	04 (6.25)	12 (33.33)	02 (05)	02 (10)	16 (16.67)	<b>20</b> <b>(12.5)</b>
b.	Satisfied	06 (27.27)	06 (23.08)	04 (25)	16 (25)	09 (25)	26 (65)	07 (35)	42 (43.75)	<b>58</b> <b>(36.25)</b>
c.	Dissatisfied	06 (27.27)	10 (38.46)	08 (50)	24 (37.5)	09 (25)	08 (20)	05 (25)	22 (22.92)	<b>46</b> <b>(28.75)</b>
d.	Fully Dissatisfied	02 (9.09)	08 (30.77)	04 (25)	14 (21.88)	03 (08.33)	02 (05)	04 (20)	09 (9.38)	<b>23</b> <b>(14.38)</b>
e.	Can't say	04 (18.18)	02 (07.69)	00	06 (9.38)	03 (08.33)	02 (05)	02 (10)	07 (7.29)	<b>13</b> <b>(8.12)</b>
<b>Total no. of respondents</b>		<b>22</b>	<b>26</b>	<b>16</b>	<b>64</b>	<b>36</b>	<b>40</b>	<b>20</b>	<b>96</b>	<b>160</b>

Source: Survey Data

**Graph 5.15.2.2: Satisfaction Level of the Selected Farmers towards ATMA**



Source: Survey Data

### Inferences

Most of the respondents (36.25%) viewed as satisfied, the highest in Tonk (65%) and 28.75 percent farmers are dissatisfied, maximum in Sikar (50%) while almost 12.5% farmers are fully satisfied, maximum in Sawaimadhapur (33.33%) with the benefits of the agency. The percentage of fully dissatisfied respondents is 14.37 percent, highest in Kota (30.77%). The satisfaction level is higher in the developing districts than in the developed districts.

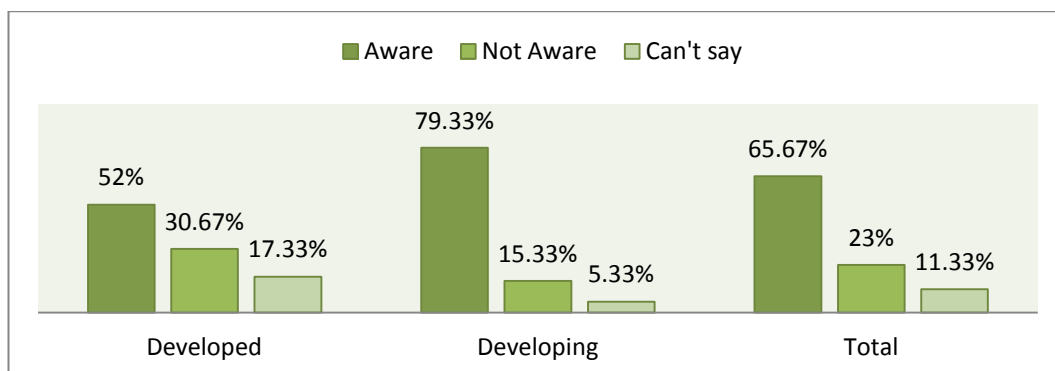
### 5.15.3. Krishi Vigyan Kendra

**Table 5.15.3.1: Knowledge of the Selected Farmers about Krishi Vigyan Kendra**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	32 (64)	24 (48)	22 (44)	78 (52)	41 (82)	38 (76)	40 (80)	119 (79.33)	<b>197</b> (65.67)
b.	Not Aware	14 (28)	10 (20)	22 (44)	46 (30.67)	07 (14)	08 (16)	08 (16)	23 (15.33)	<b>69</b> (23)
d	Can't say	04 (08)	16 (32)	06 (12)	26 (17.33)	02 (04)	04 (08)	02 (04)	8 (05.33)	<b>34</b> (11.33)
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.3.1: Knowledge of the Selected Farmers about Krishi Vigyan Kendra**



Source: Survey Data

### Inferences

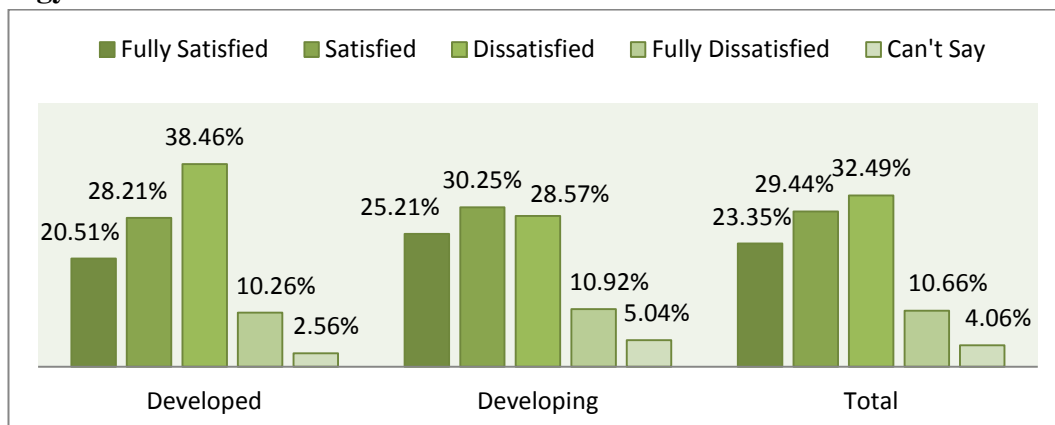
Most of the selected farmers (65.67%) are well informed while 23 percent selected cultivators are unaware, maximum in Sikar (44%) of these centers. The percentage of respondents who have knowledge about it is the highest in Sawaimadhupur (82%) followed by Jhalawar (80%) and Tonk (76%). The awareness level is higher in the developing districts than in the developed districts.

**Table 5.15.3.2: Satisfaction Level of the Selected Farmers towards Kisan Vigyan Kendra**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	12 (37.50)	02 (08.33)	02 (9.09)	16 (20.51)	13 (31.71)	14 (36.84)	03 (07.5)	30 (25.21)	<b>46</b> <b>(23.35)</b>
b.	Satisfied	06 (18.75)	14 (58.33)	02 (9.09)	22 (28.21)	14 (34.15)	12 (31.58)	10 (25)	36 (30.25)	<b>58</b> <b>(29.44)</b>
c.	Dissatisfied	10 (31.25)	06 (25)	14 (63.64)	30 (38.46)	08 (19.51)	10 (26.31)	16 (40)	34 (28.57)	<b>64</b> <b>(32.49)</b>
d.	Fully Dissatisfied	02 (06.25)	02 (08.33)	04 (18.18)	08 (10.26)	04 (9.76)	02 (5.26)	07 (17.5)	13 (10.92)	<b>21</b> <b>(10.66)</b>
e.	Can't say	02 (06.25)	00	00	02 (2.56)	02 (4.88)	00	04 (10)	06 (5.04)	<b>08</b> <b>(4.06)</b>
<b>Total no. of respondents</b>		<b>32</b>	<b>24</b>	<b>22</b>	<b>78</b>	<b>41</b>	<b>38</b>	<b>40</b>	<b>119</b>	<b>197</b>

Source: Survey Data

**Graph 5.15.3.2: Satisfaction Level of the Selected Farmers towards Kisan Vigyan Kendra**



Source: Survey Data

### Inferences

Almost 32.49 percent of respondents are dissatisfied, 29.44% respondents are satisfied, 23.35% respondents are fully satisfied and 10.66 percent respondents are fully dissatisfied with the availability of these centers in their areas. It may be concluded that when comparing selected districts, there are maximum highly satisfied respondents in Jaipur (37.05%) and Tonk (36.84%) while satisfied respondents are in Kota (58.33%) and dissatisfied respondents are in Sikar (63.64%). There is not very much difference in the number of fully dissatisfied respondents among selected districts.

### 5.15.4. AGMARKNET

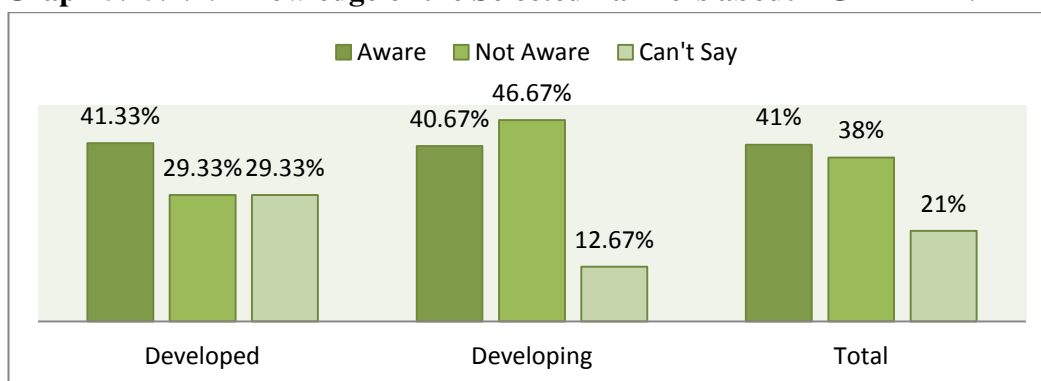
**Table 5.15.4.1: Knowledge of the Selected Farmers about AGMARKNET**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Aware	24 (48)	14 (28)	24 (48)	62 (41.33)	23 (46)	26 (52)	12 (24)	61 (40.67)	<b>123</b> <b>(41)</b>
b.	Not Aware	10 (20)	16 (32)	18 (36)	44 (29.33)	24 (48)	22 (44)	24 (48)	70 (46.67)	<b>114</b> <b>(38)</b>
c.	Can't say	16 (32)	20 (40)	08 (16)	44 (29.33)	03 (06)	02 (04)	14 (28)	19 (12.67)	<b>63</b> <b>(21)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	150	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data



**Graph 5.15.4.1: Knowledge of the Selected Farmers about AGMARKNET**



Source: Survey Data

### Inferences

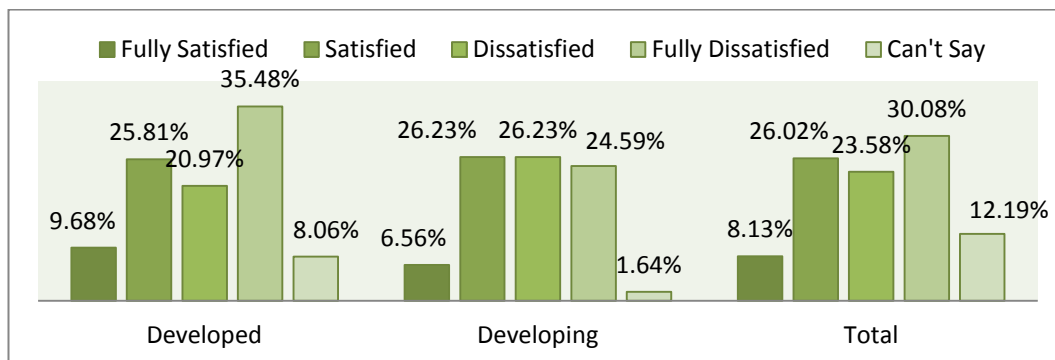
Most of the respondents (38%) are not aware whereas 41 percent farmers are aware of it. There is not very much difference in the number of respondents among all six districts. In the developing districts, the number of not aware respondents is higher than in the developed districts.

**Table 5.15.4.2: Satisfaction Level of the Selected Farmers towards AGMARKNET**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	00	02 (14.28)	04 (16.67)	06 (9.68)	03 (13.04)	00	01 (8.33)	04 (6.56)	<b>10 (8.13)</b>
b.	Satisfied	06 (26.09)	04 (28.57)	06 (25)	16 (25.81)	03 (13.04)	12 (46.15)	01 (8.33)	16 (26.23)	<b>32 (26.02)</b>
c.	Dissatisfied	06 (26.09)	03 (21.43)	04 (16.67)	13 (20.97)	06 (42.86)	06 (23.08)	04 (33.33)	16 (26.23)	<b>29 (23.58)</b>
d.	Fully Dissatisfied	10 (41.67)	04 (28.57)	08 (33.33)	22 (35.48)	05 (35.71)	07 (26)	03 (25)	15 (24.59)	<b>37 (30.08)</b>
e.	Can't say	02 (08.33)	01 (1.14)	02 (8.33)	05 (8.06)	06 (42.86)	01 (3.85)	03 (25)	10 (1.64)	<b>15 (12.19)</b>
<b>Total no. of respondents</b>		<b>24</b>	<b>14</b>	<b>24</b>	<b>62</b>	<b>23</b>	<b>26</b>	<b>12</b>	<b>61</b>	<b>123</b>

Source: Survey Data

**Graph 5.15.4.2: Satisfaction Level of the Selected Farmers towards AGMARKNET**



Source: Survey Data

### Inferences

Most of the respondents (30.08%) are fully dissatisfied whereas 23.58 percent respondents are Dissatisfied with the benefits of the scheme. About 26.02 percent respondents are satisfied and nearly 8.13 % respondents are fully satisfied. The percentage of fully satisfied farmers is the highest in Sikar with 16.67% followed by Kota (14.28%), Sawaimadhapur (13.04%) and Jhalawar (08.33%) while it is nil percentage in Jaipur and Tonk. The percentage of respondents who stated that they are fully dissatisfied is higher in Jaipur (41.67%) and Sawaimadhapur (35.71%) than in other selected districts. The above Graph shows that the number of fully dissatisfied respondents is higher in the developed districts than in the developing districts.

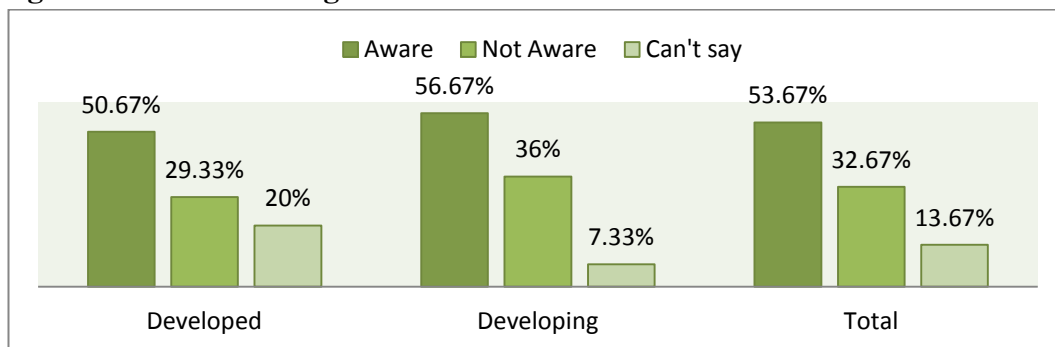
### 5.15.5. Establishment of Agro & Food Processing Centre at State Level

**Table 5.15.5.1: Knowledge of the Selected Farmers about Establishment of Agro & Food Processing Centre at State Level**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	20 (40)	30 (60)	26 (52)	76 (50.67)	26 (52)	34 (68)	25 (50)	85 (56.67)	<b>161</b> <b>(53.67)</b>
b.	Not Aware	16 (32)	10 (20)	18 (36)	44 (29.33)	20 (40)	14 (28)	20 (40)	54 (36)	<b>98</b> <b>(32.67)</b>
d	Can't say	14 (28)	10 (20)	06 (12)	30 (20)	04 (08)	02 (04)	05 (10)	11 (7.33)	<b>41</b> <b>(13.67)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.5.1: Knowledge of the Selected Farmers about Establishment of Agro & Food Processing Centre at State Level**



Source: Survey Data

### Inferences

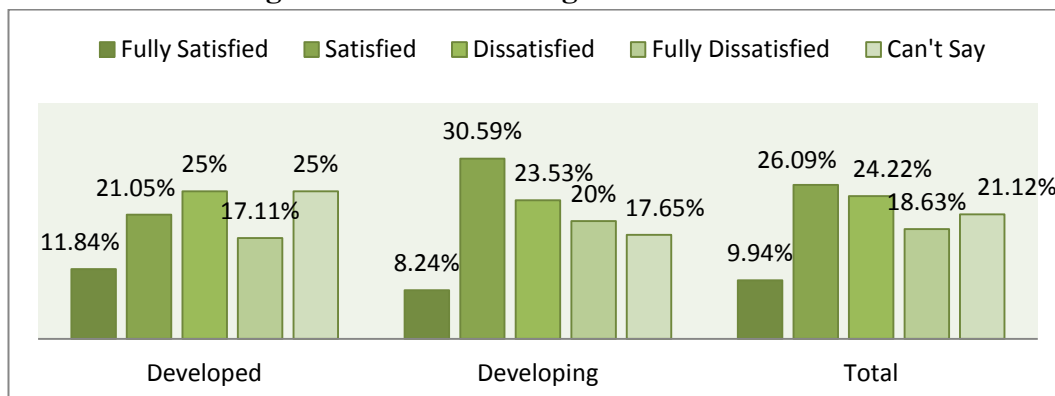
Around 53.66 percent farmers have knowledge of the state government's project which is maximum in Tonk (68%) and minimum in Jaipur (40%) while 32.67 percent farmers are unaware of it, maximum in Sawaimadhopur (40%) and Jhalawar (40%) followed by Sikar (36%) and Jaipur (32%). In the developing districts, the number of not aware respondents is higher than in the developed districts.

**Table 5.15.5.2: Satisfaction Level of the Selected Farmers towards Establishment of Agro & Food Processing Centre at State Level**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	02 (10)	03 (10)	04 (15.38)	09 (11.84)	01 (3.85)	02 (5.88)	04 (16)	07 (8.24)	<b>16</b> <b>(09.94)</b>
b.	Satisfied	06 (30)	06 (20)	04 (15.38)	16 (21.05)	05 (19.23)	18 (52.94)	03 (12)	26 (30.59)	<b>42</b> <b>(26.09)</b>
c.	Dissatisfied	06 (30)	07 (23.33)	06 (23.08)	19 (25)	06 (23.08)	08 (23.53)	06 (24)	20 (23.53)	<b>39</b> <b>(24.22)</b>
d.	Fully Dissatisfied	02 (10)	05 (16.67)	06 (23.08)	13 (17.11)	05 (19.23)	04 (11.76)	08 (32)	17 (20)	<b>30</b> <b>(18.63)</b>
e.	Can't say	04 (20)	09 (30)	06 (23.08)	19 (25)	09 (34.62)	02 (5.88)	04 (16)	15 (17.65)	<b>34</b> <b>(21.12)</b>
<b>Total no. of respondents</b>		<b>20</b>	<b>30</b>	<b>26</b>	<b>76</b>	<b>26</b>	<b>34</b>	<b>25</b>	<b>85</b>	<b>161</b>

Source: Survey Data

**Graph 5.15.5.2: Satisfaction Level of the Selected Farmers towards Establishment of Agro & Food Processing Centre at State Level**



Source: Survey Data

### Inferences

The percentages of the respondents who are fully satisfied, satisfied and dissatisfied with the project are 09.36%, 24.56%, and 22.81% respectively. Around 17.54% respondents are fully dissatisfied with this venture. The highest percentages of fully satisfied and satisfied respondents are in Jhalawar (16%), and Tonk (52.94%) respectively. In Jhalawar, around 32 % respondents are fully dissatisfied with the benefits of the projects. The above Graph exhibits that there is a similar trend in both the groups.

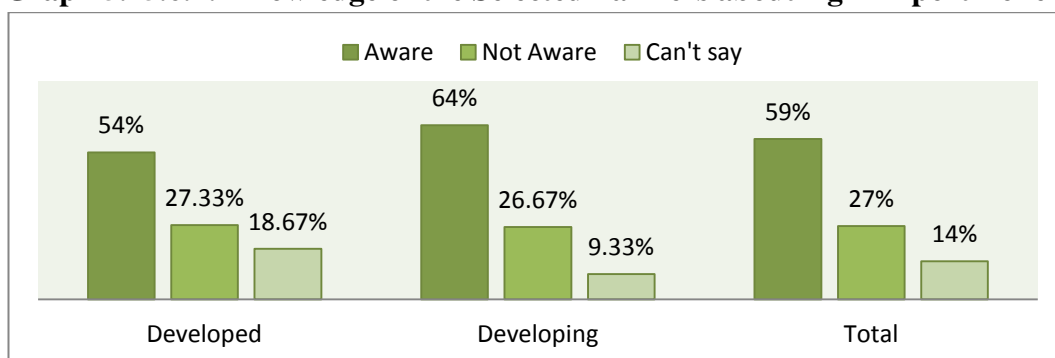
### 5.15.6. Agri Export Zone

**Table 5.15.6.1: Knowledge of the Selected Farmers about Agri Export Zone**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	30 (60)	34 (68)	17 (34)	81 (54)	26 (52)	35 (70)	35 (70)	96 (64)	<b>177</b> <b>(59)</b>
b.	Not Aware	10 (20)	08 (16)	23 (46)	41 (27.33)	20 (40)	10 (20)	10 (20)	40 (26.67)	<b>81</b> <b>(27)</b>
d	Can't say	10 (20)	08 (16)	10 (20)	28 (18.67)	04 (08)	05 (10)	05 (10)	14 (9.33)	<b>42</b> <b>(14)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.6.1: Knowledge of the Selected Farmers about Agri Export Zone**



Source: Survey Data

**Inferences**

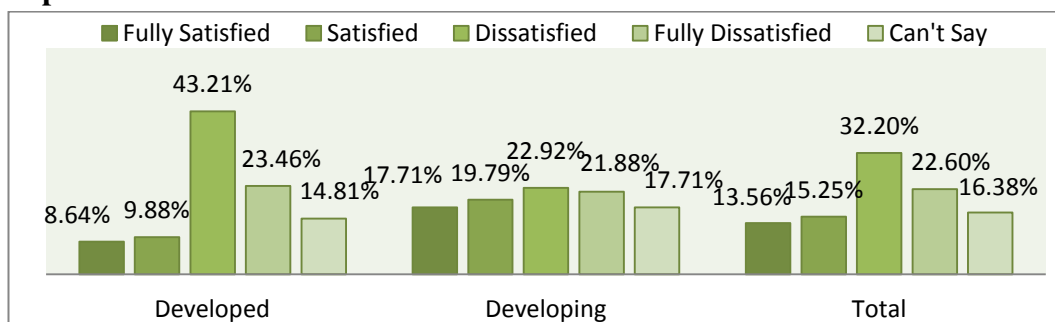
Most of the respondents (59%) are aware of this government’s venture. Around 27 percent respondents are not aware and 14 percent respondents don’t have any clear views about it. There is the highest percentage of aware respondents in Tonk (70%), Jhalawar (70%) and Kota (68%), and unaware respondents in Sikar (46%). The above Graph shows that the awareness level is higher in the developing districts than in the developed districts.

**Table 5.15.6.2: Satisfaction Level of the Selected Farmers towards Agri Export Zone**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	04 (13.33)	01 (2.94)	02 (11.76)	07 (8.64)	03 (11.54)	10 (28.57)	04 (11.43)	17 (17.71)	<b>24 (13.56)</b>
b.	Satisfied	02 (6.66)	02 (5.88)	04 (23.53)	08 (9.88)	04 (15.38)	09 (25.71)	06 (17.14)	19 (19.79)	<b>27 (15.25)</b>
c.	Dissatisfied	12 (40)	19 (55.88)	04 (23.53)	35 (43.21)	07 (26.92)	08 (22.86)	07 (20)	22 (22.92)	<b>57 (32.20)</b>
d.	Fully Dissatisfied	06 (20)	06 (17.65)	07 (41.18)	19 (23.46)	05 (19.23)	06 (17.14)	10 (28.57)	21 (21.88)	<b>40 (22.60)</b>
e.	Can't say	06 (20)	06 (17.65)	00	12 (14.81)	07 (26.92)	02 (5.71)	08 (22.86)	17 (17.71)	<b>29 (16.38)</b>
<b>Total no. of respondents</b>		<b>30</b>	<b>34</b>	<b>17</b>	<b>81</b>	<b>26</b>	<b>35</b>	<b>35</b>	<b>96</b>	<b>177</b>

Source: Survey Data

**Graph 5.15.6.2: Satisfaction Level of the Selected Farmers towards Agri Export Zone**



Source: Survey Data

### Inferences

Most of the respondents (32.20%) are dissatisfied while 15.25 percent farmers are satisfied and about 13.56 % farmers are fully satisfied with the setup of the Agri-export Zone. The Graph highlights that the dissatisfaction level is higher in the developed districts than in the developing districts.

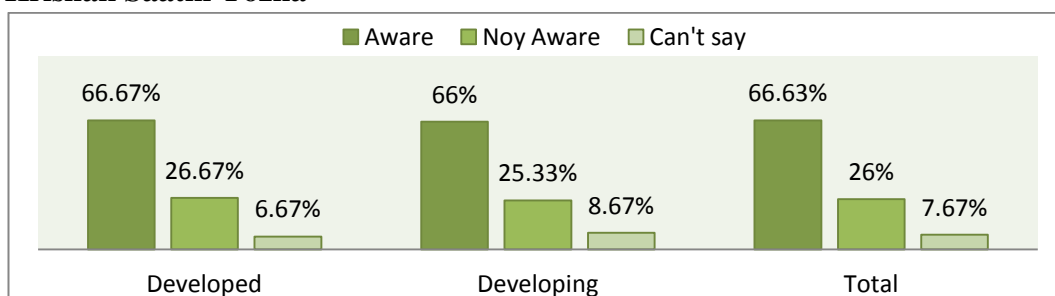
### 5.15.7. Rajeev Gandhi Krishak Saathi Yozna

**Table 5.15.7.1: Knowledge of the Selected Farmers about Rajeev Gandhi Krishak Saathi Yozna**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	38 (76)	38 (76)	24 (48)	100 (66.67)	34 (68)	40 (80)	25 (50)	99 (66)	<b>199</b> <b>(66.33)</b>
c.	Not Aware	08 (16)	12 (24)	20 (40)	40 (26.67)	12 (24)	06 (12)	20 (40)	38 (25.33)	<b>78</b> <b>(26)</b>
d	Can't say	04 (8)	00	06 (12)	10 (6.67)	04 (8)	04 (08)	05 (10)	13 (8.67)	<b>23</b> <b>(7.67)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.7.1: Knowledge of the Selected Farmers about Rajeev Gandhi Krishak Saathi Yozna**



Source: Survey Data

### Inferences

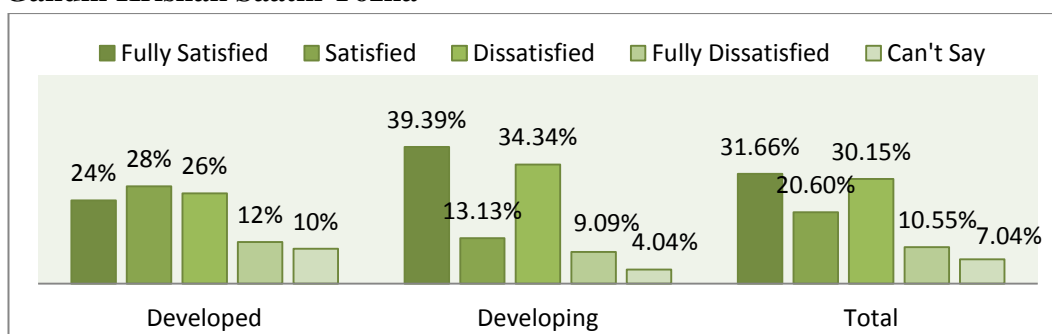
The finding reveals that most of the respondents (66.63%) are aware of it whereas 26 percent respondents don't have any knowledge about the scheme. There is the highest percentage of known respondents in Tonk (80%), and unaware farmers in Sikar (40%) and Jhalawar (40%) for the same. The above Graph shows that there is a similar trend in both the groups.

**Table 5.15.7.2: Satisfaction Level of the Selected Farmers towards Rajeev Gandhi Krishak Saathi Yozna**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	16 (42.11)	03 (07.89)	05 (20.83)	24 (24)	05 (14.71)	28 (70)	06 (24)	39 (39.39)	<b>63</b> (31.66)
b.	Satisfied	06 (15.79)	16 (42.16)	06 (25)	28 (28)	07 (20.59)	02 (5)	04 (16)	13 (13.13)	<b>41</b> (20.60)
c.	Dissatisfied	10 (26.32)	10 (26.32)	06 (25)	26 (26)	19 (55.88)	04 (10)	11 (44)	34 (34.34)	<b>60</b> (30.15)
d.	Fully Dissatisfied	02 (05.26)	06 (15.79)	04 (16.67)	12 (12)	02 (05.88)	04 (10)	03 (12)	09 (9.09)	<b>21</b> (10.55)
e.	Can't say	04 (10.53)	03 (07.89)	03 (12.5)	10 (10)	01 (02.94)	02 (05)	01 (4)	04 (4.04)	<b>14</b> (7.04)
<b>Total no. of respondents</b>		<b>38</b>	<b>38</b>	<b>24</b>	<b>100</b>	<b>34</b>	<b>40</b>	<b>25</b>	<b>99</b>	<b>199</b>

Source: Survey Data

**Graph 5.15.7.2: Satisfaction Level of the Selected Farmers towards Rajeev Gandhi Krishak Saathi Yozna**



Source: Survey Data

### Inferences

Most of the respondents (31.66%) are highly satisfied with this scheme in the state whereas the percentage of satisfied respondents is 20.60%. Around 10.55% and 30.15% respondents are fully dissatisfied and dissatisfied respectively with the incentives given in the scheme. When comparing districts, it is clearly stated that most of the respondents (70%) are fully satisfied in Tonk whereas about 42.16%

and 55.88% respondents are satisfied and dissatisfied in Kota and Sawaimadhopur respectively. The percentage of fully dissatisfied respondents is the highest in Sikar (16.67%) followed by Kota (15.79%) and Jhalawar (12%).

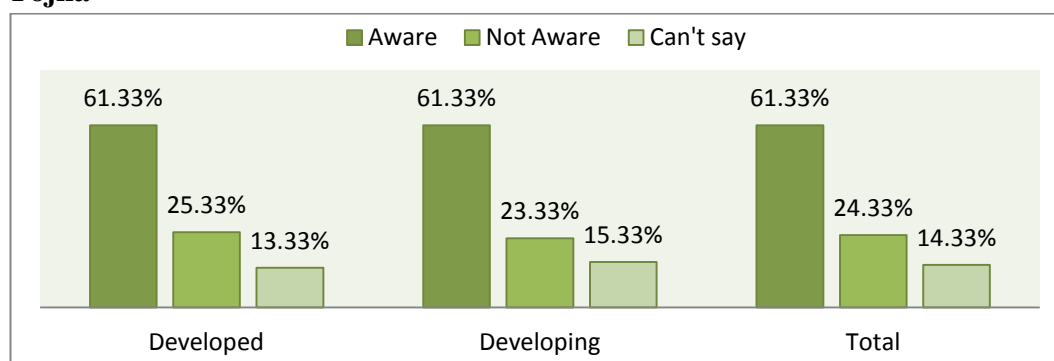
#### 5.15.8. Kisan Kalewa Yozna

**Table 5.15.8.1: Knowledge of the Selected Farmers about Kisan Kalewa Yojna**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	34 (68)	36 (72)	22 (44)	92 (61.33)	34 (68)	34 (68)	24 (48)	92 (61.33)	<b>184</b> <b>(61.33)</b>
b.	Not Aware	12 (24)	08 (16)	18 (36)	38 (25.33)	12 (24)	09 (18)	14 (28)	35 (23.33)	<b>73</b> <b>(24.33)</b>
d	Can't say	04 (08)	06 (12)	10 (20)	20 (13.33)	04 (08)	07 (14)	12 (24)	23 (15.33)	<b>43</b> <b>(14.33)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.8.1: Knowledge of the Selected Farmers about Kisan Kalewa Yojna**



Source: Survey Data

#### Inferences

Almost 61.33% respondents have knowledge about this state government scheme, maximum in Kota (72%) and minimum in Sikar (44%). Around 24.33% respondents, maximum in Sikar (36%), are not aware of it. The Graph states that there is no considerable difference between the numbers of respondents in both the groups.

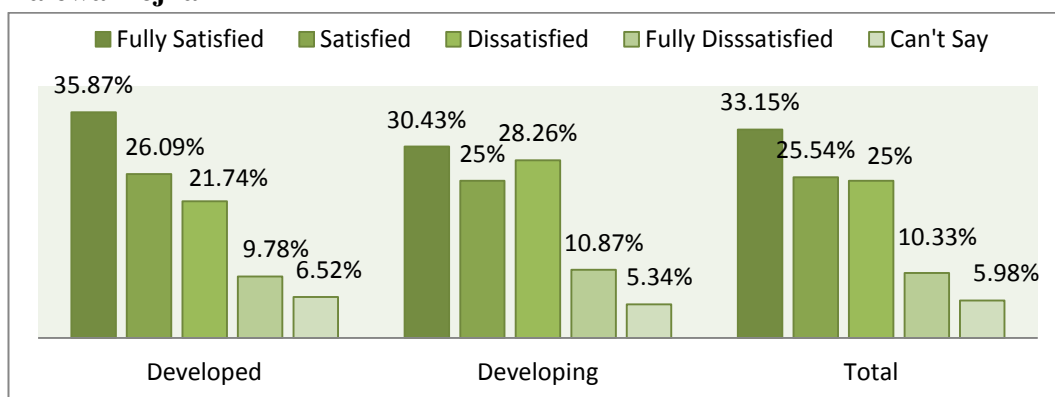


**Table 5.15.8.2: Satisfaction Level of the Selected Farmers towards Kisan Kalewa Yojna**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	06 (17.65)	25 (69.44)	02 (09.09)	33 (35.87)	06 (17.65)	18 (52.94)	04 (16.67)	28 (30.43)	<b>61</b> <b>(33.15)</b>
b.	Satisfied	14 (41.18)	04 (11.11)	06 (27.27)	24 (26.09)	09 (26.47)	06 (17.65)	08 (33.33)	23 (25)	<b>47</b> <b>(25.54)</b>
c.	Dissatisfied	04 (11.76)	06 (16.66)	10 (45.45)	20 (21.74)	13 (38.24)	06 (17.65)	07 (29.17)	26 (28.26)	<b>46</b> <b>(25)</b>
d.	Fully Dissatisfied	04 (11.76)	01 (02.77)	04 (18.18)	09 (9.78)	02 (05.88)	04 (11.76)	04 (16.67)	10 (10.87)	<b>19</b> <b>(10.33)</b>
e.	Can't say	06 (17.65)	00	00	06 (6.52)	04 (11.76)	00	01 (04.17)	5 (05.34)	<b>11</b> <b>(5.98)</b>
<b>Total no. of respondents</b>		<b>34</b>	<b>36</b>	<b>22</b>	<b>92</b>	<b>34</b>	<b>34</b>	<b>24</b>	<b>92</b>	<b>184</b>

Source: Survey Data

**Table 5.15.8.2: Satisfaction Level of the Selected Farmers towards Kisan Kalewa Yojna**



Source: Survey Data

### Inferences

Most of the respondents (33.15%) are highly satisfied, maximum in Kota (69.44%) and 25.54 percent respondents are satisfied, maximum in Jaipur (41.18%) whereas almost 25 percent respondents are dissatisfied, maximum in Sikar (45.45%). Around 10.33 percent respondents are not satisfied, maximum in Sikar (18.18%).

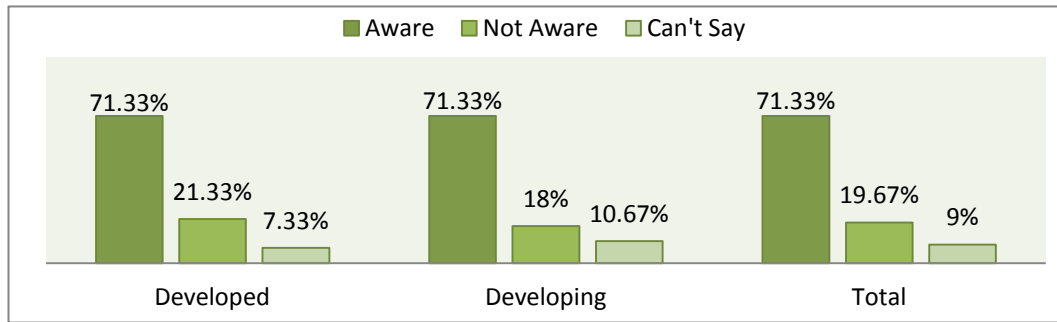
### 5.15.9. Gramin Sampark Sadak (Link Roads)

**Table 5.15.9.1: Knowledge of the Selected Farmers about Link Roads**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	40 (80)	40 (80)	27 (54)	107 (71.33)	39 (78)	38 (76)	30 (60)	107 (71.33)	<b>214</b> <b>(71.33)</b>
b.	Not Aware	09 (18)	06 (12)	17 (34)	32 (21.33)	07 (14)	08 (16)	12 (24)	27 (18)	<b>59</b> <b>(19.67)</b>
D	Can't say	01 (2)	04 (8)	06 (12)	11 (7.33)	04 (08)	04 (08)	08 (16)	16 (10.67)	<b>27</b> <b>(09)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.9.1: Knowledge of the Selected Farmers about Link Roads**



Source: Survey Data

### Inferences

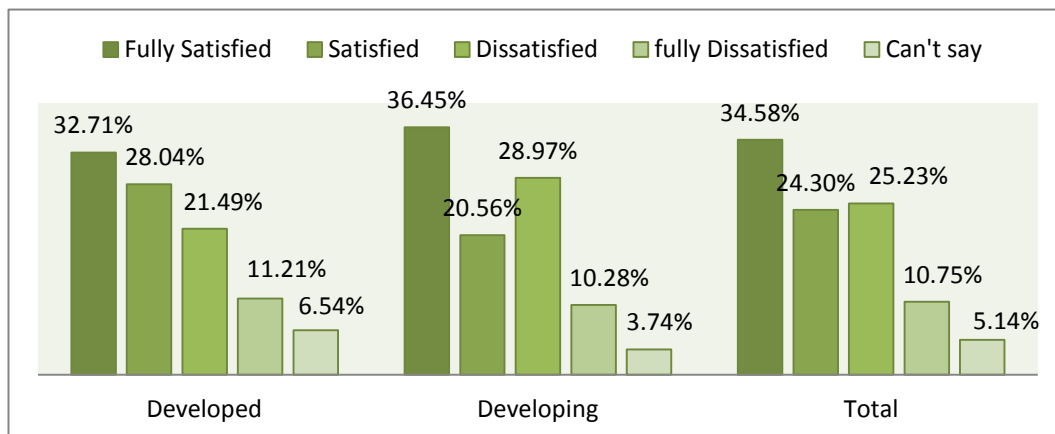
Around 71.33% respondents are aware and 19.67% respondents don't aware of this. The above Graph shows that there is a similar trend in both the groups.

**Table 5.15.9.2 Satisfaction Level of the Selected Farmers towards Link Roads**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	10 (25)	23 (57.5)	02 (07.41)	35 (32.71)	02 (5.13)	30 (78.95)	07 (23.33)	39 (36.45)	<b>74</b> <b>(34.58)</b>
b.	Satisfied	16 (40)	06 (15)	08 (29.63)	30 (28.04)	12 (30.78)	02 (05.26)	08 (26.67)	22 (20.56)	<b>52</b> <b>(24.30)</b>
c.	Dissatisfied	08 (20)	06 (15)	09 (33.33)	23 (21.49)	17 (43.59)	04 (10.53)	10 (33.33)	31 (28.97)	<b>54</b> <b>(25.23)</b>
d.	Fully Dissatisfied	04 (10)	03 (07.5)	05 (18.52)	12 (11.21)	04 (10.26)	02 (05.26)	05 (16.67)	11 (10.28)	<b>23</b> <b>(10.75)</b>
e.	Can't say	02 (05)	02 (05)	03 (11.11)	07 (06.54)	04 (10.26)	00	00	04 (03.74)	<b>11</b> <b>(5.14)</b>
<b>Total no. of respondents</b>		<b>40</b>	<b>40</b>	<b>27</b>	<b>107</b>	<b>39</b>	<b>38</b>	<b>30</b>	<b>107</b>	<b>214</b>

Source: Survey Data

**Graph 5.15.9.2: Satisfaction Level of the Selected Farmers towards Link Roads**



Source: Survey Data

### Inferences

About 34.58% respondents are fully satisfied and 24.30% respondents are satisfied, while 25.23% respondents are dissatisfied with this state government-sponsored project. The highest percentage of fully satisfied respondents is in Tonk (78.95%) and Kota (57.5%) and the lowest percentage is in Sawaimadhopur (5.13%) and Sikar (07.41%). The percentage of the respondents who are full dissatisfied with this is the highest in Sikar (18.52%) followed by Jhalawar (16.67%), Sawaimadhopur (10.26% and Jaipur (10%).

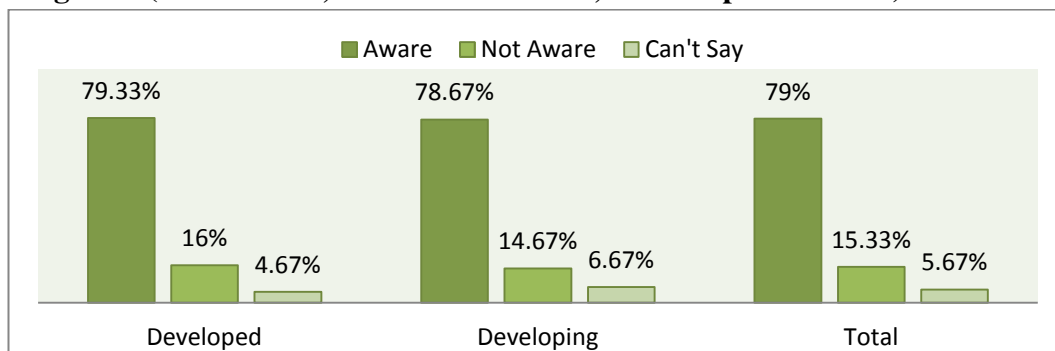
### 5.15.10. Awareness Programs (Krishi Mela, Minikit Exhibition, Crop Exhibition)

**Table 5.15.10.1: Knowledge of the Selected Farmers about Awareness Programs (Krishi Mela, Minikit Exhibition, and Crop Exhibition)**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	42 (84)	45 (90)	32 (64)	119 (79.33)	41 (82)	42 (84)	35 (70)	118 (78.67)	<b>237 (79)</b>
b.	Not Aware	04 (8)	05 (10)	15 (30)	24 (16)	06 (12)	06 (12)	10 (20)	22 (14.67)	<b>46 (15.33)</b>
d	Can't say	04 (8)	00	03 (06)	07 (04.67)	03 (06)	02 (04)	05 (10)	10 (6.67)	<b>17 (5.67)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.10.1: Knowledge of the Selected Farmers about Awareness Programs (Krishi Mela, Minikit Exhibition, and Crop Exhibition)**



Source: Survey Data

### Inferences

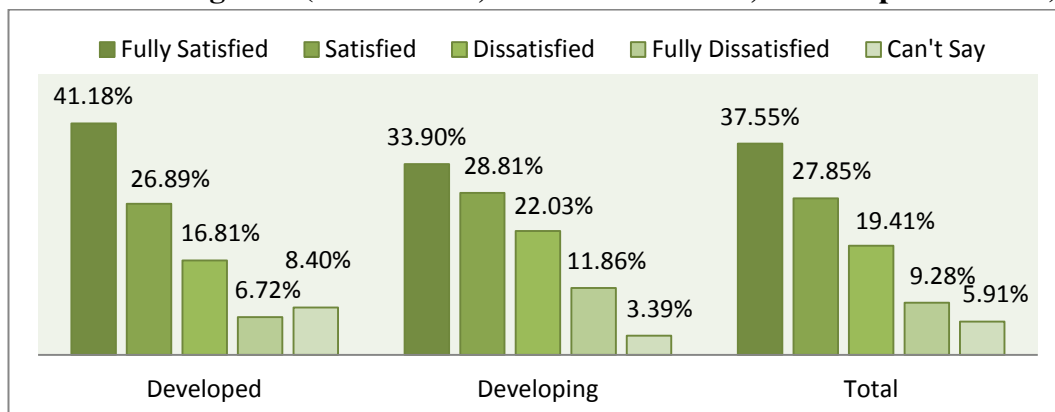
Most of the respondents (79%) are aware of the events and while 15.33 percent respondents never get to know about these events in the state. The highest percentage of aware respondents is in Kota (90%) followed by Jaipur (84%) and Tonk (84%). The percentage of unaware respondents is higher in Sikar (30%) than in other districts.

**Table 5.15.10.2: Satisfaction Level of the Selected Farmers towards Awareness Programs (Krishi Mela, Minikit Exhibition, and Crop Exhibition)**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	18 (42.86)	20 (44.44)	11 (34.38)	49 (41.18)	26 (63.41)	06 (14.29)	08 (22.86)	40 (33.90)	<b>89</b> <b>(37.55)</b>
b.	Satisfied	12 (28.57)	14 (31.11)	06 (18.75)	32 (26.89)	04 (9.76)	24 (57.14)	06 (17.14)	34 (28.81)	<b>66</b> <b>(27.85)</b>
c.	Dissatisfied	06 (14.29)	05 (11.11)	09 (28.13)	20 (16.81)	06 (14.63)	08 (19.05)	12 (34.28)	26 (22.03)	<b>46</b> <b>(19.41)</b>
d.	Fully Dissatisfied	02 (4.76)	02 (04.44)	04 (12.50)	08 (6.72)	02 (04.88)	04 (09.52)	08 (22.86)	14 (11.86)	<b>22</b> <b>(9.28)</b>
e.	Can't say	04 (9.52)	04 (08.88)	02 (6.25)	10 (8.40)	03 (07.31)	00	01 (02.86)	04 (3.39)	<b>14</b> <b>(5.91)</b>
<b>Total no. of respondents</b>		<b>42</b>	<b>45</b>	<b>32</b>	<b>119</b>	<b>41</b>	<b>42</b>	<b>35</b>	<b>118</b>	<b>237</b>

Source: Survey Data

**Graph 5.15.10.2: Satisfaction Level of the Selected Farmers towards Awareness Programs (Krishi Mela, Minikit Exhibition, and Crop Exhibition)**



Source: Survey Data

### Inferences

Most of the respondents (37.55%) viewed as highly satisfied, the highest in Sawaimadhopur(63.14%) and 27.85 percent respondents are satisfied, maximum in Tonk (57.14%) while almost 19.41% respondents are dissatisfied, maximum in Jhalawar (34.28%), with the benefits of the events. The percentage of fully dissatisfied respondents is 09.28 percent, the highest in Jhalawar (22.86%).

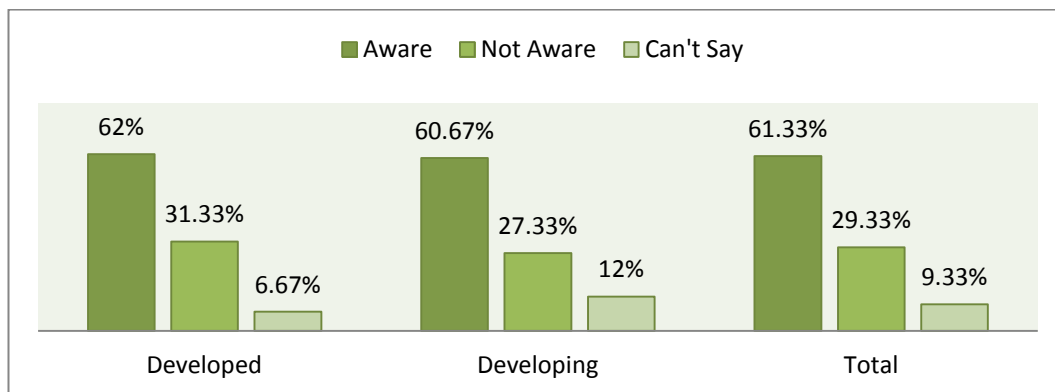
### 5.15.11. Loan against Farm Produced Stored in Government Warehouses

**Table 5.15.11.1: Knowledge of the Selected Farmers about Loan against Farm Produced Stored in Government Warehouses**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	38 (76)	34 (68)	21 (42)	93 (62)	22 (44)	34 (68)	35 (70)	91 (60.67)	<b>184</b> <b>(61.33)</b>
b.	Not Aware	08 (16)	14 (28)	25 (50)	47 (31.33)	21 (42)	10 (20)	10 (20)	41 (27.33)	<b>88</b> <b>(29.33)</b>
D	Can't say	04 (08)	02 (04)	04 (08)	10 (6.67)	07 (14)	06 (12)	05 (10)	18 (12)	<b>28</b> <b>(9.33)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.11.1: Knowledge of the Selected Farmers about Loan against Farm Produced Stored in Government Warehouses**



Source: Survey Data

### Inferences

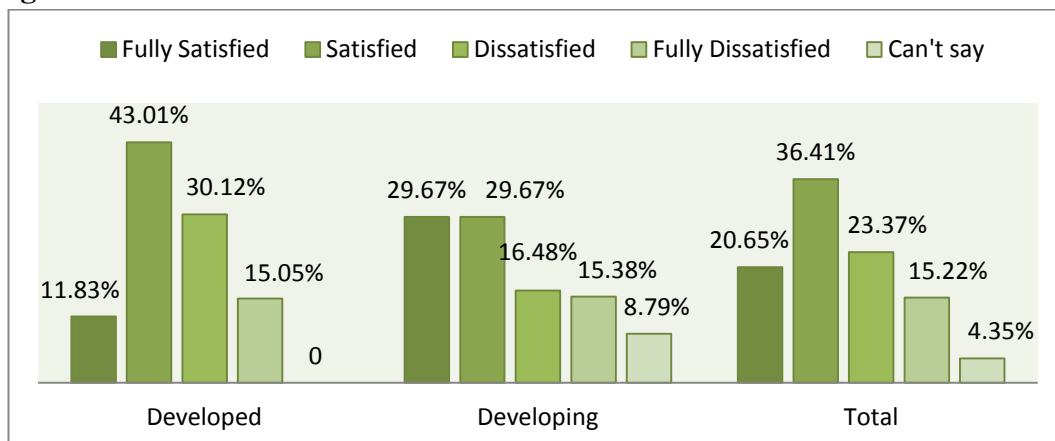
The finding reveals that 61.33% respondents are aware whereas 29.33 percent farmers don't have any knowledge of the scheme. The highest percentage of aware farmers is in Jaipur (76%) and unaware farmers in Sikar (50%) for the same.

**Table 5.15.11.2: Satisfaction Level of the Selected Farmers towards Loan against Farm Produced Stored in Government Warehouses**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	06 (15.79)	01 (02.94)	04 (19.05)	11 (11.83)	05 (22.73)	14 (41.18)	08 (22.86)	27 (29.67)	<b>38 (20.65)</b>
b.	Satisfied	12 (31.58)	22 (64.71)	06 (28.57)	40 (43.01)	04 (18.18)	12 (35.29)	11 (31.43)	27 (29.67)	<b>67 (36.41)</b>
c.	Dissatisfied	12 (31.58)	09 (26.47)	07 (33.33)	28 (30.12)	07 (31.82)	04 (11.76)	04 (11.43)	15 (16.48)	<b>43 (23.37)</b>
d.	Fully Dissatisfied	08 (21.05)	02 (5.88)	04 (19.05)	14 (15.05)	03 (13.64)	02 (05.88)	09 (25.72)	14 (15.38)	<b>28 (15.22)</b>
e.	Can't say	00	00	00	00	03 (13.64)	02 (05.88)	03 (08.57)	8 (8.79)	<b>8 (4.35)</b>
<b>Total no. of respondents</b>		<b>38</b>	<b>34</b>	<b>21</b>	<b>93</b>	<b>22</b>	<b>34</b>	<b>35</b>	<b>91</b>	<b>184</b>

Source: Survey Data

**Graph 5.15.11.2: Satisfaction Level of the Selected Farmers towards Loan against Farm Produced Stored in Government Warehouses**



Source: Survey Data

### Inferences

As per the table 5.15.11.2, it may be inferred that total level of satisfaction (fully satisfied, and satisfied) of respondents is much higher than dissatisfaction level for the scheme because around 57.06 percent respondents responded positively and 38.59 percent respondents responded that they are not satisfied. The highest percentage is fully satisfied in Tonk (41.18%), satisfied in Kota (64.71%), dissatisfied in Sikar (33.33%) and fully dissatisfied respondents are in Jhalawar (25.72%).

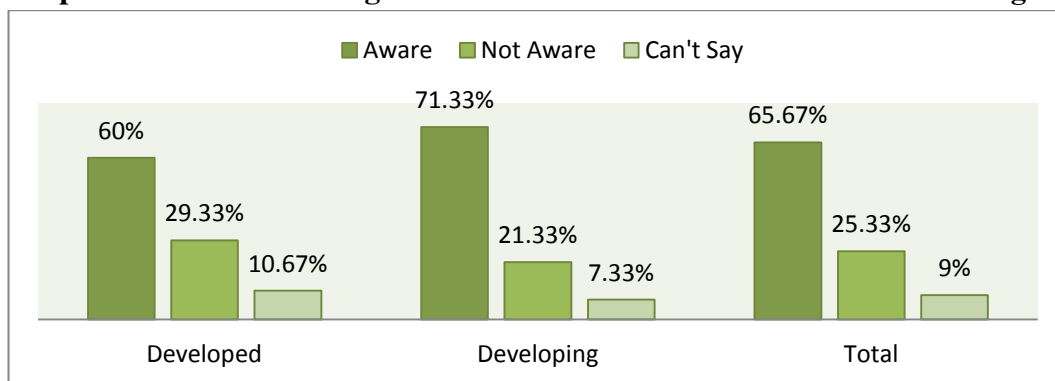
### 5.15.12. Farmer's Training

**Table 5.15.11.1: Knowledge of the Selected Farmers about Farmer's Training**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	34 (68)	32 (64)	24 (48)	90 (60)	37 (74)	36 (72)	34 (68)	107 (71.33)	<b>197</b> <b>(65.67)</b>
b.	Not Aware	10 (20)	14 (28)	20 (40)	44 (29.33)	09 (18)	10 (20)	13 (26)	32 (21.33)	<b>76</b> <b>(25.33)</b>
c.	Can't say	06 (12)	04 (08)	06 (12)	16 (10.67)	04 (8)	04 (8)	03 (06)	11 (07.33)	<b>27</b> <b>(09)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.11.1: Knowledge of Selected Farmers about Farmer’s Training**



Source: Survey Data

**Inferences**

Most of the respondents (65.67%) are aware whereas 25.33 percent respondents are unaware of the program run by the state government. The percentage of farmers who viewed “can’t say” is 9% in the state. The awareness level is higher in the developing districts than in the developed districts.

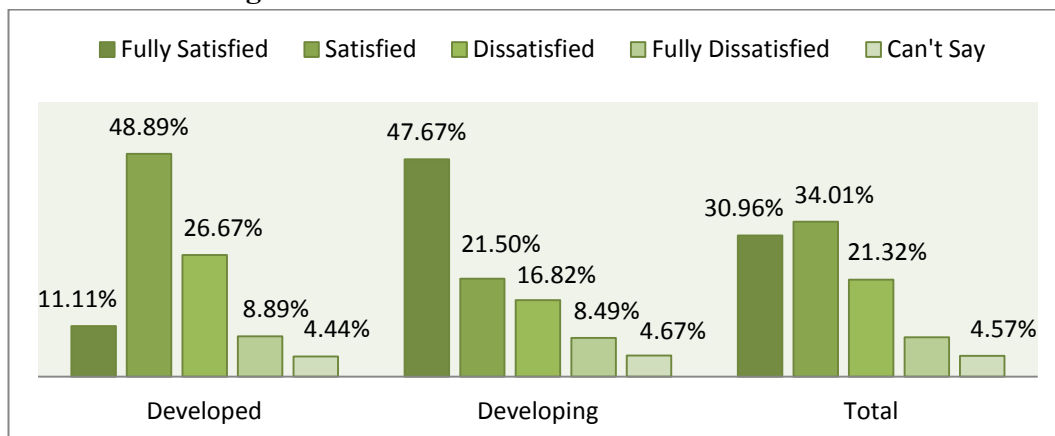
**Table 5.15.12.2: Satisfaction Level of the Selected Farmers towards Farmer’s Training**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	06 (17.65)	00	04 (16.67)	10 (11.11)	25 (67.57)	14 (38.89)	12 (35.29)	51 (47.67)	<b>61 (30.96)</b>
b.	Satisfied	10 (29.41)	26 (81.25)	08 (33.33)	44 (48.89)	03 (8.12)	12 (35.29)	08 (23.53)	23 (21.50)	<b>67 (34.01)</b>
c.	Dissatisfied	12 (35.29)	04 (12.5)	08 (33.33)	24 (26.67)	05 (13.51)	08 (22.22)	05 (14.71)	18 (16.82)	<b>42 (21.32)</b>
d.	Fully Dissatisfied	02 (5.88)	02 (6.25)	04 (16.67)	08 (8.89)	02 (5.41)	02 (5.88)	06 (17.64)	09 (8.49)	<b>17 (8.63)</b>
e.	Can’t say	05 (14.28)	00	00	05 (5.49)	02 (5.41)	00	03 (8.82)	5 (4.72)	<b>10 (4.57)</b>
<b>Total no. of respondents</b>		<b>35</b>	<b>32</b>	<b>24</b>	<b>91</b>	<b>37</b>	<b>36</b>	<b>34</b>	<b>106</b>	<b>197</b>

Source: Survey Data



**Graph 5.15.12.2: Satisfaction Level of the Selected Farmers towards Farmer's Training**



Source: Survey Data

### Inferences

According to the table, most of the respondents (34.01%) are satisfied, maximum in Kota (81.25%) and 30.96 percent respondents are fully satisfied, maximum in Sawaimadhapur (67.57%) whereas almost 21.32 percent respondents are dissatisfied, maximum in Jaipur (35.39%) with various training programme conducted by the government from time to time in the state. Around 09.14 percent respondents are fully dissatisfied with it, maximum in Jhalawar (17.64%).

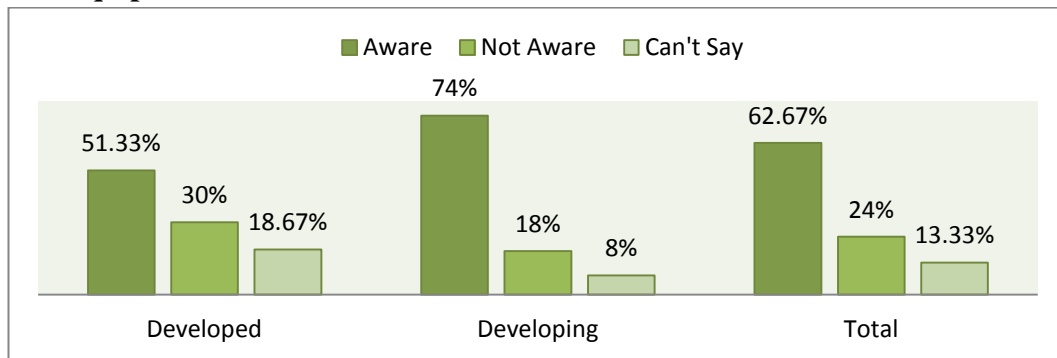
### 5.15.13. Farm Machinery and Equipment Distribution Scheme

**Table 5.15.13.1: Knowledge of the Selected Farmers about Farm Machinery and Equipment Distribution Scheme**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Aware	30 (60)	24 (48)	23 (46)	77 (51.33)	41 (82)	35 (70)	35 (70)	111 (74)	<b>188</b> <b>(62.67)</b>
b.	Not Aware	08 (16)	14 (28)	23 (46)	45 (30)	08 (16)	09 (18)	10 (20)	27 (18)	<b>72</b> <b>(24)</b>
c.	Can't say	12 (24)	12 (24)	04 (08)	28 (18.67)	01 (02)	06 (12)	05 (10)	12 (08)	<b>40</b> <b>(13.33)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.13.1: Knowledge of the Selected Farmers about Farm Machinery and Equipment Distribution Scheme**



Source: Survey Data

### Inferences

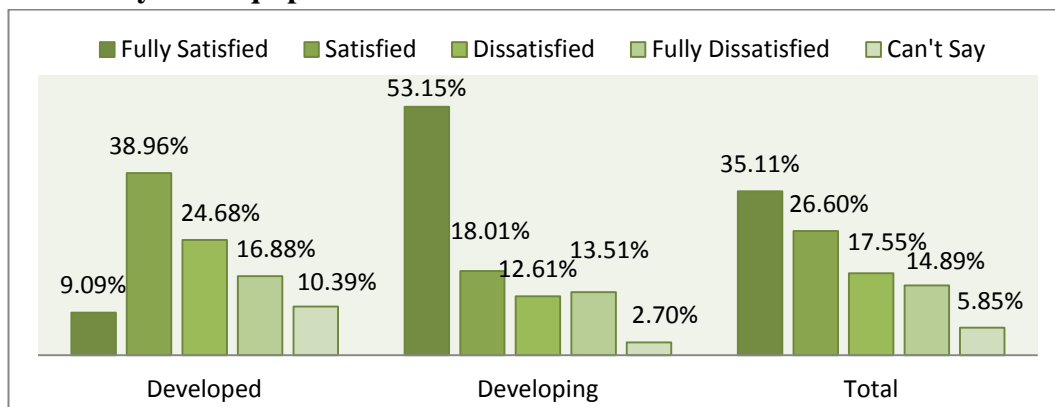
The finding deduced that from the above table shows that most of the respondents (62.67%) are aware while 24 percent are unaware of the scheme. The highest percentage of aware farmers is in Sawaimadhapur (82%) followed by Tonk (70%) and Jalawar (70%) and unaware farmers are in Sikar (46%). The awareness level is higher in the developing districts than in the developed districts.

**Table 5.15.13.2: Satisfaction Level of the Selected Farmers towards Farmer Machinery and Equipment Distribution Scheme**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	04 (13.33)	02 (08.33)	01 (4.35)	07 (9.09)	29 (70.73)	17 (48.57)	13 (37.14)	59 (53.15)	<b>66 (35.11)</b>
b.	Satisfied	06 (20)	16 (66.66)	08 (34.78)	30 (38.96)	05 (12.19)	10 (28.57)	05 (14.29)	20 (18.01)	<b>50 (26.60)</b>
c.	Dissatisfied	10 (33.33)	02 (08.33)	07 (30.43)	19 (24.68)	03 (07.32)	06 (17.14)	05 (14.29)	14 (12.61)	<b>33 (17.55)</b>
d.	Fully Dissatisfied	06 (20)	02 (08.33)	05 (21.74)	13 (16.88)	03 (07.32)	02 (5.71)	10 (28.57)	15 (13.51)	<b>28 (14.89)</b>
e.	Can't say	04 (13.33)	02 (08.33)	02 (8.69)	8 (10.39)	01 (2.44)	00	02 (40)	3 (2.70)	<b>11 (5.85)</b>
<b>Total no. of respondents</b>		<b>30</b>	<b>24</b>	<b>23</b>	<b>77</b>	<b>41</b>	<b>35</b>	<b>35</b>	<b>111</b>	<b>188</b>

Source: Survey Data

**Graph 5.15.13.2: Satisfaction Level of the Selected Farmers towards Farmer Machinery and Equipment Distribution Scheme**



Source: Survey Data

### Inferences

It is revealed from the above table that the percentages of the total respondents who are fully satisfied, satisfied and dissatisfied with the scheme, are 35.11 %, 26.60%, and 17.55 % respectively. Around 14.89% respondents are fully dissatisfied and 5.85 % percent respondents didn't say anything regarding this. The highest percentages of fully satisfied, satisfied, and dissatisfied respondents are in Sawaimadhopur (70.73%), Kota (66.66%) and Jaipur (33.33%) respectively. In Jhalawar, around 28.57 % respondents are fully dissatisfied with the schemes. In the developing districts, 53.15 % respondents are fully satisfied whereas in the developed districts only 9.09 % respondents are fully satisfied with the scheme.

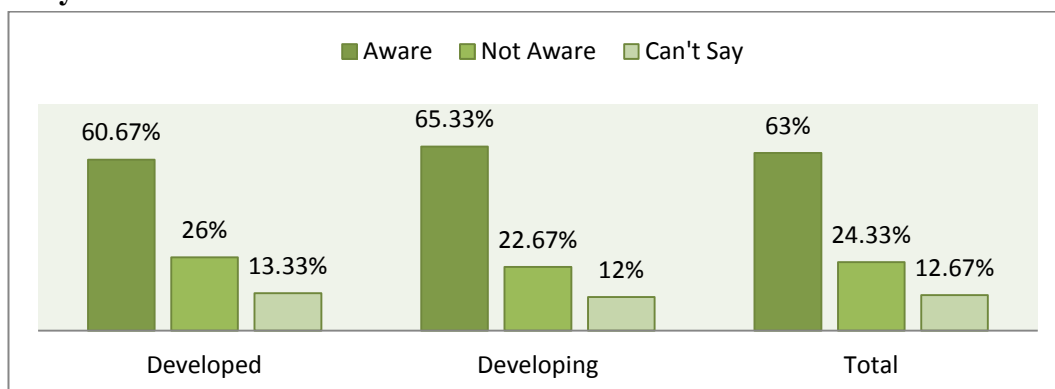
### 5.15.14. Krushak Jagriti Karyakram

**Table 5.15.14.1: Knowledge of the Selected Farmers about Krushak Jagriti Karyakram**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	36 (72)	34 (68)	21 (42)	91 (60.67)	37 (74)	38 (76)	23 (46)	98 (65.33)	<b>189 (63)</b>
b.	Not Aware	08 (16)	12 (24)	19 (38)	39 (26)	11 (22)	08 (16)	15 (30)	34 (22.67)	<b>73 (24.33)</b>
c.	Can't say	06 (12)	04 (08)	10 (20)	20 (13.33)	02 (04)	04 (08)	12 (24)	18 (12)	<b>38 (12.67)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.14.1: Knowledge of the Selected Farmers about Krushak Jagriti Karyakram**



Source: Survey Data

### Inferences

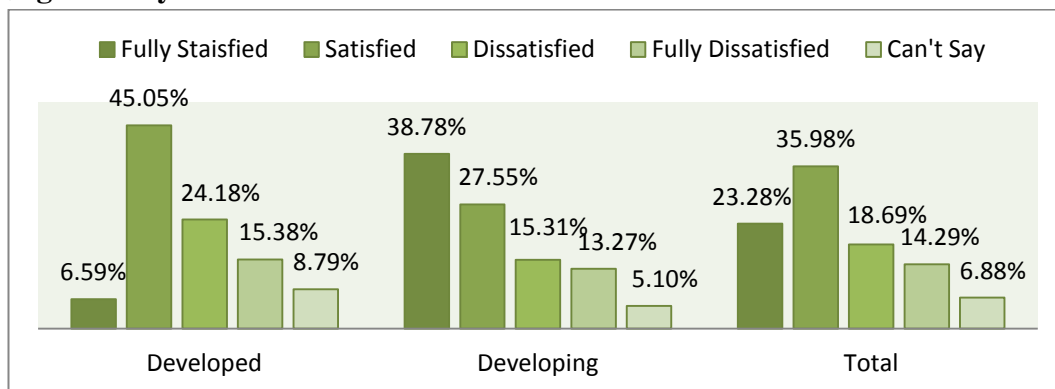
The finding reveals from the above table that around 63 percent respondents are aware while 24.33 percent respondents are unaware of this venture. The percentage of respondents who have knowledge about it is the highest in Tonk (76%) followed by Sawaimadhopur (74%) and Jaipur (72%). The percentage of respondents, who don't know about this, is higher in Sikar (38%) and Jhalawar (30%) than in other four districts.

**Table 5.15.14.2: Satisfaction Level of the Selected Farmers towards Krushak Jagriti Karyakram**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	02 (05.56)	00	04 (10.05)	06 (6.59)	25 (67.57)	08 (21.05)	05 (21.74)	38 (38.78)	<b>44 (23.28)</b>
b.	Satisfied	12 (33.33)	20 (58.82)	09 (42.86)	41 (45.05)	02 (05.41)	20 (52.63)	05 (21.74)	27 (27.55)	<b>68 (35.98)</b>
c.	Dissatisfied	14 (38.89)	04 (11.76)	04 (10.05)	22 (24.18)	03 (08.11)	04 (10.53)	08 (34.78)	15 (15.31)	<b>37 (18.69)</b>
d.	Fully Dissatisfied	04 (11.11)	06 (17.65)	04 (10.05)	14 (15.38)	04 (10.81)	06 (15.78)	03 (13.04)	13 (13.27)	<b>27 (14.29)</b>
e.	Can't say	04 (11.11)	04 (11.76)	00	08 (8.79)	03 (08.11)	00	02 (8.69)	05 (5.10)	<b>13 (6.88)</b>
<b>Total no. of respondents</b>		<b>36</b>	<b>34</b>	<b>21</b>	<b>91</b>	<b>37</b>	<b>38</b>	<b>23</b>	<b>98</b>	<b>189</b>

Source: Survey Data

**Graph 5.15.14.2: Satisfaction Level of the Selected Farmers towards Krushak Jagriti Karyakram**



Source: Survey Data

### Inferences

About 35.98% respondents are satisfied whereas 23.28% respondents are fully satisfied and 19.58% respondents are dissatisfied with the program in the state. The percentage of fully dissatisfied respondents is 14.29%. The percentage of fully satisfied respondents is the highest in Sawaimadhopur with 67.57% followed by Jhalawar (21.74%) and Sikar (21.05%), Tonk (10.05%) and Jaipur (05.56%) while there is nil percentage in Kota. The percentage of respondents who stated that they are fully dissatisfied with the awareness program run by the State government is higher in Kota (17.65%) and Tonk (15.78%) than other selected districts. Almost 38.78% respondents are fully satisfied in the developing districts while only 6.59% respondents are fully satisfied in the developed districts with the scheme.

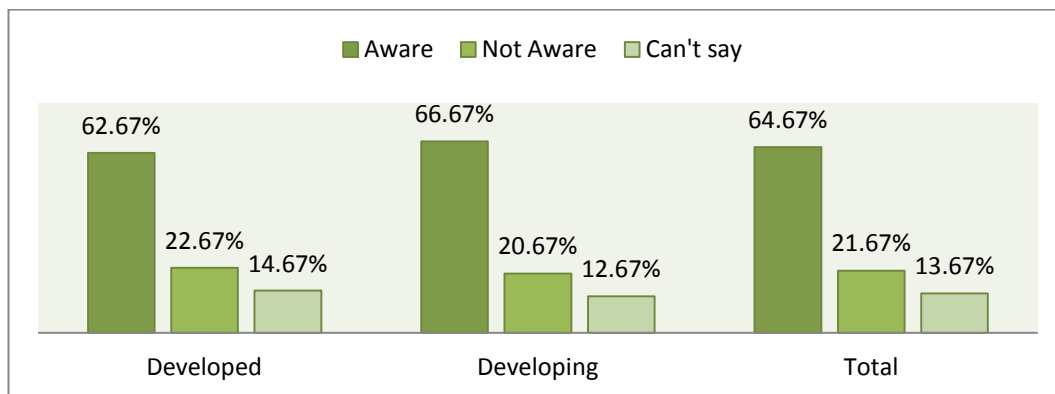
### 5.15.15. Krushak Bhraman

**Table 5.15.15.1: Knowledge of Selected Farmers about Krushak Bhraman**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	36 (72)	34 (68)	24 (48)	94 (62.67)	40 (80)	30 (60)	30 (60)	100 (66.67)	<b>194</b> <b>(64.67)</b>
b.	Not Aware	08 (16)	06 (12)	20 (40)	34 (22.67)	07 (14)	14 (28)	10 (20)	31 (20.67)	<b>65</b> <b>(21.67)</b>
c.	Can't say	06 (12)	10 (20)	06 (12)	22 (14.67)	03 (06)	06 (12)	10 (20)	19 (12.67)	<b>41</b> <b>(13.67)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.15.1: Knowledge of the Selected Farmers about Krushak Bhraman**



Source: Survey Data

### Inferences

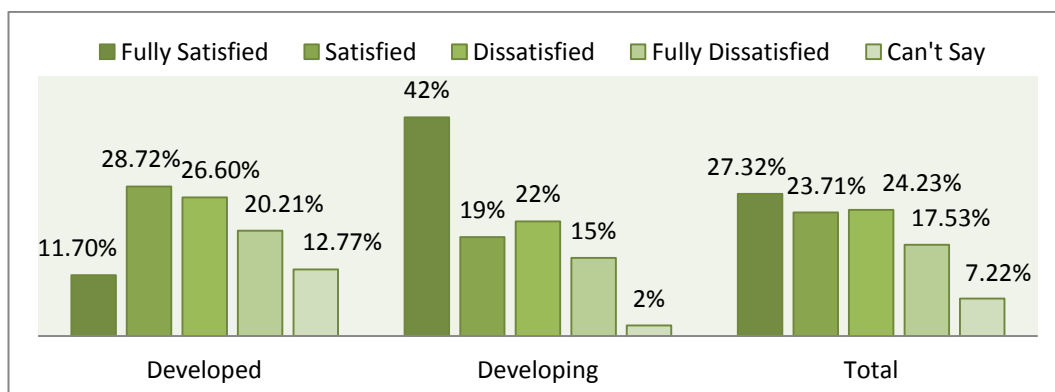
From the table 5.15.15.1, it may be deduced that 64.67% respondents are aware of excursion and 21.67% don't have any knowledge regarding this. Almost 13.66 percent respondents expressed their views as "Can't say". There is no considerable difference between the number of the respondents of both the groups.

**Table 5.15.15.2: Satisfaction Level of the Selected Farmers towards Krushak Bhraman**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	02 (5.56)	01 (2.94)	08 (33.33)	11 (11.70)	27 (67.5)	08 (26.67)	07 (23.33)	42 (42)	<b>53</b> <b>(27.32)</b>
b.	Satisfied	06 (16.67)	17 (50)	04 (16.67)	27 (28.72)	04 (10)	08 (26.67)	07 (23.33)	19 (19)	<b>46</b> <b>(23.71)</b>
c.	Dissatisfied	16 (44.44)	04 (11.76)	05 (20.83)	25 (26.6)	04 (10)	10 (33.33)	08 (26.67)	22 (22)	<b>47</b> <b>(24.23)</b>
d.	Fully Dissatisfied	08 (22.22)	07 (20.59)	04 (16.67)	19 (20.21)	04 (10)	04 (13.33)	07 (23.33)	15 (15)	<b>34</b> <b>(17.53)</b>
e.	Can't say	04 (11.11)	05 (14.71)	03 (12.5)	12 (12.77)	01 (02.5)	00	01 (3.33)	02 (02)	<b>14</b> <b>(7.22)</b>
<b>Total no. of respondents</b>		<b>36</b>	<b>34</b>	<b>24</b>	<b>94</b>	<b>40</b>	<b>30</b>	<b>30</b>	<b>100</b>	<b>194</b>

Source: Survey Data

**Graph 5.15.15.2: Satisfaction Level of the Selected Farmers towards Krushak Bhraman**



Source: Survey Data

### Inferences

As per the table 5.15.15.2, it may be deduced that the total level of satisfaction (fully satisfied and satisfied) of respondents is higher than dissatisfaction level for the scheme because around 51.03 percent respondents responded positively and 41.76 percent respondents responded that they are not satisfied. The highest percentage of fully satisfied is in Sawaimadhopur (67.5 %), satisfied is in Kota (50%), dissatisfied in Jaipur (44.44%) and fully dissatisfied respondents in Jhalawar (23.33%). About 42 % respondents are fully satisfied in the developing districts whereas only 11.70 % respondents are fully satisfied in the developed districts.

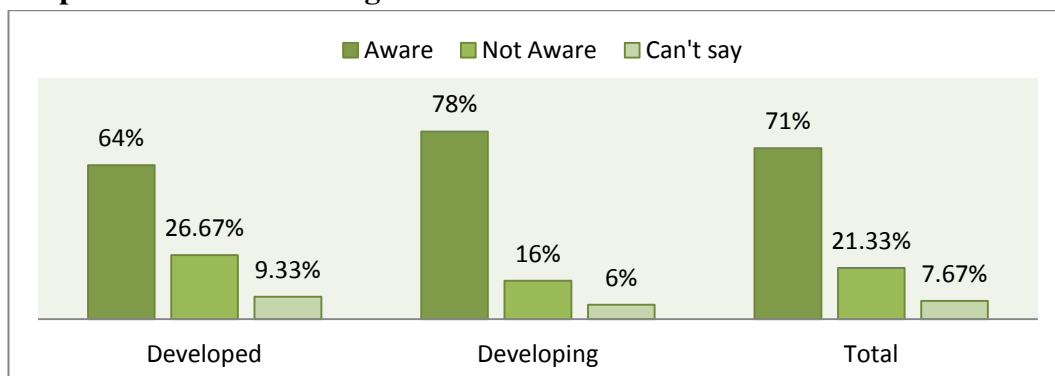
### 5.15.16. Kisan Bahwan

**Table 5.15.16.1: Knowledge of the Selected Farmers about Kisan Bahwan**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Aware	32 (64)	42 (84)	22 (44)	96 (64)	38 (76)	44 (88)	35 (70)	117 (78)	<b>213</b> <b>(71)</b>
b.	Not Aware	14 (28)	06 (12)	20 (40)	40 (26.67)	08 (16)	06 (12)	10 (20)	24 (16)	<b>64</b> <b>(21.33)</b>
c.	Can't say	04 (08)	02 (04)	08 (16)	14 (9.33)	04 (08)	00	05 (10)	9 (06)	<b>23</b> <b>(7.67)</b>
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.15.16.1: Knowledge of the Selected Farmers about Kisan Bahwan**



Source: Survey Data

### Inferences

Most of the respondents (71%) are aware of the availability of the facility in the state. Around 21.33 percent respondents maximum in Sikar (40%) don't have any knowledge regarding this. The percentage of respondents who have knowledge about it is the highest in Tonk (88%) followed by Kota (84%), Sawaimadhapur (76%), Jaipur (64%) and Jhalawar (70%).

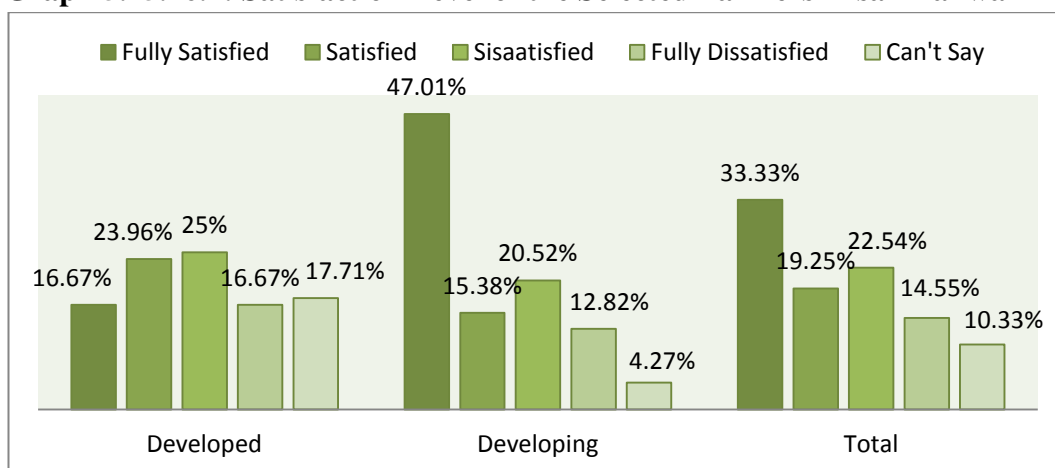
**Table 5.15.16.2: Satisfaction Level of the Selected Farmers Kisan Bahwan**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	06 (18.75)	04 (9.52)	06 (27.27)	16 (16.67)	20 (52.63)	30 (68.18)	05 (14.29)	55 (47.01)	<b>71 (33.33)</b>
b.	Satisfied	06 (18.75)	12 (28.57)	05 (22.73)	23 (23.96)	04 (10.53)	04 (09.09)	10 (28.57)	18 (15.38)	<b>41 (19.25)</b>
c.	Dissatisfied	08 (25)	14 (33.33)	02 (9.09)	24 (25)	05 (13.16)	04 (9.09)	15 (42.86)	24 (20.52)	<b>48 (22.54)</b>
D	Fully Dissatisfied	06 (18.75)	04 (9.523)	06 (27.27)	16 (16.67)	05 (13.16)	06 (13.64)	04 (11.43)	15 (12.82)	<b>31 (14.55)</b>
E	Can't say	06 (18.75)	08 (19.05)	03 (13.64)	17 (17.71)	04 (10.53)	00	01 (2.86)	05 (4.27)	<b>22 (10.33)</b>
<b>Total no. of respondents</b>		<b>32</b>	<b>42</b>	<b>22</b>	<b>96</b>	<b>38</b>	<b>44</b>	<b>35</b>	<b>117</b>	<b>213</b>

Source: Survey Data



**Graph 5.15.16.2: Satisfaction Level of the Selected Farmers Kisan Bahwan**



Source: Survey Data

### Inferences

The findings state that almost 33.33% respondents are fully satisfied with this facility in the state whereas the percentage of satisfied and dissatisfied respondents is 19.25 % and 22.54 % respectively. Around 14.55 percent respondents in the state are fully dissatisfied with the facility. When comparing districts, it is clearly stated that about 68.18% respondents are fully satisfied in Tonk whereas about 28.57% are satisfied in Kota and Jhalawar, and 42.86% respondents are dissatisfied in Jhalawar. The percentage of fully dissatisfied respondents is the highest in Sikar (27.27%) followed by Jaipur (18.75%), Sawaimadhopur (13.16%) and Tonk (13.64%). The satisfaction level is much higher in developing districts than in developed districts.

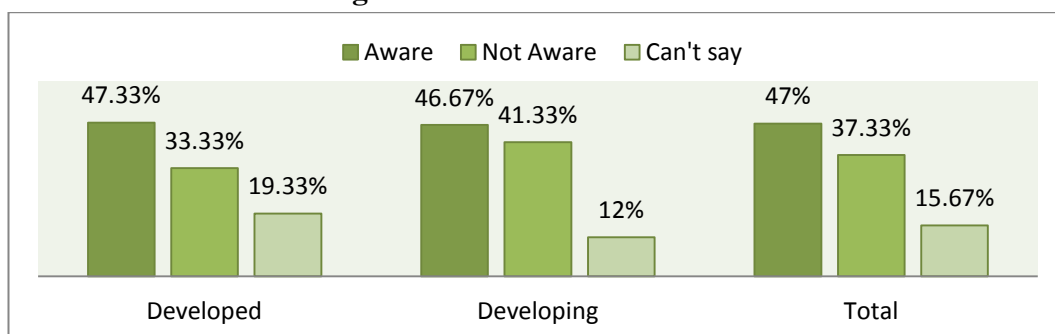
### 5.15.17. SFAC

**Table 5.15.17.1: Knowledge of the Selected Farmers about SFAC**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Aware	20 (40)	34 (68)	17 (34)	71 (47.33)	18 (36)	34 (68)	18 (36)	70 (46.67)	<b>141</b> (47)
b.	Not Aware	16 (32)	08 (16)	26 (52)	50 (33.33)	25 (50)	12 (24)	25 (50)	62 (41.33)	<b>112</b> (37.33)
d	Can't say	14 (28)	08 (16)	07 (14)	29 (19.33)	07 (14)	04 (08)	07 (14)	18 (12)	<b>47</b> (15.67)
<b>Total no. of Respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Table 5.15.17.1: Knowledge of the Selected Farmers about SFAC**



Source: Survey Data

**Inferences**

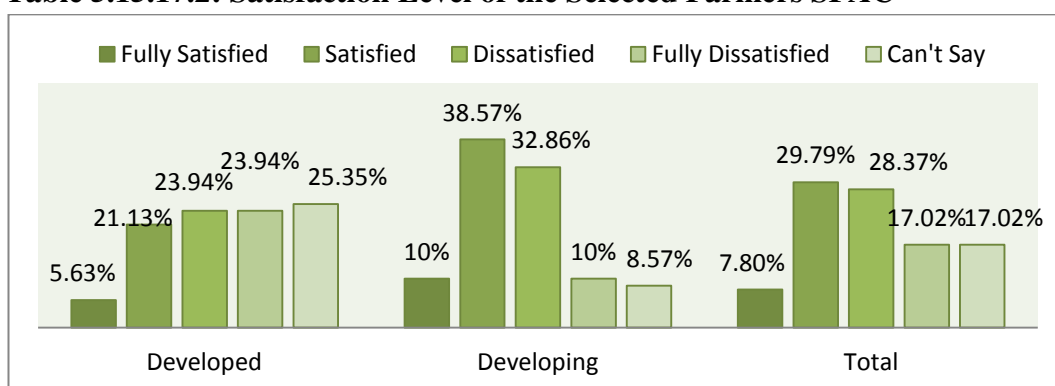
The finding reveals from the above table that around 47 percent respondents are aware while 37.33 percent respondents are unaware, maximum in Sikar (52%) about this venture. The percentage of respondents who have knowledge of it is the highest in Kota (68%) and Tonk (68%).

**Table 5.15.17.2: Satisfaction Level of the Selected Farmers SFAC**

S. N.	Variables	Developed(1)				Developing (2)				Total 1+2=3
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Fully Satisfied	02 (10)	02 (05.88)	00	04 (5.63)	02 (11.11)	02 (5.88)	03 (16.67)	07 (10)	<b>11</b> <b>(7.80)</b>
b.	Satisfied	02 (10)	08 (23.53)	05 (29.41)	15 (21.13)	05 (27.78)	18 (52.94)	04 (22.22)	27 (38.57)	<b>42</b> <b>(29.79)</b>
c.	Dissatisfied	04 (20)	08 (23.53)	05 (29.41)	17 (23.94)	05 (27.78)	10 (29.41)	08 (44.44)	23 (32.86)	<b>40</b> <b>(28.37)</b>
d.	Fully Dissatisfied	06 (30)	08 (23.53)	03 (17.65)	17 (23.94)	02 (11.11)	02 (5.88)	03 (16.67)	07 (10)	<b>24</b> <b>(17.02)</b>
e.	Can't say	06 (30)	08 (23.53)	04 (23.53)	18 (25.35)	04 (22.2)	02 (5.88)	00	06 (8.57)	<b>24</b> <b>(17.02)</b>
<b>Total no. of respondents</b>		<b>20</b>	<b>34</b>	<b>17</b>	<b>71</b>	<b>18</b>	<b>34</b>	<b>18</b>	<b>70</b>	<b>141</b>

Source: Survey Data

**Table 5.15.17.2: Satisfaction Level of the Selected Farmers SFAC**



Source: Survey Data

## Inferences

As per the table, it may be concluded that about 29.79% respondents are satisfied and 07.80 percent respondents are fully satisfied. Almost 45.39% respondents are not happy with this project. The satisfaction level is higher in developing districts than in developed districts regarding this.

### 5.16. Constraints in Marketing of Farm Products

The farmers have to face several problems such as lack of credit facility to purchase agricultural inputs and manage post harvest expenses; existence of excess number of middlemen in the market who snatch their big part of profit and exploit them; lack of availability of infrastructure for processing of farm produce; lack of storage, grading and packaging facilities increasing in post harvest losses, lack of transportation facilities and high transportation charges increasing cost of farm produce; lack of technical guidance about cultivation process; and unavailability of timely market information regarding current price, weather and new developments in agricultural operations. To find out the frequency of facing these issues by selected farmers in agricultural operations, nine tables have been prepared and discussed. In each table, respondents are classified into five groups as always, often, sometimes, rarely and never based on their frequency of facing the issue.

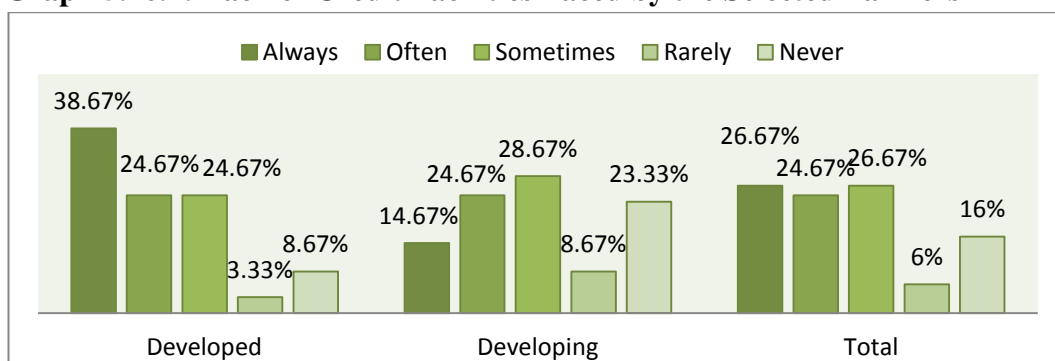
#### 5.16.1. Lack of Credit Facilities

**Table 5.16.1: Lack of Credit Facilities Faced by the Selected Farmers**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	16 (32)	22 (44)	20 (40)	58 (38.67)	04 (08)	08 (16)	10 (20)	22 (14.67)	80 (26.67)
b.	Often	14 (28)	12 (24)	11 (22)	37 (24.67)	14 (28)	08 (16)	15 (30)	37 (24.67)	74 (24.67)
c.	Sometimes	12 (24)	13 (26)	12 (24)	37 (24.67)	14 (28)	14 (28)	15 (30)	43 (28.67)	80 (26.67)
d.	Rarely	02 (04)	03 (06)	00	05 (3.33)	04 (08)	04 (08)	05 (10)	13 (8.67)	18 (06)
e.	Never	06 (12)	00	07 (14)	13 (8.67)	14 (28)	16 (32)	05 (10)	35 (23.33)	48 (16)
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.16.1: Lack of Credit Facilities Faced by the Selected Farmers**



Source: Survey Data

### Inferences

The findings revealed from the above table that about 26.67% respondents always face the problem. The percentage of respondents who face the problem often, sometimes, and rarely are 24.67%, 26.67%, and 06% respectively. Only 16 percent respondents never face the problem. It means that they can manage their credit needs on their basis and they have no requirement of taking a loan or borrowing money from any sources for performing agricultural operations. When comparing both the groups, it is clearly deduced that in developed districts, the numbers of respondents who experience the problem is higher than in developing the district.

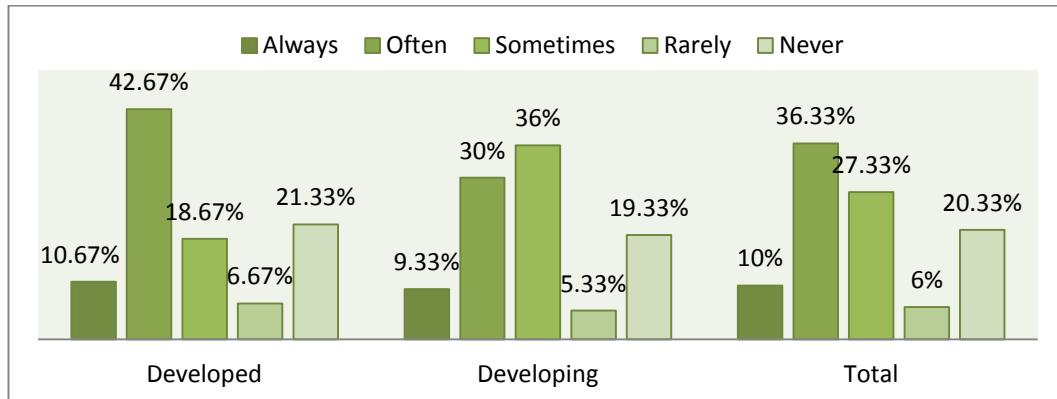
### 5.16.2. Long Marketing Channel

**Table 5.16.2: Frequency of Presence of Excess Numbers of Intermediaries in the Market**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	10 (20)	00	06 (12)	16 (10.67)	04 (08)	10 (20)	00	14 (9.33)	30 (10)
b.	Often	12 (24)	35 (70)	17 (34)	64 (42.67)	14 (28)	16 (32)	15 (30)	45 (30)	109 (36.33)
c.	Some-times	12 (24)	06 (12)	10 (20)	28 (18.67)	12 (24)	15 (30)	27 (54)	54 (36)	82 (27.33)
d.	Rarely	04 (08)	03 (06)	03 (06)	10 (6.67)	02 (04)	03 (06)	03 (06)	08 (5.33)	18 (06)
e.	Never	12 (24)	06 (12)	14 (28)	32 (21.33)	18 (36)	06 (12)	05 (10)	29 (19.33)	61 (20.33)
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.16.2: Frequency of Presence of Excess Numbers of Intermediaries in the Market**



Source: Survey Data

### Inferences

The findings revealed from the above table that about 10% respondents always face the problem. The percentage of respondents who face the problem often, sometimes, and rarely are 36.33%, 27.33%, and 06% respectively. Only 20.33 percent respondents never face the problem. When comparing both the groups, it is clearly deduced that the numbers of respondents in both the groups experience a similar problem.

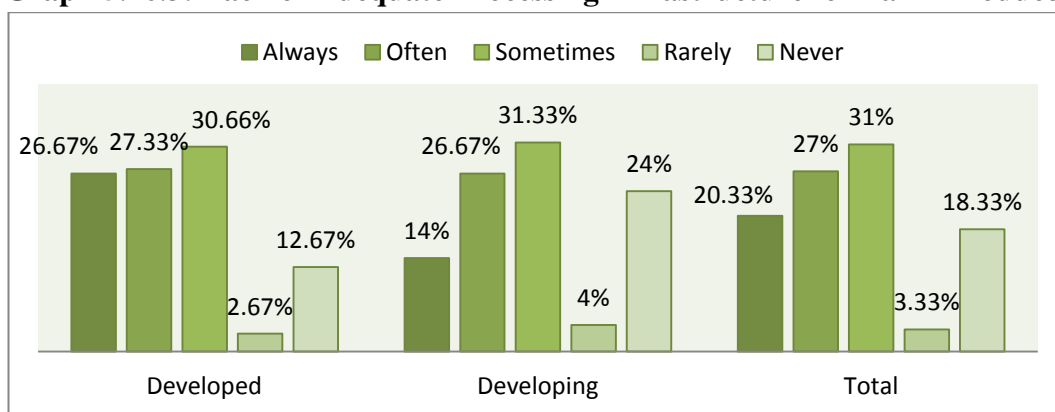
### 5.16.3. Lack of Processing Infrastructure:

**Table 5.16.3: Lack of Adequate Processing Infrastructure for Farm Produce**

S. N .	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	14 (28)	02 (04)	24 (48)	40 (26.67)	08 (16)	06 (12)	07 (14)	21 (14)	61 (20.33)
b.	Often	12 (24)	20 (40)	09 (18)	41 (27.33)	16 (32)	06 (12)	18 (36)	40 (26.67)	81 (27)
c.	Some-times	15 (30)	19 (38)	12 (24)	46 (30.67)	16 (32)	17 (34)	14 (28)	47 (31.33)	93 (31)
d.	Rarely	01 (02)	03 (06)	00	04 (2.67)	02 (04)	03 (06)	01 (02)	06 (04)	10 (3.33)
e.	Never	08 (16)	06 (12)	05 (10)	19 (12.67)	08 (16)	18 (36)	10 (20)	36 (24)	55 (18.33)
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.16.3: Lack of Adequate Processing Infrastructure for Farm Produce**



Source: Survey Data

### Inferences

The findings reveal from above the table that about 20.33% respondents always face the problem. The percentage of respondents who face the problem often, sometimes, and rarely are 27%, 31%, and 3.33% respectively. Only 18.33 percent respondents never face the problem. When comparing both groups, it is clearly deduced that the numbers of respondents who face the problem is higher in developed districts.

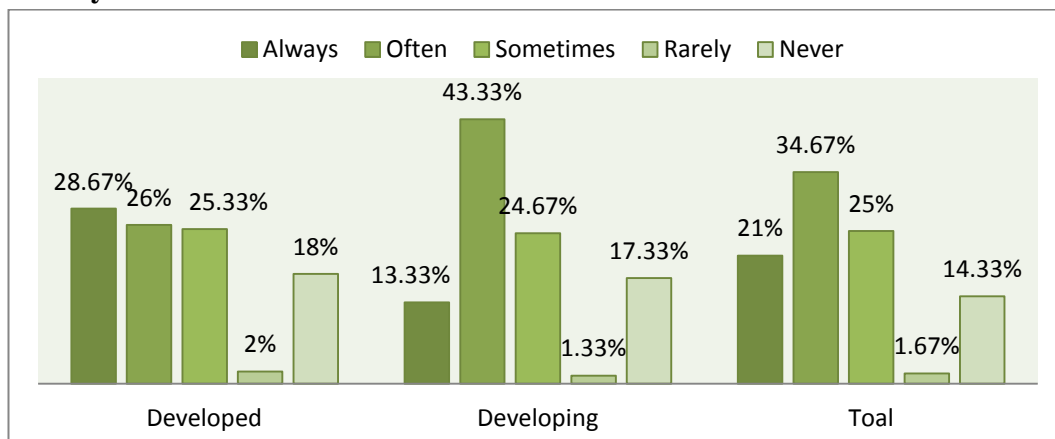
### 5.16.4. High Cost of Transport Charges and Lack of Transportation Facility

**Table 5.16.4: High Cost of Transport Charges and Lack of Transportation Facility for Movement of Farm Produce**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	28 (56)	02 (04)	13 (26)	43 (28.67)	06 (12)	04 (08)	10 (20)	20 (13.33)	63 (21)
b.	Often	08 (16)	16 (32)	15 (30)	39 (26)	22 (44)	18 (36)	25 (50)	65 (43.33)	104 (34.6)
c.	Some-times	12 (24)	16 (32)	10 (20)	38 (25.33)	16 (32)	16 (32)	05 (10)	37 (24.67)	75 (25)
d.	Rarely	00	02 (04)	01 (02)	03 (02)	00	01 (02)	01 (02)	02 (1.33)	05 (1.67)
e.	Never	02 (04)	14 (28)	11 (22)	27 (18)	06 (12)	11 (22)	09 (18)	26 (17.33)	53 (14.33)
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.16.4: High Cost of Transport Charges and Lack of Transportation Facility for Movement of Farm Produce**



Source: Survey Data

### Inferences

The findings revealed from the above table that about 21% respondents always face the problem. The percentage of respondents who face the problem often, sometimes, and rarely is 34.67%, 25%, and 1.67% respectively. Only 14.33 percent respondents never face the problem. When comparing both the groups, it is clearly deduced that the numbers of respondents in both the groups experience a similar problem.

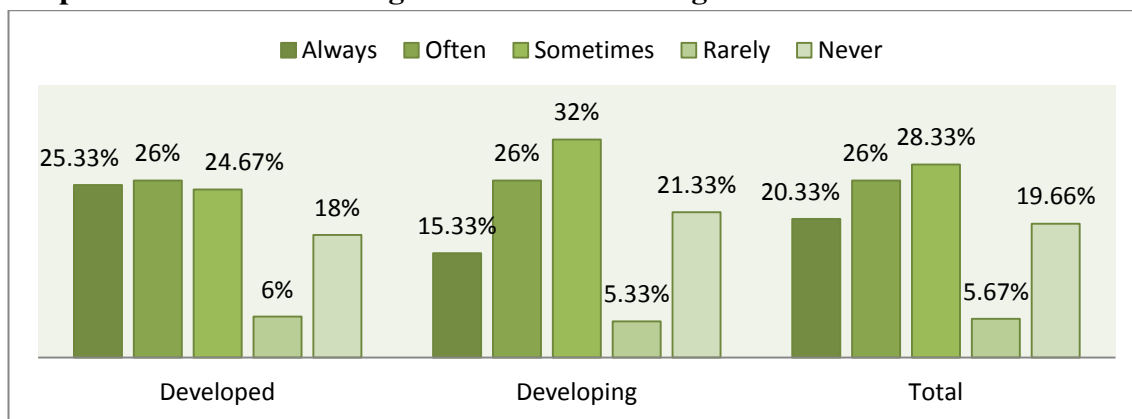
### 5.16.5. Lack of Storage Facilities

**Table 5.16.5: Lack of Storage Facilities for Storing of Farm Produce**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	12 (24)	06 (12)	20 (40)	38 (25.33)	10 (20)	06 (12)	07 (14)	23 (15.33)	61 (20.33)
b.	Often	12 (24)	18 (36)	09 (18)	39 (26)	16 (32)	06 (12)	17 (34)	39 (26)	78 (26)
c.	Some-times	10 (20)	16 (32)	11 (22)	37 (24.67)	12 (24)	18 (36)	18 (36)	48 (32)	85 (28.33)
d.	Rarely	02 (04)	04 (08)	03 (06)	09 (06)	04 (08)	02 (04)	02 (04)	08 (5.33)	17 (5.67)
e.	Never	14 (28)	06 (12)	07 (14)	27 (18)	08 (16)	18 (36)	06 (12)	32 (21.33)	59 (19.66)
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.16.5: Lack of Storage Facilities for Storing of Farm Produce**



Source: Survey Data

### Inferences

The findings revealed from the above table that about 20.33% respondents always face the problem. The percentage of respondents who face the problem often, sometimes, and rarely is 26%, 28.33%, and 5.67% respectively. Only 19.66 percent respondents never face the problem. When comparing both the groups, it is clearly deduced that the number of respondents in both the groups experience a similar problem.

### 5.16.6. Lack of Knowledge of Good Cultivation Practices

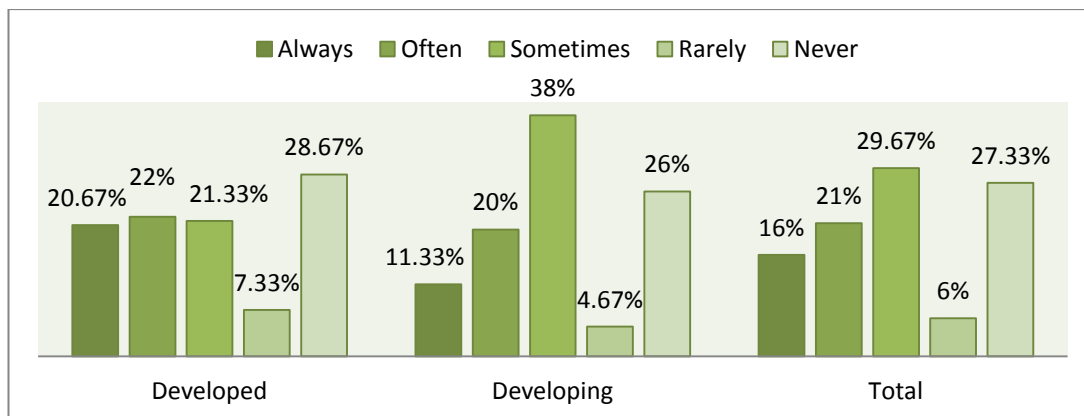
**Table 5.16.6: Lack of Knowledge of Good Cultivation Practices**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	14 (28)	08 (16)	09 (18)	31 (20.67)	04 (08)	08 (16)	05 (10)	17 (11.33)	48 (16)
b.	Often	10 (20)	16 (32)	07 (14)	33 (22)	14 (28)	06 (12)	10 (20)	30 (20)	63 (21)
c.	Some-times	17 (34)	08 (16)	07 (14)	32 (21.33)	24 (48)	16 (32)	17 (34)	57 (38)	89 (29.67)
d.	Rarely	03 (06)	04 (08)	04 (08)	11 (7.33)	02 (04)	02 (04)	03 (06)	07 (4.67)	18 (06)
e.	Never	06 (12)	14 (28)	23 (46)	43 (28.67)	06 (12)	18 (36)	15 (30)	39 (26)	82 (27.33)
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data



**Graph: 5.16.6. Lack of Knowledge of Good Cultivation Practices**



Source: Survey Data

### Inferences

The findings revealed from the above table that about 16 % respondents always face the problem. The percentage of respondents who face the problem often, sometimes, and rarely is 21%, 29.67%, and 6% respectively. Only 27.33 percent respondents never face the problem. When comparing both the groups, it is clearly deduced that the number of respondents in both the groups experience a similar problem.

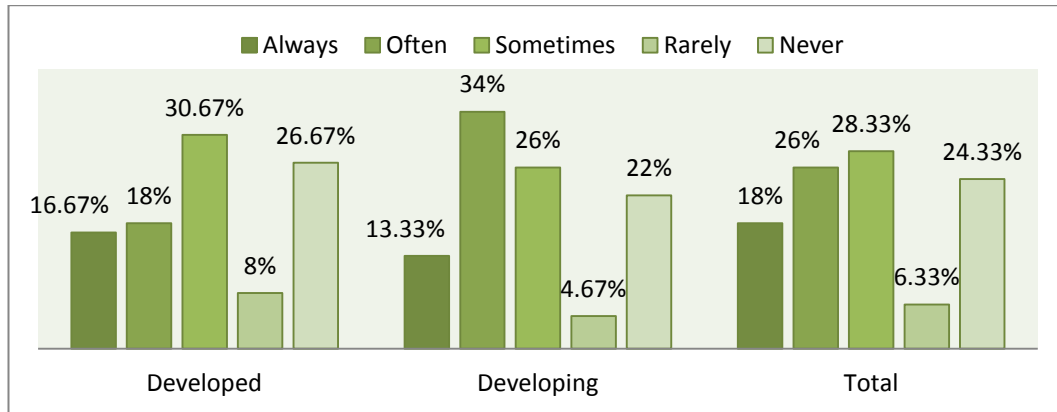
### 5.16.7. Lack of Technical Know-How on Grading

**Table 5.16.7: Lack of Technical Know-How on Grading**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	12 (24)	04 (08)	09 (18)	25 (16.67)	04 (08)	10 (20)	06 (12)	20 (13.33)	45 (18)
b.	Often	10 (20)	10 (20)	07 (14)	27 (18)	20 (40)	14 (28)	17 (34)	51 (34)	78 (26)
c.	Some-times	15 (30)	23 (46)	08 (16)	46 (30.67)	16 (32)	08 (16)	15 (30)	39 (26)	85 (28.33)
d.	Rarely	05 (10)	03 (06)	04 (08)	12 (08)	02 (04)	02 (04)	03 (06)	07 (4.67)	19 (6.33)
e.	Never	08 (16)	10 (20)	22 (44)	40 (26.67)	08 (16)	16 (32)	09 (18)	33 (22)	73 (24.33)
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.16.7: Lack of Technical Know-How on Grading**



Source: Survey Data

### Inferences

The findings revealed from the above table that about 18 % respondents always face the problem. The percentage of respondents who face the problem often, sometimes, and rarely are 26%, 28.33%, and 6.33% respectively. Only 24.33 percent respondents never face the problem. When comparing both the groups, it is clearly deduced that the numbers of respondents in both the groups experience a similar problem.

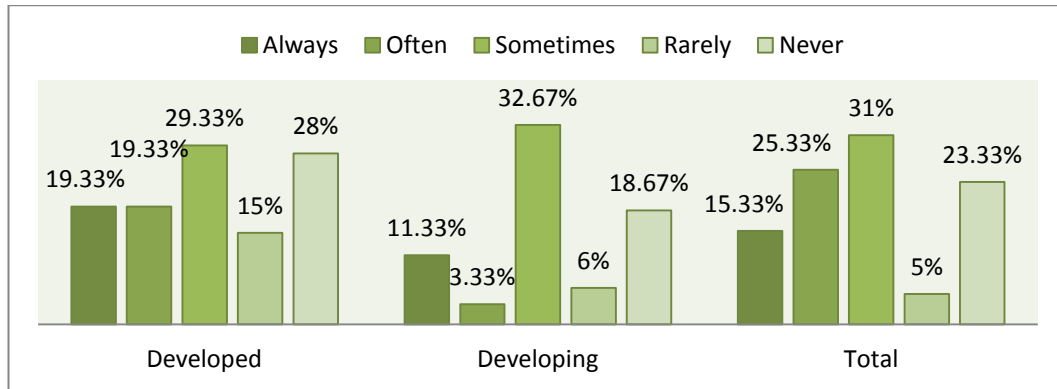
### 5.16.8. Lack of Knowledge on Packaging

**Table 5.16.8: Lack of Knowledge on Packaging**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	12 (24)	08 (16)	09 (18)	29 (19.33)	06 (12)	08 (16)	03 (06)	17 (11.33)	46 (15.33)
b.	Often	14 (28)	08 (16)	07 (14)	29 (19.33)	16 (32)	14 (28)	17 (34)	47 (31.33)	76 (25.33)
c.	Some-times	16 (32)	19 (38)	09 (18)	44 (29.33)	18 (36)	15 (30)	16 (32)	49 (32.67)	93 (31)
d.	Rarely	02 (04)	03 (06)	01 (02)	06 (15)	04 (08)	01 (02)	04 (08)	09 (06)	15 (05)
e.	Never	06 (12)	12 (24)	24 (48)	42 (28)	06 (12)	12 (24)	10 (20)	28 (18.67)	70 (23.33)
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.16.8: Lack of Knowledge on Packaging**



Source: Survey Data

### Inferences

The findings revealed from the above table that about 15.33% respondents always face the problem. The percentage of respondents who face the problem often, sometimes, and rarely are 25.33%, 31%, and 5% respectively. Only 23.33 percent respondents never face the problem. When comparing both the groups, it is clearly deduced that the number of respondents who face the issue is higher in developed districts than in developing districts.

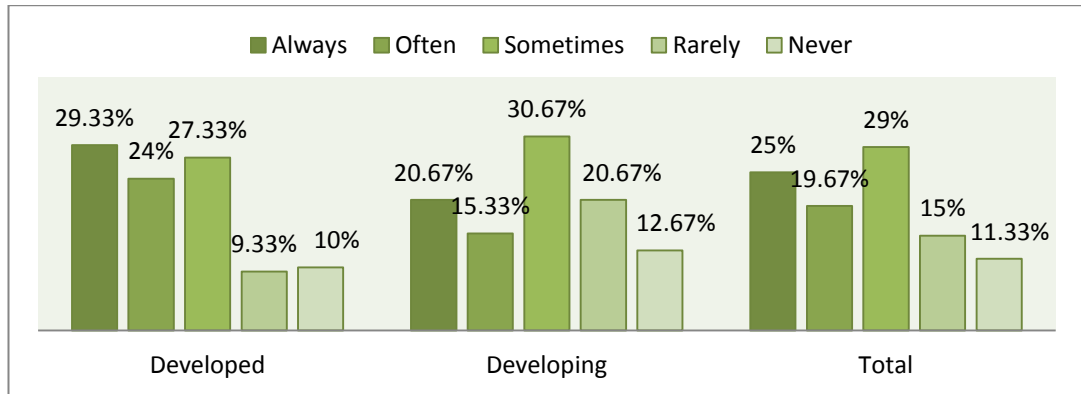
### 5.19.9. Lack of Market Information

**Table 5.19.9: Lack of Market Information**

S. N.	Variables	Developed				Developing				Total
		Jaipur	Kota	Sikar	Total	SWM	Tonk	JWR	Total	
a.	Always	18 (36)	10 (20)	16 (32)	44 (29.33)	06 (12)	08 (16)	17 (34)	31 (20.67)	<b>75</b> <b>(25)</b>
b.	Often	12 (24)	16 (32)	08 (16)	36 (24)	14 (28)	04 (08)	05 (10)	23 (15.33)	<b>59</b> <b>(19.67)</b>
c.	Some-times	12 (24)	15 (30)	14 (28)	41 (27.33)	15 (30)	18 (36)	13 (26)	46 (30.67)	<b>87</b> <b>(29)</b>
d.	Rarely	03 (06)	04 (08)	07 (14)	14 (9.33)	10 (20)	12 (24)	09 (18)	31 (20.67)	<b>45</b> <b>(15)</b>
e.	Never	05 (10)	05 (10)	05 (10)	15 (10)	05 (10)	08 (16)	06 (12)	19 (12.67)	<b>34</b> <b>(11.33)</b>
<b>Total no. of respondents</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>150</b>	<b>300</b>

Source: Survey Data

**Graph 5.19.9: Lack of Market Information**



Source: Survey Data

### Inferences

The findings revealed from the above table that about 25% respondents always face the problem. The percentage of respondents who face the problem often, sometimes, and rarely are 19.67%, 29%, and 15% respectively. Only 11.33 percent respondents never face the problem. When comparing both the groups, it is clearly deduced that the number of respondents who face the issue is almost same in both the groups.

### 5.18. Hypothesis Testing and Results

The chi-square test and Fisher exact test are implemented for testing hypothesis.

**H1: The State Government's policies and initiatives are effective for promoting Agriculture Sector in Rajasthan and farmers are able to grab some of the benefits from these activities. They are partially satisfied but not fully**

#### Methodology:

To support 'H1', the 37 Government's projects and the satisfaction level of selected farmers towards them are examined. A null hypothesis 'H0' and alternative hypothesis 'Ha' are constructed for each project or scheme.

**H0:** The satisfaction levels of selected farmers are equal in both groups as developed and developing.

**Ha:** The satisfaction levels of selected farmers are not equal in both groups as developed and developing.

The chi-square value and P value are calculated for each project or scheme separately. The Critical value is 9.488 obtained from the chi-square table for 4 degrees of freedom at 5% level of significance. If the calculated chi-square value is higher than critical value or p-value is less than 0.05 (alpha level of significance) than the null hypothesis is rejected and the alternative hypothesis is accepted.

The chi-square value and the P value for each scheme and project are calculated and given in the following table:

**Table 5.18.1: Chi-square Value and the P-Value for Government's Schemes and Projects (Satisfaction Level of the Selected Farmers)**

S.N	Government's Schemes/Programs/Policies	Chi-Square Value	P Value	Result
1.	Transportation Facilities	16.87	0.002	H0=Rejected Ha=Accepted
2.	Water Facilities	08.2	0.084	H0=Accepted Ha=Rejected
3.	Electricity for Home	1.65	0.799	H0=Accepted Ha=Rejected
4.	Telecommunication Facility	2.23	0.693	H0=Accepted Ha=Rejected
5.	Banking Facility	11.49	0.022	H0=Rejected Ha=Accepted
6.	Supply of Seeds	18.124	0.001	H0=Rejected Ha=Accepted
7.	Supply of Fertilizers	10.512	0.033	H0=Rejected Ha=Accepted
8.	Supply of Pesticides	12.23	0.016	H0=Rejected Ha=Accepted
9.	Supply of Electricity for Farm	2.104	0.717	H0=Accepted Ha=Rejected
10.	Supply of Petrol and Diesel	9.148	0.057	H0=Accepted Ha=Rejected
11.	Farm Machinery and Equipments	5.86	.209	H0=Accepted Ha=Rejected
12.	Information Provided by Government Organizations and their Representative	9.77	.044	H0=Rejected Ha=Accepted
13.	Minimum Support Price	10.30	0.035	H0=Rejected Ha=Accepted
14.	Selling of their Produce to Government Purchase Centre or Agencies	Fisher Exact Test	0.068	H0=Accepted Ha=Rejected
15.	Amenities in Krishi Upaj Mandi	13.489	.009	H0=Rejected Ha=Accepted
16.	Amenities in Government Warehouses	3.609	0.461	H0=Accepted Ha=Rejected
17.	Benefits of Loans from Institutional Sources	20.744	0.0003	H0=Rejected Ha=Accepted

18.	Kisan Credit Card	Fisher Exact Test	0.003	H0=Rejected Ha=Accepted
19.	Crop Insurance	25.068	0.00004	H0=Rejected Ha=Accepted
20.	Kisan Call Center	Fisher Exact Test	0.093	H0=Accepted Ha=Rejected
21.	Rajasthan Kisan AAYog	10.77	0.029	H0=Rejected Ha=Accepted
22.	ATMA	14.3	0.006	H0=Rejected Ha=Accepted
23.	Kisan Vigyan Kendra	2.66	0.616	H0=Accepted Ha=Rejected
24.	AGMARKNET	3.69	0.449	H0=Accepted Ha=Rejected
25.	Establishment of Agro & Food Processing Centre at State Level	3.17	0.530	H0=Accepted Ha=Rejected
26.	Agri-Export Zone	11.4	0.023	H0=Rejected Ha=Accepted
27.	Rajeev Gandhi Krishak Saathi Yozna	13.1	0.011	H0=Rejected Ha=Accepted
28.	Kisan Kalewa Yozna	1.36	0.852	H0=Accepted Ha=Rejected
29.	Link Roads	3.49	0.479	H0=Accepted Ha=Rejected
30.	Timely Awareness Programme	5.96	0.202	H0=Accepted Ha=Rejected
31.	Loan Against Farm Produce Stored in Govt. Warehouses	Fisher Exact Test	0.000	H0=Rejected Ha=Accepted
32.	Farmer's Training	34.11	0.000	H0=Rejected Ha=Accepted
33.	Farm Equipment Distribution Scheme	41.35	0.000	H0=Rejected Ha=Accepted
34.	Krashak Jagrati Karyakram	46.4	0.000	H0=Rejected Ha=Accepted
35.	Krashak Bhraman	27.17	0.000	H0=Rejected Ha=Accepted
36.	Kisan Bhawan	26.80	0.000	H0=Rejected Ha=Accepted
37.	SFAC	15.31	0.004	H0=Rejected Ha=Accepted

Source: Researcher

### Interpretation

From the above table, null hypothesis is accepted for 15 schemes or projects viz Water Facilities, Electricity for Home, Telecommunication Facility, Supply of Electricity for Farm, Supply of Petrol and Diesel, Farm Machinery and Equipments, Selling of Farm Produce to Government Purchase Centre or Agencies, Amenities in Government Warehouses, Kisan Call Centers, Kisan Vigyan Kendra, AGMARKNET, Establishment of Agro & Food Processing Centre at State Level, Kisan Kalewa Yozna, Link Roads, and Timely awareness

program. It means the satisfaction level toward these schemes is same in both the groups viz. developed and developing.

The alternative hypothesis is accepted and the null hypothesis is rejected for remaining 22 schemes or projects viz. Transportation Facilities, Banking Facility, Supply of Seeds, Supply of Fertilizers, Supply of Pesticides, Information Provided by Government Organizations and their Representatives, Minimum Support Price, Amenities in Krishi Upaj Mandi, Benefits of Loans from Institutional Sources, Kisan Credit Card, Crop Insurance, Rajasthan Kisan Aayog, ATMA, Agri-Export Zone, Rajeev Gandhi Krishak Saathi Yozna, Loan Against Farm Produce Stored in Govt. Warehouses, Farmer's Training, Farm Equipment Distribution Scheme, Krushak Jagrati Karyakram, Krushak Bhraman, Kisan Bhawan, and SFAC. It means the satisfaction level toward these schemes is not the same in both the groups viz. developed and developing. It depends on the effectiveness of the policy or scheme undertaken by the Government.

**H2: Lack of awareness of trends and developments in Agriculture sector, farmers are not able to grab benefits from the State Government's policies and schemes.**

**Methodology:**

To support 'H2', the 17 Government's projects and the awareness level of selected farmers towards them are examined. A null hypothesis 'H0' and alternative hypothesis 'Ha' are constructed for each project or scheme.

**H0:** The awareness levels of the selected farmers are equal in both the groups.

**Ha:** The awareness levels of the selected farmers are not equal in both the groups.

The chi-square value and P value are calculated for each project or scheme separately. The Critical value is 5.991 obtained from the chi-square table for 2 degrees of freedom at 5% level of significance. If the calculated chi-square value is higher than critical value or p-value is less than 0.05 (alpha level of significance) than the null hypothesis is rejected and the alternative hypothesis is accepted.

The chi-square value and the P value for each scheme and project are calculated and given in the following table:

**Table 5.18.2: Chi-Square Value and the P-Value for Government's Schemes and Projects (Awareness Level of Selected Farmers)**

S.N.	Government's Schemes/Programs/Policies	Chi-Square Value	P Value	Result
1.	Rajasthan Kisan Aayog	2.15	0.342	H0=Accepted Ha=Rejected
2.	ATMA	15.22	0.0005	H0=Rejected Ha=Accepted
3.	Kisan Vigyan Kendra	25.73	0.000	H0=Rejected Ha=Accepted
4.	AGMARKNET	15.85	0.0004	H0=Rejected Ha=Accepted
5.	Establishment of Agro & Food Processing Centre at State Level	10.33	0.0057	H0=Rejected Ha=Accepted
6.	Agri-Export Zone	5.95	0.0510	H0=Accepted Ha=Rejected
7.	Rajeev Gadhi Krishak Saathi Yozna	0.448	0.78	H0=Accepted Ha=Rejected
8.	Kisan Kalewa Yozna	0.332	0.847	H0=Accepted Ha=Rejected
9.	Link Roads	1.35	0.509	H0=Accepted Ha=Rejected
10.	Timely Awareness Programme	0.621	0.733	H0=Accepted Ha=Rejected
11.	Loan against Farm Produce Stored in Govt. Warehouses	2.717	0.257	H0=Accepted Ha=Rejected
12.	Farmer's Training	4.29	0.1171	H0=Accepted Ha=Rejected
13.	Farm Equipment Distribution Scheme	17.05	0.000	H0=Rejected Ha=Accepted
14.	Krushak Jagrati Karyakram	0.707	0.702	H0=Accepted Ha=Rejected
15.	Krushak Bhraman	0.543	0.762	H0=Accepted Ha=Rejected
16.	Kisan Bhawan	7.16	0.028	H0=Rejected Ha=Accepted
17.	SFAC	3.87	0.145	H0=Accepted Ha=Rejected
18.	Kisan Call Center	0.733	0.693	H0=Accepted Ha=Rejected

Source: Researcher

### Interpretation

From the above table, the null hypothesis is accepted for 12 schemes or projects viz. Kisan Call Center, Rajasthan Kisan Aayog, Agri-Export Zone, Rajeev Gandhi Krishak Saathi Yozna, Kisan Kalewa Yozna, Link Roads, Timely awareness program, Loan against Farm Produce Stored In Govt. Warehouses, Farmer's Training, Krushak Jagrati Karyakram, Krushak Bhraman, and SFAC. It means the



result is not significant. The awareness level of farmers towards these projects or schemes is the same in both the groups.

The alternative hypothesis is accepted and the null hypothesis is rejected for remaining 05 schemes or projects viz. ATMA, Kisan Vigyan Kendra, AGMARKNET, Establishment of Agro & Food Processing Centre at State Level, Farm Equipment Distribution Scheme, and Kisan Bhawan. It means the awareness level of farmers towards these projects or schemes is not the same in both the groups.

**H3: The State Government has not adopted appropriate marketing strategies for the development of Agricultural marketing in Rajasthan.**

**Methodology:**

To support 'H3', 9 issues faced by the farmers in their agricultural operations in the state are examined. A null hypothesis 'H0' and alternative hypothesis 'Ha' are constructed for each issue faced by the selected farmers in the farm work in the state.

**H0:** The marketing strategies undertaken by the Government to resolve the issues faced by selected farmers in agricultural operations are equally effective in both the groups viz. developed and developing.

**Ha:** The marketing strategies undertaken by the Government to resolve the issues faced by selected farmers in agricultural operations are not equally effective in both the groups viz. developed and developing

The chi-square value and P value are calculated for each project or scheme separately. The Critical value is 9.488 obtained from the chi-square table for 4 degrees of freedom at 5% level of significance. If the calculated chi-square value is higher than critical value or p-value is less than 0.05 (alpha level of significance) than the null hypothesis would be rejected and the alternative hypothesis would be accepted.

The chi-square value and the P value for each issue are calculated and given in the following table:

**Table 5.18.3: Chi-Square Value and the P-Value For Challenges and Issued Faced By the Selected Farmers**

S.N.	Issues/Challenges	Chi –Square Value	P value	Result
1.	Lack of Credit Facilities	30.29	0.000	H0=Rejected Ha=Accepted
2	Long Marketing Channel	12.06	0.0169	H0=Rejected Ha=Accepted
3	Lack of Processing Facilities	11.59	0.0206	H0=Rejected Ha=Accepted
4	High Transportation Cost	15.13	0.004	H0=Rejected Ha=Accepted
5	Lack of Storage Facilities	5.594	0.231	H0=Accepted Ha=Rejected
6	Lack of Knowledge on Good Cultivation Practices	12.332	0.015	H0=Rejected Ha=Accepted
7	Lack of Technical Know-How on Grading	10.503	0.032	H0=Rejected Ha=Accepted
8	Lack of Knowledge On Packaging	11.062	.025	H0=Rejected Ha=Accepted
9	Lack of Market Information	12.279	.015	H0=Rejected Ha=Accepted

Source: Researcher

### Interpretation

From the above table, the null hypothesis is accepted for only one issue as Lack of Storage Facilities. It means the result is not significant. It means the marketing strategies undertaken by the Government for resolving the issue faced by selected farmers in agricultural operations are equally effective in all over Rajasthan.

The alternative hypothesis is accepted and the null hypothesis is rejected for remaining 08 challenges viz. Lack of Credit Facilities, Long Marketing Channel, Lack of Processing Facilities, High Transportation Cost, Lack of Knowledge on Good Cultivation Practices, Lack of Technical Know-How on Grading, Lack of Knowledge on Packaging, and Lack of Market Information. It means the marketing strategies undertaken by the Government for resolving the issue faced by selected farmers in agricultural operations are not equally effective in all over Rajasthan.

**References:**

1. Jose, T. (2015, 11 July).What is Minimum Support Price? Retrieved from <http://www.indianeconomy.net/splclassroom/59/what-is-minimum-support-price/>

## **Chapter – Six**

### **Findings and Suggestions**

## Chapter – Six

### Findings and Suggestions

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#### 6.1. Key Findings from Primary Data Analysis

On the basis of the various responses given by respondents (Selected Farmers), many findings concluded. These are the following:

- 50% of the farm labors belonged to middle age group and only 33% sample farmers belong to young age group. Hence, it can be said that young people are least interested in the farming job.
- More than half of the farmers and farm labors have primary (37%) and high school education (34%) but the number of college-goers (19%) is very low. So it can be said that highly educated peoples do not have interest in the farm business.
- More than half of the sample farmers have their own houses (62.33%) and farms (60%) which give them a sense of financial security.
- About 90 % farmers earn below Rs. 25 thousand per month. It shows the low profitability of farm business.
- About 72% farmers own bike, 51% have bicycles and 39.33% have loading vehicles or tractors and only 19% have their own car or four wheelers. Hence, the bike is the most popular vehicle among farmers.
- Mobile and television are the most popular electronic media among farmer.
- Only 15 % farmers know about internet and only half of the total respondents (50%) use internet for agricultural work. Lack of sources and knowledge about internet is the main reason to hold back farmers from using internet.
- Nearly half of the sample farmers are not happy with transportation (44.33%), availability of water (49.33%) and electricity for home (45.34%), telecommunication (47.66%), banking facilities (52%). Hence, these facilities are not satisfactory in most of the places of the state.

- Nearly 60% sample farmers are happy with the supply of seeds (59.67%) and fertilizers (59.34%) and about 53.33% selected farmers are satisfied with the supply of pesticides. However, electricity for the farm, petrol, and farm machinery is not satisfactory in the state.
- Television, Radio and print media are the most effective media for information dissemination. Representatives as ‘gram sevaks’ of agriculture department are the second most effective means to provide information to the farmers without filtration. The internet is less popular source among sample farmers. More than half of the sample farmers (55%) are satisfied with information disseminated by government organizations and their representatives.
- Tools for information dissemination are not 100% effective. More than 10 % farmers never receive any information about agriculture sector.
- The number of satisfied respondents (34.67%) towards MSP is very less. It may be deduced that majority of farmers are not happy with current MSP rates.
- About 40.33 % farmers strongly prefer government purchase center or agencies, 71% strongly prefer regulated markets for selling their farm produce. It can be said that the regulated markets are the first choice of the majority of farmers in the state to sell their farm produce.
- Nearly 47% selected farmers are satisfied with selling the farm produce to government purchase centers or agencies. The low profitability and no government purchase center nearby farmer’s vicinity are the main reasons to hold them back from selling their crops in these centers.
- Almost 57 % selected farmers are satisfied with amenities provided in the regulated markets for farmers.
- About 44 % selected farmers strongly (always and often) prefer to store their farm produce in Government-owned or hired warehouses. More than half of the respondents (who store their produce always, often, sometimes and rarely) in the warehouse are not satisfied with the amenities provided in these warehouses for farmers. The need for a lot of documentation, no warehouse

nearby farmer's vicinity, and lack of security or maintenance are main reasons to hold back selected farmers from availing the facility.

- About 66% selected farmers strongly (always and often) prefer institutional sources for taking a loan or borrowing money for agricultural operations. It can be said that the institutional credit is the first choice for most of the farmers in the state. Nearly 60 % respondents (who prefer institutional credit always, often, sometimes and rarely) are satisfied with the benefits provided by Institutional sources. The need for a lot of documentation and time-consuming process (long procedure) are main reasons to hold back farmers for taking credit from institutional sources.
- About 59% respondents have Kisan Credit Card and 71 % respondents are satisfied with the benefits of the Kisan Credit Cards. Lack of knowledge among farmers about the scheme is the prime reason for not having the Kisan Credit Card.
- About 38 % selected farmers strongly (always and often) prefer to get insurance for their crops. Nearly 37 % respondents (who prefer to have crop insurance always, often, sometimes and rarely) are satisfied with the benefits provided by Institutional sources. Lack of knowledge, lack of interest and low profitability are the main reasons to hold back farmers from insuring the crops. It can be said that crop insurance is not popular among farmers in the state.
- Less than half of the selected farmers strongly follow (always and often) the agricultural based shows broadcasted on the television, radio or internet. About 58 % respondents (who follow the shows always, often, sometimes and rarely) strongly follow the advice or guidance given in these shows. So, It can be said that the show is quite successful in making aware the farmers about new trends in agricultural sectors.
- About 80% selected farmers are aware of Kisan call Centers and 50% of them make the call to the center and 72% of them are satisfied with the services of the call center. So, it can be said KCC are quite successful in solving the problems and providing expert consultation to farmers regarding farm operations and it is gaining popularity among farmers gradually. The lack of

knowledge, hesitation in communication, and no requirement are the main reason to hold back farmers from availing of the facility.

- More than 70% selected farmers are aware of Link Roads (71.33%), Awareness programs (Krishi Mela, Minikit Exhibition, and Crop Exhibition) (79%), and Kisan Bhawan (71%), more than 60% respondents are aware of Rajasthan Kisan Aayog (61.67%), Kisan Vigyan Kendra (65.67%), Rajeev Gandhi Krashak Saathi Yojan (66.33%), Kisan Kalewa Yojana (61.33%), Loan against stored goods in the Government warehouses(61.33%), Farmer's training(65.67%), Farm machinery and Equipment distribution Scheme (62.67%), Krushak Jagrati Karyakram (63%), and Krushak Brahman(64.67%), more than half of respondents are aware of ATMA(53.33%), Establishment of Agro & Food Processing Centre at State Level(53.67%), and Agri Export Zone(59%) and less than half of respondents are aware of AGMARKNET(41%) and SFAC(47%). It can be said most of the farmers in the state are aware of most of the schemes run by the Government for promoting agricultural development and Government's strategy for making the farmer aware of the ongoing schemes or projects are sound and effective.
- More than 60% selected farmers are satisfied (who are aware of the particular scheme) with the benefits of Awareness programs (Krishi Mela, Minikit Exhibition, and Crop Exhibition)(65.40%), Farmer's training(64.97%), and Farm machinery and Equipment Distribution Scheme(61.71%), more than half of respondents are satisfied with the benefits of Rajasthan Kisan Aayog (50.81%), Kisan Vigyan Kendra(52.79%), Rajeev Gandhi Krashak Saathi Yojna(52.26%), Kisan Kalewa Yojna(58.69%), Link Roads (58.88%), Loan against stored goods in the Government warehouses (57.06%), Krushak Jagrati Karyakram (59.26%), Krushak Brahman (51.03%), and Kisan Bhawan (52.58%) and less than half of respondents are satisfied with the benefits of ATMA(48.75%), AGMARKNET(34.15%), Agro & Food Processing Centre at State Level (36.03%), Agri Export Zone (28.81%) and SFAC(37.59%). It can be said that most of the schemes run by the Government for promoting agricultural development are satisfactory and effective.



- More than half of the respondents strongly experience (always and often) lack of credit facility for performing farm operations(51.34%) and high transportation charges and lack of transportation facility for movement of farm produce (55.60%)and less than half of respondents strongly experience (always and often) lack of storage facility(46.33%), Long Marketing Channel(46.33%), Lack of Processing Facilities(47.33%), Lack of Knowledge on Good Cultivation Practices(37%), Lack of Technical Know-How on Grading (44%), Lack of Knowledge on Packaging (40.66%), and Lack of Market Information (44.67%) in farm jobs. Therefore, it can be said that the government's strategies are quite effective in resolving the aforesaid issues except for credit and transportation facilities in some areas of the state.

## **6.2. Findings on the Basis of Hypothesis Testing**

- **The State Government's policies and initiatives are effective in promoting Agriculture Sector in Rajasthan and farmers are able to grab some of the benefits from these activities.They are partially satisfied but not fully.**

To support the hypothesis, the satisfaction level of selected farmers with 37 projects, policies, and schemes undertaken by the Government are analyzed and the theoretical (null) hypothesis is accepted for 15 projects and rejected for 22 projects. It means that the degree of development of any field affects the satisfaction level of a person from a particular scheme or project up to some extent but not fully. The other factors such as nature of the scheme and number of the benefits of the scheme, complexity involved in the procedure of availing of the benefits, awareness level for the scheme, interest level for availing of the scheme, and availability of sources etc. also affect the satisfaction level of the person concerned. On the basis of frequency distribution analysis, the number of satisfied selected farmers is higher in developed districts for 18 projects whereas for remaining 19 projects, the selected farmers are more satisfied in developing districts. On the basis of the percentage analysis, more than half of the selected farmers are satisfied with the benefits of 20 projects, policies and projects undertaken by the government

but for rest of the 17 projects, the percentage of satisfied respondents is less than 50%. Therefore, it can be stated that some policies and schemes are successful and some initiatives need more efforts to be successful.

From the above analysis, it can be said the State Government's policies and initiatives are effective in promoting Agriculture Sector in Rajasthan and farmers are able to grab some of the benefits from these activities and they are partially satisfied but not fully.

- **Lack of awareness of trends and developments in the Agriculture sector, farmers are not able to grab benefits from the State Government's policies and schemes.**

To support the hypothesis, the awareness level of selected farmers about 17 policies and schemes are analyzed and the null hypothesis is accepted for 12 schemes and rejected for rest of 05 policies and schemes. It means that the awareness level of government's initiatives don't much depend on the degree of development of the particular region but it also depends on the effectiveness of the strategy adopted by the government for implementing any particular policy or scheme. On the basis frequency distribution analysis, the number of aware selected farmers is higher in the developed districts for 03 projects while for 09 projects the selected farmers are more aware in the developing districts. For rest of the 05 projects, the awareness level is same in both the groups. On the basis of the percentage analysis, more than half of the total selected farmers are aware of 15 projects and policies of the government and only for 2 projects, the percentage of aware respondents is less than 50%. Therefore, it can be stated that most of the farmers in the state are aware of most of the schemes and Government's strategy for making the farmer aware about ongoing schemes or projects which are sound and effective and the government has adopted an appropriate strategy for information dissemination about new trends and development in the Agriculture sector.

So it can be deduced that the above-mentioned assumption “Lack of awareness about trends and developments in Agriculture sector, farmers are not able to grab benefits from the State Government’s policies and schemes” is not fully true.

- **The State Government has not adopted appropriate marketing strategies for development of Agricultural marketing in Rajasthan.**

To support the hypothesis, 09 issues which are faced by the farmers in their agricultural operations in the state are analyzed and the null hypothesis is accepted for only 01 issue and rejected for rest of the 08 issues. It means that the marketing strategies undertaken by the Government for resolving the issues faced by selected farmers in agricultural operations are not equally effective all over the Rajasthan. On the basis of the frequency distribution analysis, the number of selected farmers who experience difficulties in farm operations is higher in developed districts for 07 issues while only for 02 issues the number of the selected farmers is higher in developing districts. On the basis of the percentage analysis of the total respondents, only two issues are always and often faced by more than half of selected farmers and rest of the 7 issues are faced by the selected farmers occasionally. 06 issues out of 09 issues are strongly (always and often) experienced by more than half of the selected farmers in the developed districts while only 01 issue is strongly faced by more than half of the selected farmers in the developing districts. Therefore, it can be said that the government’s strategies are quite effective in resolving the aforesaid issues in developing districts rather than the developed districts.

So it can be inferred that the State Government has not adopted appropriate marketing strategies for development of Agricultural marketing all over the Rajasthan.

### **6.3. Conclusion**

The state government had initiated various schemes and policies to improve marketing of agriculture products as well as farmer's condition in the state. Most of the farmers in the state are aware of most of the schemes and government's strategies for making farmers aware of their initiatives are sound and effective. Some initiatives can be considered as more successful and some initiatives need to more efforts to be successful in the state and farmers are able to grab some of the benefits from these initiatives so they are partially satisfied not fully. In developed and developing districts of Rajasthan, the farmers are more aware and satisfied in developing districts. It means the degree of development of any field effects the satisfaction level of a person up to some extent not fully and the government had not adopted appropriate strategies for promoting agricultural marketing in all districts of the state according to their level of developments. However, the governments played major roles to improve the modality of agricultural marketing in the state but they should make promotional strategies according to the degree of development of the particular region.

### **6.4. Suggestions**

In the light of the above analysis, some suggestions have been made to improve methodology and framework of the agriculture sector and agricultural marketing in Rajasthan. These are the following:

#### **6.4.1. Needs of Improvement in Regulated Markets**

- The remunerative price or **FSP (Fixed selling price)** for farm produce should be declared by the Government. It means any seller can't sell the farm produce at below its FSP.
- Adequate warehousing and cold storage facilities should be made available in the markets and proper maintenance and security should be provided for protecting farm produce from rain, gale or other threats.
- The regulated market should be modernized by providing advanced infrastructure facilities. Basic amenities like food, drinking water, and washrooms etc. should be provided for farmers.

- The management in the regulated market should be proper. Corruption and malpractices in trading should be a legal offense.
- Transportation facility should be proper and available at reasonable cost.
- There should be an effective grievance redressal mechanism or cell for resolving farmer's complaint with mismanagement in the regulated market.
- The market information about price, new policies, schemes or a new trend in agriculture sector should be provided to the farmers by KUMS employees.
- The credit facility should be provided by KUMS at a reasonable rate of interest on the pledge of their farm produce. The loan amount can be recovered at the time of sale.
- The seeds, fertilizers, and pesticides should be supplied by the KUMS at a reasonable price giving a grant to small and marginal farmers.
- Farmers should be provided with proper facilities and cleanliness to stay farmers at Kisan Bhawan and any kind of anti-social activities such as gambling, drinking alcohol etc. should be prohibited in it.

#### **6.4.2. Farm Input Marketing**

- Quality seeds, fertilizers, and pesticides should be supplied before the season at a reasonable price. The transparency in prices of farm produce should be ensured.
- Direct marketing should be promoted for farm input marketing and the government should ensure a direct supply of quality of farm inputs and set up farm inputs distribution centers at panchayat level or tahsil level.
- The duration of the loan on farm equipment such as tube well should be increased and scientific methods of farming should be promoted.
- The cost of electricity for farm should be reduced and the hours of supply should be increased.
- The supply of petrol and diesel should be sufficient and regular in rural areas.

### **6.4.3. Promotion of Innovative forms of Agricultural Marketing**

The alternatives forms of agricultural marketing viz Contract marketing, Cooperative marketing and Direct Marketing etc. should be promoted in the state at large scale to increase participation of farmers in the markets.

- A. Direct Marketing:** To ensure fair prices for farmers and producers, direct marketing should be promoted through set up mandi or marketplace at large scale and policy support. It is necessary to break monopolies in the regulated market. The retailer, processor, and the consumer should be encouraged to purchase farm produce directly from farmers or producers. The trading should be facilitated by setting up the producer markets where the producer or farmers can easily set up their stall or shop without any restrictions and the consumer can easily spot the markets.
- B. On-Farm Retail:** It is a form of direct marketing in which the trading between producer and consumer takes place on the farm or production site. The farmer or producer sells the product through setting up a small retail outlet at the farm. It has some advantages to farmers like it provides remunerative price to farmers by reducing transaction cost as transportation etc.; it does not need specific packaging or grading; it provides instant creditability to the farmers and it provides protection to the farmers from the exploitation of middlemen etc. It has some benefit for consumers as it provides different purchasing experience to the consumer by visiting the actual production site, it provides sense of trust and satisfaction because the consumer chooses the product by his own experience and examination of the site and the chances of impurity are reduced and it provides farm produce at reasonable price by eliminating several middle transaction costs. The On-Farm Retailing should be promoted by the government through providing better connectivity and transportation facility between farm location and consumer location.
- C. Subscription Farming:** it is also a form of direct marketing in which the customer purchases the shares or subscriptions for farm produce. The

selected farm product is delivered or picked up by the customer regularly in a certain period of time or for the whole season. It has some advantages for farmers as the whole or some part of payment is made in advance so it fulfills credit requirement of farmers for farm input or before harvesting and helps in estimating demand of volume of products before planting, it provides guarantee to sell the farm product so the farmer can focus on improving his farm operation without worrying about market fluctuations. The farmer receives a higher price than the wholesale price and the customer receives quality farm product at reasonable price. It helps the farmer to create a brand. The subscription farming should be promoted by the government by making necessary measures as grading, packaging etc and create awareness of it among farmers, consumers, retailers, and processors etc.

**D. Farm Marketing through Farmers Interest Groups or Cooperative**

**Marketing:** This innovative form of Agricultural marketing should be promoted by the government through providing several initiatives like easy transportation, the establishment of packing and grading houses, providing easy credit and necessary training to these organizations.

**E. Contract Marketing:** The contract farming should be promoted by removing entry barriers and providing policy support by the government for emphasizing the modernization of the Indian Agricultural sector. The farmer's benefits should be a priority in these contacts. The farmers, farmer's organizations, and the young farmers should be encouraged to enter into contract farming.

**F. E-commerce and M-commerce:** The trading of farm produce should be promoted through e-commerce (through internet) and m-commerce (through mobile phone). The direct marketing should be promoted through them. The farmers can set up their own website, page or mobile app through which they can advertise and promote their farm products and can sell the product directly to the consumer. The training and assistance should

be provided by the Government to the farmers who want to set up their own ventures. The government should remove entry barriers and provide law and policy support to set up the online retail market for farm produce for entrepreneurs, agripreneurs, and corporate sector. The government should facilitate collaboration between online marketing companies and the farmers and their organization to extend the scope for farmers in e-commerce and m-commerce domain.

For Example: To increase the scope for the farmers in online markets, the Karnataka government made some arrangements for signing an agreement between online grocery marketing firm named Bigbasket and the Federation of organic farmers for procurement of spices and millets. The agreement was signed for trading 300 metric tons of organic spices worth Rs.12 crore in April 2017. The government will provide the training and assistance to farmers associated with federations about Packaging and labeling of the product (Government bridging gap, 2017). The Government of Rajasthan must take such initiatives to promote online trading of farm produce in the state for increasing income of the farmers.

**G. Marketing through Electronic Spot Exchange:** The Commodity Exchanges or Electronic Spot Exchanges should be promoted at large scale among farmers (especially small and marginal farmers) by the Government of Rajasthan for trading all crops.

#### **6.4.4. Promotion of Agri-Processing Units**

- The government should promote and establish a large number of agro-processing units for farm produce at the district level or district headquarters for ensuring remunerative prices and reducing post-harvest losses. The state government in Rajasthan has launched a new policy Rajasthan Agro-Processing And Agri-Marketing Promotion Policy – 2015 for the promotion of setting up agro-processing units in the state.
- The government should identify the places where the supply of particular crops is high and demand is low in the local market and farmers are not



able to get cost of their production. So the government should promote to setting up agro-processing units to meet the excess supply of the produce.

#### **6.4.5. Effective Market Information Dissemination to Farmers and Bridging Gap between Farmers and Government**

- The government should adopt the strategy and tools for disseminating the market information according to the state of development of the particular region and available sources. For example, in urban areas, the internet and telecommunication facilities are quite good rather than in rural areas so the government can provide information in urban area through text message, mobile phone applications, and Internet while in rural areas, information can be disseminated through television, radio, newspaper, outdoor publicity and ‘panchayats’.
- The government should provide training and sufficient funds to representatives like Sarpanch, Gramsevak, and patwari for providing information to farmers in an effective manner.
- The government should provide computer and internet training from time to time to the farmers and set up the centers at the village level.
- Websites in local languages should be created so that farmers can access information easily.
- Farmer’s excursion like intra-state, inter-state and outside the country should be promoted and knowledge about improved and advanced techniques of farming should be provided through these tours.
- Information Communication Technology (ICTs) should be promoted at large scale in the agricultural sector. Before Implementation of any ICTs project or application, the government or concerned organization should create awareness among farmers and provide basic training to farmers about its operations. So the farmers can get benefits easily.
- The government and the department concerned should promote two-way communication between Government and farmers about farm operations. Not only the methods of communicating about government ‘s initiatives to

but also the methods and platform through which the farmers can share their problems, experiences and provide feedback to the Government, researchers, and policymakers, should be promoted.

- Some methods for bridging the gap between Farmers and Government are following as:
  - i. Through direct interaction between officials of the department concerned, representatives of agriculture universities, researchers and policy makers associated with farm development and Farmers by organizing meetings, conferences, seminar, competitions, and training programs.
  - ii. Through setting up village knowledge centers at village, tahsil or district level.
  - iii. Through association with the private sector or corporate sector.
  - iv. Through association with NGOs.

#### **6.4.6. Promotion of Agri- Tourism**

Rajasthan has a great scope in many means for the purpose of agriculture as well as tourism. Agritourism can work as a backbone for the state if focused properly. Some districts in Rajasthan state viz Udaipur, Jaipur, and Chittorgarh (culture, traditions and forts); Kota (education city); Jaisalmer, Bikaner, and Jodhpur (desert, culture and camel riding); Sawaimadhopur and Bharatpur (National Park for Tiger reserves and birds respectively); Jhunjhunu (Mandawara for haveli); Dungarpur and Banswara (Tribal culture and fishing) etc. has immense potential and opportunities for Agritourism. These districts are the main destinations for both domestic and international tourists in the state.

Some suggestions to the government for promoting agri-tourism are the following:

- Law and policy support for entrepreneurs in the sector should be made.
- Better connectivity via rail, road, and air should be made available.
- Rural infrastructure should be improved.
- Easy credit facility should be provided to develop farm as a site for tourist.

- Training and education programs about tourism and business training, customer service, marketing, sales promotion, financial planning, record keeping, and value-added service etc. should be provided to farmers and rural people.
- Advanced Social infrastructure for education, and health etc. should be provided
- Awareness and sale promotion should be created through Government operated websites.

#### **6.4.7. Preventive Measures for Farmer's Suicide and Migration**

We studied some farmer's suicide cases in chapter 4 "Research Methodology" to know farmer's actual condition in the country and found that the low profitability, high risk and financial insecurity in farm work are main causes for committing suicide and leaving farm work.

- The government should find out and promote alternative sources of incomes for farmers in drought-affected areas and encourage the farmers to adopt it.
- The government must ensure that farmers get remunerative price for their farm produce and are less dependent on external credit sources for purchasing farm inputs and performing farm operation.
- Strong law and legislation should be implemented to stop the exploitation of farmers by middlemen, money lenders, and others.
- Some innovative means for selling farm produce should be promoted. For example: selling Aloe Vera pulp than leaves is more profitable.
- The safety measures in farm operation must be incorporated by conducting essential training programs regularly and by educating farmers about precautions and safely uses of any farm machinery or equipment. The farmers must be taught about first aid techniques. The safety gear like gloves, high ankle shoes, and mask should be introduced in farm operations to reduce possibilities of any miss-happening like snake biting, insect biting, and heat stroke etc.

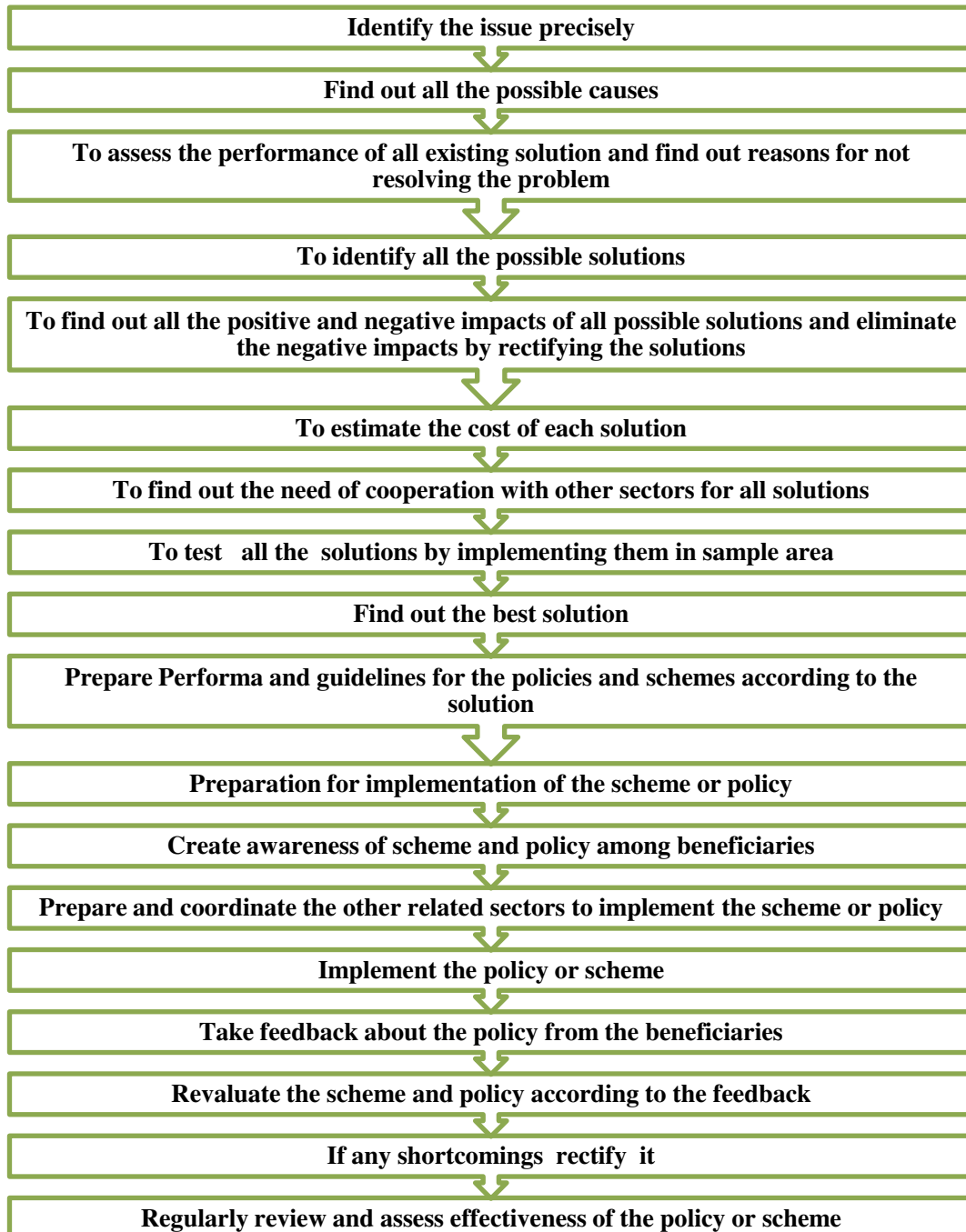
- The modern and advanced techniques should be introduced to increase productivity and to reduce production cost. The government should promote multiple crop system and crop diversification system to reduce the risk of crop failure and to engage the farmers and farm family all the year round in the activities.
- The government should promote crop insurance schemes for all type of crops. The terms and conditions should be given in easy and simple language so that farmers can understand easily.
- Advanced weather alert system and disaster management system should be put in the agriculture sector to minimize the loss due to natural calamity.
- Artificial irrigation systems must be introduced in drought-prone areas.
- Gram Panchayats should evolve a mechanism to identify the indebted and suicide-prone farmers and help them to overcome the crisis.
- The government should make sure through follow up programs that the benefits of policies must reach to small and marginal farmers.

#### **6.4.8. Suggested Steps for Disposal of Bumper Crops**

- Estimate the expected yield and make an effective marketing strategy for disposal of bumper supply of farm produce to ensure remunerative prices before harvesting.
- Promote the benefits and different methods of consuming of bumper crops in the local market at large scale additional demand should be created. For example; the supply of tomato is high in a particular season then the government should run a campaign to motivate the people for consuming it in more quantity by creating awareness of benefits and multiple uses of tomato as salad, soup, sauce, and juice.
- Provide additional storage facility at a reasonable price to store the products for using them in offseason.
- Find out the market where demand is high and supply is low for the bumper produce and the additional amount should be exported to that place.

#### 6.4.9. Model for Formulation and Implementation the Policies and Schemes in Proper Way

Figure 6.1: Model for Formulation and Implementation the Policies and Schemes in Proper Way



Source: Researcher

The model is suggested by the researcher for formation and implementation of any scheme or policy or any initiative regarding agriculture development in an effective manner for resolving the concerned issue completely.

#### **6.4.10. Model of Community Participation for Promotion of Agriculture and Farmer's Welfare**

The agriculture sector is important not only for farmers who earn their livelihoods from it but also it is essential for the whole society as it provides food, shelter, and clothes as well as raw material to various industries. It generates employment for more than half of the population of the country. The economic development of the country also depends on the development of Agriculture sector. So it is not only the responsibility of the government but also it is mandatory for every component of society to contribute to Agriculture development and to be responsible for Farmer's welfare.

**Figure 6.2.: Model of Community Participation for Promotion of Agriculture and Farmer's Welfare**



Source: Researcher

#### **A. Farmer Himself/Herself**

The farmers are the basic unit of agriculture and the development of Agriculture sector correlated with the development of the farming community. According to this economic survey 2013 done by National Sample Survey Office, the condition

of Indian farmers is not good and their monthly income from various sources is estimated to be only Rs.6, 426. The government is introducing several initiatives to increase farmer's income and is adopting new approach from production centric to farmer's income centric. Despite Government efforts, the farmers have to make efforts to improve their condition and cooperation the government in agricultural development. Some suggestions for farmers are the following:

- The farmer must be aware of the new trends and developments in agriculture sector on his basis.
- The farmer should adopt new technology in cultivation methods and post-harvest management.
- The farmers should not resist adopting scientific advancement in farm operations and take interest in learning new technologies such as internet, computer, smartphone and automated machinery etc.
- The big farmers should provide knowledge about modern cultivation methods and post-harvest management to small and marginal farmers and motivate them to adopt these methods.
- The small and marginal farmers should make a collective group to increase their bargaining power in the market.
- The farmers should contact employees of agriculture department from time to time to receive market information as well as to take consultation about new techniques, methods and to learn how to increase their income.

**For example:** Farmer Shree Liyakat Khan lives in Sawai Madhopur, had 5 hectare land but he couldn't earn sufficient money from agriculture; so he contacted agriculture officials to know how to increase his income and as per their guidance he cultivated guavas in one hectare land and adopted new techniques as 'Shower& Drip' technique for irrigation, and farm pond etc. He earned more in the year than previous years. Then he cultivated guavas in three-hectare land and continued to contact agriculture officials to collect information about new techniques and methods of cultivation. Now he is doing fisheries, livestock and preparing compost fertilizers from the waste of

animals. He is now among one of the rich farmers of the district and he has set up a 'Kisan Club' to provide the information and guidance to other farmers and has motivated them to adopt modern and improved methods of farming. The agriculture and bank official participate in the meeting of the Kisan Club. Therefore, the success story of farmer Liyakat Khan is very inspirational to all farm community and implies that if farmers adopt new methods and techniques of farm operations then they would be self-sufficient and financially secure and can contribute to the development of the country (District Collectorate, 2010).

## **B. Youth**

The young people are precious assets of any country and they have enormous potential to change the picture of any sector by their innovative thinking and applying new technologies. India has the largest youth population in the world and has great opportunity to make a strong presence on the world map by exploiting the youth potential in the right direction.

The agricultural sector is a vital sector of the Indian economy but most of the young people are not interested so much in farming business due to the need of back-breaking hard work, low profitability, high risk, less security and lack of recognition in the society. The report of OECD (Organization of Economic Cooperation and development) Economic Survey India 2017 stated that over 30% of Indian young people (aged 15-29) are unemployed or not attaining any training or education. According to the report, the rate of employment has declined in India and job creation has not sped up with the increasing working age population (Jethmalani, 2017).

The agriculture sector has huge potential for job creation and earning a livelihood. The young people can explore the career in biodynamic farming, communication technologies, logistics, quality assurance, forecasting, marketing, urban agriculture projects, environmental sciences, food preparation, and much more. The government should make efforts to motivate the young people to do farm work.



Some suggestions for motivating the young people in farm business are the following:

- The image of agriculture must transform from low profile job to high profile job. It needs to be promoted as an intellectually stimulating and economically sustainable career among young people. The information about how to make a career in farm business should be provided to the young people by using different platforms like as social media, seminars or setting up education and training centers at college level etc.
- The public and private investments should be increased in the agriculture sector for adopting new methods and techniques in farm operations.
- The government should provide policy support to young farmers and young agri-entrepreneurs.
- To set up an online portal as one-stop resources where young farmers and people can explore job opportunities in the farm business, find innovative methods for cultivation and agricultural marketing, information about weather and calamity prediction, expert consultation and guidance for farm operations, and various initiatives introduced by the government in farm sector etc.
- To facilitate the accessibility of land and credit to young farmers and people who want to make a career in the agriculture sector.
- The basic and infrastructure facilities should be provided so that the quality of life of rural people can be improved and the young people can be motivated to live there.
- The profitability of the sector should be increased by reducing the cost of farm operations and increased productivity.
- Some new effective insurance schemes in agriculture sector should be introduced to reduce the risk associated with farm operations.
- The agriculture education should be redesigned and reformed according to the need of present scenario and agriculture-related higher education like MBA in Agri-Business should be promoted at large scale and the number of the institutions which provide such education should be increased in the

country. The practical knowledge about farm operation such as cultivation, post-harvest management, logistics, grading, and storing etc. should be included in college-level education.

- The government should take feedback about current policies and schemes from the young farmers and motivate them to provide suggestions for improving methods of farm operations and resolve the existing problems in the agriculture sector.

### **C. Private and Corporate Sector**

The corporate sector and private sector play a key role in the supply of farm inputs, extension, and processing and marketing of farm products. To promote the participation of private and corporate sectors in the farm operation, the government made some arrangements in National Agricultural Policy such as contract farming, land leasing arrangements, promotion of direct marketing, the establishment of private markets to allow accelerated technology transfer in farm operations, capital inflow and assured a market for crop production etc. The sector is functioning in the farm sector for making a profit but it should be responsible for the betterment of farmers and the agriculture development. The corporate sector has great potential to change the picture of agriculture sector by making huge investments in farm operations. Some suggestions for the corporate and private sector are the following as:

- The sector can contribute to Research and Development activities to introduce new, advanced and improved methods and technologies in Farm operations for reducing time and back-breaking efforts; in facilitation of credit availability to farmers; in creating infrastructure for farm inputs as seeds, pesticides, and fertilizers, transportation, agro-processing units and marketing of farm produces; and in extension services.
- The sector can also contribute to the dissemination of accurate and timely market information to farm community and rural people.

- The sector can help in the establishment of village-based industries and small-scale industries to provide rural employment. It can explore new sources of income for farmers after the post-harvest season.
- The sector can contribute to skill development of the rural community by establishing training centers. **For example,** The company Mahindra & Mahindra Limited has initiated a project known as 'Kisan Mitra' to help small and marginal farmers by training them about effective farm operations such as crop planning, soil health, bio-dynamic farm practices, seed culture, and drip irrigation etc. The agri extension, capacity building, community farming, infrastructure development and advisory services etc. are included under the project to improve agriculture productivity. The project is conducted in Rajasthan, Madhya Pradesh, and Maharashtra etc. and 49,635 farmers have benefitted from the project (Bhole, 2017).
- The corporate sector can play a major role in reducing the number of middlemen in the market by purchasing farm produce directly from Farmers and by providing them a remunerative price through a systematic process.
- The sector can set up a platform for online marketing of farm products. **For example,** The Big Basket group provides a big platform for online marketing to farmers for their fresh fruits and vegetables. They also facilitate to sell processed foods like spice, flour, pulses, and diced vegetables etc. through the online market. The initiative is extremely successful in metro cities.
- Corporate social responsibility is an important part of the corporate sector and it is mandatory by the Company Act, 2013. The corporate player can invest their profits in development of agriculture, rural area, and rural communities. **For example,** The ITC group has created sustainable livelihood opportunities for six million people through its CSR activities. Their e-Choupal project has been initiated to link rural farmers via the internet for procuring farm products. It covers about 40,000 villages and more than four million farmers (Dezan, Shira & Associates, 2017).

- The sector can work with the public sector by adopting public-private partnership approach for disseminating market knowledge, and technology, distributing qualitative farm inputs to farmers, setting up agri processing units, marketing, and distribution of farm products, and diffusing government schemes as Pradhan Mantri Fasal Beema Yojna etc. The public sector can create a competitive environment through supporting policies and programs for motivating the private sector to undertake the projects.
- The corporate and private sectors can create awareness among their customers and people about farmer's problem and efforts through their advertisement and sales promotion campaign. **For example:**
  - a) The Tata group attempted to create awareness about farmer's problem and suicide through their advertisement and sales promotion of TATA tea on Television and Internet. They initiated a campaign 'Jago' to provide a social message to the society "to wake up and raise your voice for farmers before they commit suicide".
  - b) The Hindustan Liver's brand Bru coffee shows the farmers' strive hard and make back-breaking efforts to grow their crops in their sales promotion and advertisement and it provides a social message like praising and appreciating the farmer for their efforts.
- They can conduct excursion programs for farmers to learn about a new variety of farm produce, techniques and methods of farm operations. **For example,** The Adani Ports and Special Economic Zone Ltd. have collaborated with Kisan Vigyan Kendra through Farmer Support Programs. Through this project, 30 farmers from five villages of Mundra participated in exposure tour program to get knowledge about agricultural technologies (Bhole, 2017).

#### **D. Celebrity and Influencing People**

Indian celebrities and influencing people have a large presence and influence in India. They have millions of fan following on social media who consider them their role models and follow them. So, it is quite easy for them to use their frame

and put it to some good work. Some celebrities like Shabana Azmi, Nana Patekar, Rahul Bose, Maneka Gandhi, Medha Patekar and Neeta Ambani etc. are continuously putting their best foot forward to serve the society. The celebrities can also contribute to agriculture development and farmer's welfare. Some suggestion for the celebrity and Influential People are following as:

- They can raise their voice and share views about existing conditions of the farmers and the agriculture sector among their fans by using social media, stage shows, award shows, movies, television shows or other big platforms. **For example**, Peepli Live and Kisan movies were based on farmer's suicide and exposed the problems of farmers and their families.
- They can donate money to farmer's welfare and support the organizations which work for farmer's welfare. They also motivate other donors to do the same. **For example**, Actor Akshay Kumar and his team donated Rs. 90 lakhs to the 180 farmer's family who committed suicide in Marathwada and donated Rs.15 lakhs to 30 widows of farmers and the same amount was donated to them continuously for five months (Das, 2016).
- They can support and participate in social campaigns and projects regarding farm community development. **For example**, Actress Priyanka Chopra and Diya Mirza promoted NDTV project 'Greenathon' which is an initiative to support eco-friendliness and to improve electricity supplies in rural areas (Verma, 2015).
- They can help in raising fund or donating money to the organizations for conducting the programs or projects regarding farmer's welfare and rural development. **For example**, Actor Aamir Khan donated Rs.11 Lakh to the Chief Minister Devendra Fadnavis' rural water conservation (Jore, 2015).
- They can adopt a village or a particular area on own and can work for its development or for resolving a particular issue. **For example**, Being a part of Greenathon project run by NDTV, Actress Kareena Kapoor adopted the village of Chanderi in Madhya Pradesh and worked for a regular supply of Electricity in the village (Verma, 2015).

- They can set up their own foundation and NGO to work for rural development. **For example**, Actress Shabana Aazmi set up a foundation known as Mizwan Welfare Society for helping the people of Mizwan village for improving the quality of life. The foundation organized a Mizwan fashion show to promote the talent of the villagers so that they can get the help they require (Das, 2016).

Most of the celebrities are donating money or doing social work for the development of rural people of Maharashtra but they should also focus on another state like Rajasthan to improve the condition of the farmers.

### **E. NGOs**

NGOs (Non-Government Organization) play a vital role in the development of agriculture sector and rural people. These organizations have some specific features in comparison to Government organizations such as they are more committed towards society and community development; they are more flexible and familiar with problems or issues, and they are specific to a particular locality; etc. They work in collaboration with the Government of India and receive funds as a donation for achieving their goals. These organizations have a lot of potentials to improve rural life but dependency upon the government funds and external donations is a major obstacle in their work. Some suggestions for NGOs are the following:

- The NGO and social organization can play a vital role in reducing the communication gap between farmers and the government and convey the problems of the farmers to in the government in right manner.
- These organizations can help in developing new technologies and methods by projecting true picture of farmers' needs and wants.
- These organizations can organize training, excursion, and skill development programs for farmers and labors for increasing productivity in agriculture and allied sector.
- The sector can introduce new, advanced and improved methods and technologies in Farm operations at a reasonable price. **For example**, The

Spenta Refrigeration Pvt. Ltd (Mumbai) and Promethean Power System (Boston) formed a joint venture known as Promethean Spenta Technologies to support the Indian farmers and food processors. The joint venture has initiated a project named Promethean Power Systems to develop battery based refrigeration for rural dairy Industry. In this system, the cold thermal energy is released by battery and it is used in refrigeration. So, the refrigeration is available all time when there is no electricity. It is extremely beneficial for the rural areas when electricity is available only at night. They are providing these facilities to farmers and food processor at reasonable prices (Five Innovative NGOs, 2014).

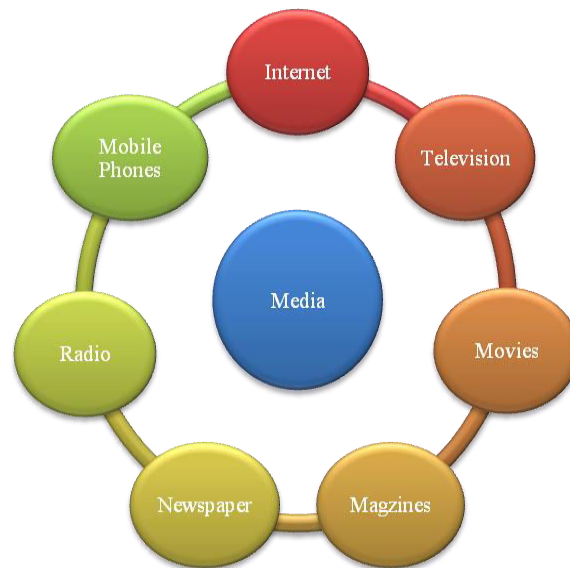
- These organizations can provide improved and scientific advanced farm inputs, and credit facility to the farmers. They can provide technical assistance to farmers in post-harvest management and marketing of farm produce. **For example**, One Acre Fund was set up in Kenya in 2006 to support smallholder farmers. The organization's four main activities such as it provide seed and fertilizer loans to farmers; it delivered seeds and fertilizers to farmers; it provided training of advanced techniques in farm operations to farmers for increasing profitability, and it provides storage facility and the market for selling the farm produce. The organization successfully helped more than 130,000 farmers and their families in doubling their income (Five Innovative NGOs, 2014).
- The organizations can provide market information to farmers especially in remote and tribal areas.
- They can play important role in disaster management by providing relief fund to the true needy person.

## **F. Media**

The media has a social and cultural impact upon the society and plays an essential role in strengthening the society by providing a platform to create and shape the public opinion. It acts as a watchdog to protect the public interest against malpractice and create public awareness. It has the ability to reach a large number

of people at a time at low cost. At present, the media comprises more than 50,000 newspapers and magazines, and 100 of television and radio channels in India. The availability of online platforms such as facebook, twitter, and whatsapp etc. provides global connectivity between people.

**Figure 6.3.: The Components of Media**



**Source: Researcher**

The media can play an important role in strengthening Agriculture Sector and protecting Farmers' interest. Some suggestions for the media are the following:

- The television and radio can be effective media in the dissemination of farm information and knowledge about modern farm technology to literate and illiterate farmers alike even in tribal or remote areas within a short time.
- The government and organizations concerned should make and broadcast a short film or documentary about policy, scheme, trends, and knowledge about modern technology and farm operations etc on television. It may include not only information but also the instructions and guidelines like how to grab the benefits from these measures, how to approach the concerned organization or department for a particular scheme, how to apply



the technology in farm operations and how to use effective pest management etc. The farmers can easily understand the guidelines, instructions and expert consultation about farm operations through television. **For example**, to teach the people how to vote on the electric voting machine, the concerned department prepared a short documentary and broadcasted on television.

- The program on television or radio should be broadcasted and the informative material should be published in the local language to reach a large number of people.
- Farm magazines and newspapers should be published by the department of agriculture and farmers associations regularly.
- The GPS (Global Positioning System) systems should be used for tracking and mapping the pest and diseases outbreak.
- The media can provide a platform and create opportunities for farmers to express their views directly on air. The strategy can help in reducing communication gap between farmers and society.
- The media can provide a platform through which farmers can engage with policymakers and their perspective can be considered broadly. It can help in increasing participation of farmers in decision making.
- The essential market information should be disseminated through text message (eg. m-Kisan) and voice calls. **For example**, to create awareness about initiative and actions of State Government about pollution control in Delhi, A voice message record by Chief Minister and text message had been sent to a large number the people on their mobile phones.
- The media can provide information about the current situation of the farmers before the society regularly
- The society or common people also share their views about agricultural development and give suggestions for improving farmer's condition through social media.
- The news channels should provide a true picture of farmer's condition without any modification and should not create news for TRP.

### **6.5. Limitations of the Study**

Although every effort was made to conduct schedule as rigorously as possible some limitations are unavoidable and such limitations are following:

1. The study has had certain limitations which influenced the result of the research some extent. The study was limited to six districts viz Jaipur, Kota, Sikar, Sawaimadhopur, Jhalawar and Tonk out of 33 districts of Rajasthan because of cost and time constraint.
2. The researcher collected data and findings through the schedule so it may be subject to biases in opinions from the respondent and responses given by them may not be entirely accurate.
3. The most prominent constraint of the study was Illiteracy of respondents as most of the respondents are not literate and aware of emerging trends and new developments in the agriculture sector.
4. The farmer's readiness for filling up the schedule is another biggest problem because most of the farmers were not ready to reply the question against Government's policies and schemes.
5. Respondents were contacted with the help of some government agencies working in the agriculture sector. So there was a possibility that respondents were influenced by them So the scholar may not have been able to obtain correct and accurate information from them.

### **6.6. Future Scope of the Study**

The below list is illustrative of the potential for further research.

1. In-depth study of the perception of farmers towards government policies in Agricultural Marketing in the country.
2. A critical evaluation of the performance of the regulated market.
3. A critical evaluation of practical strategic tools for implementation of policies effectively.
4. Trend analysis of agricultural establishment in the country or particular state.

5. Study of effective agro marketing strategies with special reference to particular state or region of the country.

#### **6.6.1 Beneficiaries of the Research**

This research may be useful for the following entities:-

1. Farmers
2. Government and Policy Makers
3. Educational Institutes and Agriculture Research Centers
4. Companies in the Agriculture Sectors
5. Business Research
6. Individuals/Investor

## References:

1. Bhole, A. (2017, May, 25). A list of 11 large Agriculture CSR projects in India. Retrieve from [https://csrbox.org/India\\_CSR\\_news\\_A-list-of-11-large-agriculture-CSR-projects-in-India\\_48](https://csrbox.org/India_CSR_news_A-list-of-11-large-agriculture-CSR-projects-in-India_48)
2. Das, P.R. (2016, March, 17). 10 Indian celebs who quietly did their bit for society without creating any hype around it Respect. Retrieved from <https://www.scoopwhoop.com/indian-celebs-who-are-doing-social-work/#.ucozcdj4k>
3. Dezan, Shira & Associates (2017, January, 11). Corporate Social Responsibility in India. Retrieved from <http://www.india-briefing.com/news/corporate-social-responsibility-india-5511.html/>
4. District Collectorate. (2010). District human development report. Sawaimadhopur. Retrieved from <http://plan.rajasthan.gov.in/content/planning/portal/en/des/publications/reports/human-development-report/District-Human-Development-Reports>.
5. Five Innovative NGOs in Agriculture. (2014, March, 24) Retrieved from <https://ironline.american.edu/five-innovative-ngos-agriculture/>
6. Government bridging gap between e-commerce Retailer, Farmers. (2017, April, 28). Times of India. Retrieved from <http://timesofindia.indiatimes.com/city/bengaluru/government-bridging-gap-between-e-commerce-retailer-farmers/articleshow/58411712.cms>.
7. Jethmalani, H. (2017, March, 07). More than 30% of India's youth not in employment, OECD report. Retrieved from <http://www.livemint.com/Money/JYalqNRT0taQCIU4EuXGRO/More-than-30-of-Indias-youth-not-in-employment-shows-OECD.html>
8. Jore, D. (2015, August, 23). Mumbai: Bollywood superstar Aamir Khan turns Good Samaritan. Retrieved from <http://www.mid-day.com/articles/mumbai-bollywood-superstar-aamir-khan-turns-good-samaritan/16477169>

9. Verma, S. (2015, June, 09). Here Are the Social Causes These 15 Bollywood Celebrities Are Promoting. Retrieved from <https://www.scoopwhoop.com/inothernews/social-causes-bollywood-celebrities/#.y96uwfa7k>

## **Appendix**

**Bibliography**

**Questionnaire**

**Research Papers published during the Research work**

**Paper Presented in Conferences**

**Course Work Certificate**

**Plagiarism Certificate**

## Bibliography

### **Books, Journals, Newspapers, and Magazines**

- Acharya, S.S. (2007). Agribusiness in India: Some Facts and Emerging Issues. *Agricultural Economics Research Review* (Conference Issue, Vol. 20, pp 409-424).
- Acharya, S.S. (2004). *Agricultural Marketing in India: A Millennium Study of Indian Farmers* (Vol.17). New Delhi, India: GoI, Academic Foundation.
- Acharya, S.S., & Agrawal, N. L. (2011). *Agriculture Marketing in India* (Fifth edition ISBN 978-81-204-1755-7). New Delhi, India: Oxford & IBH Publishing Company Pvt. Ltd.
- Adam, L.K. (2004). Entertainment Farming and Agri-Tourism. ATTRA-National Sustainable Agriculture Information Service, 1-800-346-9140, 1-16.
- Ahluwalia, I. J. and Rangarajan, C. (1986, December). Agriculture and Industry: A study of Linkages the Indian Experience. World Economic Congress of International Association (Mimeo).
- Ahmed, Saifuddin. (2009). “Methods in Survey Sampling Biostat 140.640 Stratified Sampling”. Johns Hopkins University. Retrieved from
- <http://ocw.jhsph.edu/courses/StatMethodsForSampleSurveys/PDFs/Lecture4.pdf>.
- Bansal, A. (2011). Agri-Business in India-Vision 2020. *ZENITH International Journal of Multidisciplinary Research*, 1(2), 62-72.
- Banerjee,A.(2011). The ICT in Agriculture: Bridging Bharat with India. *Global Media Journal – Indian Edition*, 2(2), 1-16.
- Bennett, P. D. (Ed.). (1995). Dictionary of marketing terms. Chicago: American Marketing Association.
- Bhagyalakshmi, M., and Kumar, S.M. (2016). Rationale of agriculture subsidies in India: a case study. *International Journal of Applied Business and Economic Research*, 14(3), 1507-1514.

- Bhalla, G.S. (2010). *The Nature of Agricultural Development in India*. Delhi, India Jawaharlal Nehru University.
- Bissa, G. and Vyas, V.(2014). Study of Infrastructural Status in Agricultural Marketing. *Indian Journal of Research*, 4 (1) 90.
- Brahma, A. (2014). *Agri-warehousing & logistics in India*. Global Strategy Group, KPMG India Private Limited.
- Broadway, A. C. and Broadway, A. A. (2007). *Text book of agri business management*. Ludhinia, India: Kalyani Publishers.
- Chengappa, P. G. (2003). Institutional Aspects of Agricultural Marketing in India. In S. Pal, Mruthyunjaya, P. K. Joshi and R. Saxena (Ed.), *Institutional Change in Indian Agriculture* (pp.331-348).New Delhi, India: Director, NCAP.
- Chitra B.M. and Shankaraiah. (2012). ICT Initiatives in Indian Agriculture. *Information Technology in Developing Countries*, 22(3), 28-30.
- Cochran, W.G. (1952). The  $\chi^2$  test of goodness of fit. *Annala of Mathematical Statistics*, 25,315-345.
- Datt, R. and Sundharam, K. P. M. (2006). *Indian Economy* (Revised 54th edn.). New Delhi, India: S. Chand & Co Ltd.
- Department of Agriculture & Cooperation, Ministry of Agriculture, Government of India. (2007).National Policy for Farmers, pp-16.
- Dey, Sanjoy. (2017, January 13). At 50p a kg, farmers in Jharkhand prefer dumping tomatoes to selling. *Hindustan Times*. Retrieved from <http://www.hindustantimes.com/india-news/at-50p-a-kg-farmers-in-jharkhand-prefer-dumping-tomatoes-to-selling/story>.
- Dutta, R.A. (2009). State Budgetary Resources and Agricultural Development in Rajasthan. Gujarat, India. Retrieved from [http://www.spuvvn.edu/academics/academic\\_centres/agro\\_economic\\_centre/research\\_studies/Report%20No.%20135%20State%20Budgetary%20Resources%20and%20Agriculture%20Development%20in%20%20Rajasthan.pdf](http://www.spuvvn.edu/academics/academic_centres/agro_economic_centre/research_studies/Report%20No.%20135%20State%20Budgetary%20Resources%20and%20Agriculture%20Development%20in%20%20Rajasthan.pdf)



- Gulati, A. (2009). Emerging Trends in Indian Agriculture: What Can We Learn from these?. *Agricultural Economics Research Review* 22(July-December) 171-184.
- Hypothesis Testing-Test of Differences. (2005). *Business Research Method*. ICFAI Center for Management Research, ISBN 81-7881-947-3.
- Jairath, M.S. (2008). Trends in Private and Public Investments in Agricultural Marketing Infrastructure in India. *Agricultural Economics Research Review* 21, 371-376.
- Jairath, M.S. (2013). Agricultural Marketing Infrastructural Facilities in India – State Wise Analysis. Retrieved from [http://www.cosamb.org/wp-content/uploads/2013/07/MISINDIA-Cosamb\(F\).doc](http://www.cosamb.org/wp-content/uploads/2013/07/MISINDIA-Cosamb(F).doc)
- Kadrolkar, M.V. (2012). Role of APMCs in Agricultural Marketing in India- A Study. Karnataka, India. *International Journal of Retailing and Marketing (IJRM)* 4(2), 159-165.
- Kannan, E. and Sundaram, S. (2011). Analysis of Trends in India’s Agricultural Growth (ISBN 978-81-7791-132). Bangalore, India: The Institute for Social and Economic Change.
- Kaul, S. (2011). Historical and Scientific Study of Development of Agriculture Including Global Issues, Pertaining to Agriculture at National Agricultural Science Museum. Delhi, India: Indian Agricultural Statistics Research Institute.
- Kaur, P.J., Singh, I. P., and Sharma, S. (2013). Production Costs and Efficiency of Marketing of Paddy (PR 106) in Hanumangarh District of Rajasthan. *IJSR - international journal of scientific research*, 2(2), 5-8.
- Kaushik, S. (2014). An Analytical Study of the Working of Regulated Markets of Agricultural Produce” (With Special Reference to the Hadoti Region) (Doctoral thesis). University of Kota, Rajasthan, India.
- Khotari, C.R. (2004). *Research Methodology Methods & Techniques*. New Age International (P) Limited, Publishers, Second Edition. ISBN 81-224-1522-9.

- Kumar, Ranjit. (2011). *Research Methodology a step by step guide for beginners*. SAGE Publications Ltd, Third Edition. ISBN987-1-84920-300-5 Retrieved from [http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit\\_Kumar-Research\\_Methodology\\_A\\_Step-by-Step\\_G.pdf](http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit_Kumar-Research_Methodology_A_Step-by-Step_G.pdf).
- Mahesha, B.P. (2013). The Role of Law in Securing Good Agricultural Marketing in India. ISSN 2321 – 4171. Retrieved from <http://jsslawcollege.in/wp-content/uploads/2013/05/THE-ROLE-OF-LAW-IN-SECURING-GOOD-AGRICULTURAL-MARKETING-IN-INDIA.pdf>
- Mishra, S. K. (2007). Trends in Growth of Agriculture Sector of the Indian Economy. Retrieved from <http://www.esocialsciences.org/Download/repecDownload.aspx?fname=Document11232007120.3030359.pdf&fcategory=Articles&AId=882&fref=repec>
- Mittal, S.C. (2001). Role of Information Technology in Agriculture and its Scope in India. *Fertilizer News*, 46 (12), 83-87.
- Murthy. S.M. Mokshapathy, S. and Chandrashekar, H.M. (2012). Strategies for Application of Information Technology in Agriculture. *Contemporary Research In India*, 2(3), 30-33.
- Narayanan, S. (2005). Organic Farming in India: Relevance, Problems and Constraints. Mumbai, India: Department of Economic Analysis & Research, NABARD (publisher). Retrieved From <https://www.nabard.org/demo/auth/writereaddata/File/OC%2038.pdf>
- NCCD. (2015). All India Cold-chain Infrastructure Capacity (Assessment of Status & Gap). Delhi, India. ([www.nccd.gov.in](http://www.nccd.gov.in))
- Pal, R. (2016). Recent Trends in Agricultural Credit. *International Journal in Management and Social Science*, 4(1), 184.
- Pandey, J. and Singh, A. (2012). Opportunities and Constraints in Organic Farming: An Indian Perspective. *Journal of Scientific Research*, 56, 47-72.

- Pandey, M.M. (2009, February 10-12). Indian Agriculture – an Introduction. A country report- India submitted to the Fourth Session of the Technical Committee of APCAEM, Chiang Rai, Thailand.
- Panigrahi, Debashish. (2016, March 28). In drought-hit western Maharashtra, children forced to live orphans. Hindustan Times. Retrieved from <http://www.hindustantimes.com/india/in-drought-hit-western-maharashtra-children-forced-to-live-as-orphans/story>
- Patel, A.A. (2010). An In-Depth Comparative Study of Supply Chain Management Practices at Selected Agriculture Produce Marketing Committees of North Gujarat (Doctoral thesis). Ganpat University, Mehsana, India.
- Prasad, R. (2006). *Text Book of Field Crops Production*. New Delhi, India: ICAR.
- Rajawat, D.S. (2010). Integrated Rural Development Planning, A case of Jhalarpatal Tehsil (Doctoral thesis). University of Kota, Rajasthan, India.
- Roy, M. (2012). Agricultural Marketing: New Challenges. *International Journal of Humanities and Applied Sciences (IJHAS)*, 1(2), 54-57.
- Sharma, A.R. (2017, May 23). Modi government mulls allowing 100% FDI in retail, with caveats. Live Mint (E-paper). Retrieved from <http://www.livemint.com/Industry/6EAO7iO19zi8yoW4FIPF1M/Modi-govt-mulls-allowing-100-FDI-in-retail-with-caveats.html>
- Sharma, Kumar, Nitish. (2015, April 24). Third farmer suicide in 24 hours, this time in Bharatpur. The Times of India. Retrieved from <http://timesofindia.indiatimes.com/city/jaipur/Third-farmer-suicide-in-24-hours-this-time-in-Bharatpur-village/articleshow/47033371.cms>
- Singh, Bhairavi, (2015, March 03) .In Rajasthan's Bharatpur, Weighed Down by Debt, Farmer Commits Suicide. NDTV India. Retrieved from <http://www.ndtv.com/india-news/in-rajasthans-bharatpur-weighed-down-by-debt-farmer-commits-suicide-760183>.
- Singh, N. (2011). Indian Agriculture: Before and After Economic Reforms. *European Journal of Business and Management*, 3(4), 292-299.

- Sinha, S. (2007). Agriculture Insurance in India. Retrieved from [http://www.ifmr.co.in/wpcontent/uploads/2011/03/cirm\\_sinha\\_paper\\_june2007.pdf](http://www.ifmr.co.in/wpcontent/uploads/2011/03/cirm_sinha_paper_june2007.pdf)
- Swami, A. (2009). Agricultural Risk Management in Bikaner District of Rajasthan (Doctoral thesis).University of Bikaner, Rajasthan, India.
- Tomar, N. (2013). APMC Act in India: Rising Food Inflation A Decade Story. *International Journal of Social Science & Interdisciplinary Research*, 2 (7), 38-49.
- Tripp, R. and Pal, S. (1998). Information Exchange in Commercial Seed Markets in Rajasthan. Agricultural Research & Extension Network, Network Paper No. 83. London, England: Overseas Development Institute.
- Tuteja, U. and Chandra, S. (2012). Impact of Emerging Marketing Channels in Agricultural Marketing-Benefits to Producer-Seller and Marketing Costs and Margins of Agricultural Commodities in Haryana. Research Study No. 2012/01. Agricultural Economics Research Centre, University of Delhi, Delhi, India.
- UPA govt wins Parliament approval for FDI in retail. (2012, December 07). Zee News. Retrieved from [http://zeenews.india.com/news/nation/upa-govt-wins-parliament-approval-for-fdi-in-retail\\_815237.html](http://zeenews.india.com/news/nation/upa-govt-wins-parliament-approval-for-fdi-in-retail_815237.html)
- Upadhyay, R. (2010). Modernization of Agriculture, A Case Study of Tonk District (Doctoral thesis).University of Kota, Rajasthan, India.
- Vadivelu, A. and Kiran, B. R. (2013). Problems and Prospects of Agricultural Marketing in India: an Overview. *International Journal of Agricultural and Food Science*, 3(3): 108-118.
- Vyas, V.K. (2014). Study of Effective Agro Marketing Strategies with Special Reference to Western Rajasthan (Doctoral thesis). Suresh Gyan Vihar University, Rajasthan, India.
- 116 Farmers committed suicide in 2016; 10 states reeling under drought. (2016, April 28). Hindustan Times. Retrieved from

<http://www.hindustantimes.com/india/116-farmers-committed-suicide-in-2016-10-states-reeling-under-drought/story>.

- 116 farmers committed suicide in last 3 months. (2016, April 26). India Today. Retrieved from <http://indiatoday.intoday.in/education/story/116-farmers-commit-suicide-last-3-months-all-you-should-know-indian-farmer/1/655112.html>.

## **Reports**

- Agriculture Division, Planning Commission, Government of India. (2007). Report of the Working Group on Agricultural Marketing Infrastructure and Policy Required for Internal and External Trade for the Xi Five Year Plan 2007-12.
- Agriculture Division, Planning Commission, Government of India. (2011). Report of the Working Group on Agricultural Marketing Infrastructure, Secondary Agriculture and Policy Required for Internal and External Trade For the Xii Five Year Plan 2012-17.
- Department of Agriculture. (2013).Administrative Progressive Report 2012-13.Jaipur, Rajasthan.
- Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Government of India. (2016). Annual Report 2015-16.New Delhi, India.
- Directorate of Marketing & Inspection, Department of Agriculture & Co-operation, Ministry of Agriculture and Government of India. (2014). Directorate of Marketing and Inspection Statistical Bulletin. Faridabad, India.
- District Collectorate. (2010). District human development report. Sawaimadhopur. Retrieved from <http://plan.rajasthan.gov.in/content/planning/portal/en/des/publications/reports/human-development-report/District-Human-Development-Reports>.
- District Collectorate. (2009). District human development report. Tonk. Retrieved from

<http://plan.rajasthan.gov.in/content/dam/planning/portal/Directorate%20of%20Economics%20and%20Statistics/Publication/Human%20Development%20Report/District%20Human%20Development%20Reports/Tonk.pdf>.

- Government bridging gap between e-commerce Retailer, Farmers. (2017, April, 28). Times of India. Retrieved from <http://timesofindia.indiatimes.com/city/bengaluru/government-bridging-gap-between-e-commerce-retailer-farmers/articleshow/58411712.cms>.
- Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare and Directorate of Economics & Statistics.(2016).Pocket Book of Agricultural Statistics. New Delhi, India.
- Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare, & Directorate of Economics and Statistics.(2017). Agriculture Statistics at a Glance 2016. New Delhi, India.
- Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare, Directorate of Economics and Statistics.(2016). State of Indian Agriculture 2015-16.New Delhi, India
- Government of India, & Ministry of Agricultural and Irrigation. (1976). Report of the National Commission on Agriculture Part XII Supporting Services and Incentives. New Delhi, India.
- Government of Rajasthan, Directorate of Agriculture (Statistical Cell). (2013).Rajasthan Agricultural Statistics at a Glance 2011-12. Jaipur, Rajasthan.
- Institute of Development Studies, Jaipur. (2008). District human development report. Jhalawar. Retrieved from <http://plan.rajasthan.gov.in/content/dam/planning/portal/Directorate%20of%20Economics%20and%20Statistics/Publication/Human%20Development%20Report/District%20Human%20Development%20Reports/Jhalawar>.
- Iyer, Ashish and Singhi, Abheek. (2012). Indian Agribusiness-Cultivating Future Opportunities. Mumbai. Boston Consulting Group (BCG), report.

- Ministry of Agriculture, Department of Agriculture and Co-operation, Government of India. (2013). Final Report of the Committee of State Ministers, in-charge of Agriculture Marketing to Promote Reforms. Retrieved from <http://dmi.gov.in/Documents/stminprreform.pdf>
- Ministry of Road Transport and Highways, Transport Research Wing, Government of India. (2016). Basic Road Statistics of India 2013-14 and 2014-15. New Delhi, India.
- Pattanayak, S.K. (2016). State of Indian Agriculture 2015-16. New Delhi, India: Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare Directorate of Economics and Statistics.
- Planning Commission, Government of India. (2007). Report of working group on Risk Management in Agriculture for the Eleventh five year plan, 2007-2012. New Delhi, India.
- Rajasthan State Agriculture Marketing Board, Department of Agriculture Marketing. (2016). Marketing Progressive Report. Jaipur, Rajasthan.
- Rajasthan Grameen Aajeevika Vikas Parishad (RGAVP), Ministry of Rural Development, Government of India. (2012). Annual Action Plan (RRLP, NRLP & NRLM) 2012-13.
- Swain, M. Kalamkar, S. S. and Ojha, M. (2012). State of Rajasthan Agriculture 2011 -12. AERC report 145, Agro-Economic Research Centre, Sardar Patel University, Gujarat, India.

### **Web Links**

- Agri Export Zone of India. (2015). Retrieved From [http://apeda.gov.in/apedawebsite/trade\\_promotion/Agri\\_Export\\_Zone.htm](http://apeda.gov.in/apedawebsite/trade_promotion/Agri_Export_Zone.htm).
- Agriculture in Rajasthan-Maps Of India. (2010). Retrieved from <http://www.mapsofindia.com/maps/rajasthan/rajasthanagriculture.htm>
- Agricultural Portal. (2017). Retrieved From

<http://www.agriculture.rajasthan.gov.in/content/agriculture/en.html>

- Bhole, A. (2017, May, 25). A list of 11 large Agriculture CSR projects in India. Retrieve from [https://csrbox.org/India\\_CSR\\_news\\_A-list-of-11-large-agriculture-CSR-projects-in-India\\_48](https://csrbox.org/India_CSR_news_A-list-of-11-large-agriculture-CSR-projects-in-India_48)
- Das, P.R. (2016, March, 17). 10 Indian celebs who quietly did their bit for society without creating any hype around it Respect. Retrieved from <https://www.scoopwhoop.com/indian-celebs-who-are-doing-social-work/#.ucozcdj4k>
- Dezan, Shira & Associates (2017, January, 11). Corporate Social Responsibility in India. Retrieved from <http://www.india-briefing.com/news/corporate-social-responsibility-india-5511.html/>
- Five Innovative NGOs in Agriculture. (2014, March, 24) Retrieved from <https://ironline.american.edu/five-innovative-ngos-agriculture/>
- Government of India. (2011). Retrieved from <http://plan.rajasthan.gov.in/statistics>
- Jawli, Nandini. (2015, April 26). Plight of farmers in Rajasthan. Citizen Samvad Jan Jan ki Aawaj. Retrieved from <http://citizensamvad.com/plight-of-farmers-in-rajasthan>.
- Jethmalani, H. (2017, March, 07). More than 30% of India's youth not in employment, shows OECD report. Retrieved from <http://www.livemint.com/Money/JYalqNRT0taQCIU4EuXGRO/More-than-30-of-Indias-youth-not-in-employment-shows-OECD.html>
- Jore, D. (2015, August, 23). Mumbai: Bollywood superstar Aamir Khan turns Good Samaritan. Retrieved from <http://www.mid-day.com/articles/mumbai-bollywood-superstar-aamir-khan-turns-good-samaritan/16477169>
- Mandi committees categorization. (2017). Retrieved from



[http://www.agriculture.rajasthan.gov.in/content/agriculture/en/RAM-dep/about-us/state-at-a-glance.html#par1\\_text](http://www.agriculture.rajasthan.gov.in/content/agriculture/en/RAM-dep/about-us/state-at-a-glance.html#par1_text)

- Moni, M. (2009, September 1). Impact of economic reforms on Indian agricultural sector: Application of geomatics technology to reduce marginalization and vulnerability of small farmers in India. Retrieved from <https://www.geospatialworld.net/article/impact-of-economic-reforms-on-indian-agricultural-sector-application-of-geomatics-technology-to-reduce-marginalisation-and-vulnerability-of-small-farmers-in-india/>
- (PMFBY) Pradhan Mantra Fasal Bima Yojna |Crop Insurance Scheme.(2016) Retrieved from <http://pmjandhanyojana.co.in/pradhan-mantri-fasal-bima-crop-insurance-scheme/>
- Rajasthan Map. (2017, January 31). Retrieved from [www.mapsofindia.com/maps/rajasthan/rajasthanagriculture.htm](http://www.mapsofindia.com/maps/rajasthan/rajasthanagriculture.htm)
- Verma, S. (2015, June, 09). Here Are the Social Causes These 15 Bollywood Celebrities Are Promoting. Retrieved from <https://www.scoopwhoop.com/inothernews/social-causes-bollywood-celebrities/#.y96uwfa7k>



**5) Which of the following vehicles do you have?**

S.N.	Variables	Yes	No
1.	Bullock/ Camel cart /Horse cart		
2.	Bicycle		
3.	Bike/Two wheeler		
4.	Car/Four Wheeler		
5.	Tractor/Loading vehicles		
6.	No vehicle		

**6) Which of the following electronic media do you use?**

S.N.	Variables	Yes	No
1.	T.V.		
2.	Radio/F.M.		
3.	Computer		
4.	Mobile		
5.	No any media used		

**7) Do you know about Internet?**

- A. Fully Known                      B. Little Known                      C. Not Known

**7.1) If yes-Do you use Internet?**

- A. Always                      B. Often                      C. Sometimes  
D. Rarely                      E. Never

**7.2) If no -Why do you not use Internet?**

- A. Illiterate                      B. Lack of availability of local language websites  
C. Lack of resources                      D. Resistance for adopting new technology  
E. Lack of knowledge                      F. Not required

**8) How do you find the following facilities in your area?**

S. N.	Variables	Fully Satisfied	Satisfied	Dissatisfied	Fully Dissatisfied	Can't say
1	Transportation					
2	Water facility					
3	Electricity for home					
4	Telecommunication facility					
5	Banking facility					

**9) How do availability/ Supply of following farm inputs in your Area?**

S. N.	Variables	Fully Satisfied	Satisfied	Dissatisfied	Fully Dissatisfied	Can't say
1	Seeds					
2	Fertilizers					
3	Pesticides					
4	Electricity for farm					
5	Petrol/Diesel					
6	Farm Machinery/ Equipments					

**10) What do you get to know about new developments/new policies in the field of Agriculture?**

S.N.	Variables	Always	Often	Sometimes	Rarely	Never
1.	Radio/T.V. /Newspaper					
2.	Internet					
3.	Govt. Agencies Reports					
4.	Representatives of Agriculture Department					
5.	Panchayat / Gram Sabha					
6.	Doesn't come to know					

**10.1) Do you satisfy with the information provided by Agriculture officer/ Govt. Agencies Reports?**

- A. Fully Satisfied                      B. Satisfied                      C. Dissatisfied  
D. Fully Dissatisfied                      E. Can't say

**11.) Do you satisfy with Minimum Supporting Price decided System?**

- A. Fully Satisfied                      B. Satisfied                      C. Dissatisfied  
D. Fully Dissatisfied                      E. Can't say

**12.) Where/whom do you prefer to sell your Farm produce?**

S.N.	Variables	Always	Often	Sometimes	Rarely	Never
1.	Krishi Upaj Mandi					
2.	Government Purchase Centers/ Government Agencies					

**12.1.1) If Krishi upaj mandi, How do you find amenities in these Mandis?**

- A. Fully Satisfied                      B. Satisfied                      C. Dissatisfied  
D. Fully Dissatisfied                      E. Can't say

**12.2.1) If Government Purchase Centre /Government Agencies**

**Do you satisfy with this facility giving by the Government?**

- A. Fully Satisfied
- B. Satisfied
- C. Dissatisfied
- D. Fully Dissatisfied
- E. Can't say

**12.2.2) If not to Government Purchase Centre /Government Agencies**

**Then, what is the reason for not selling farm produce to them?**

- A. Low profit/ Good prices in open market
- B. Bad behavior of Govt. officials / Corruption in trading
- C. Have to wait for days to sell a crop
- D. Lack of storage facility at the center
- E. Delay in getting payment
- F. No Government Purchase Centre in the nearby vicinity
- G. Lack of knowledge

**13) Do you store your Farm produce in the Government warehouses?**

- A. Always
- B. Often
- C. Sometimes
- D. Rarely
- E. Never

**13.1) Do you satisfy with amenities in the Government's warehouses?**

- A. Fully Satisfied
- B. Satisfied
- C. Dissatisfied
- D. Fully Dissatisfied
- E. Can't say

**13.2) What is the reason for not storing it in Government's warehouses?**

- A. High-cost
- B. Need of lot of documentation
- C. Low maintenance of crop/ lack of security of crops
- D. Bad behavior of Govt. officials / Corruption in trading
- E. No Government warehouse center in the nearby vicinity
- F. Lack of knowledge

**14) Do you prefer to take finance from Bank/Institutional Sources?**

- A. Always
- B. Often
- C. Sometimes
- D. Rarely
- E. Never

**14.1) Do you satisfy with benefits of loan from Bank/Institutional Sources?**

- A. Fully Satisfied                      B. Satisfied                      C. Dissatisfied  
D. Fully Dissatisfied                      E. Can't say

**14.2) Why do you not take loan from Bank/Institutional Sources**

- A. Not required/interested                      E. Need of a lot of documentation  
B. Bank was not transparent in passing the loan F. Long Process  
C. Bank's interest rate was very high  
D. Bank official demanded money or other benefit

**15) Do you have Kisan Credit Card?**

- A. Yes                      B. No

**15.1) If yes, Do you satisfy with benefits of Kisan Credit Card?**

- A. Fully Satisfied                      B. Satisfied                      C. Dissatisfied  
D. Fully Dissatisfied                      E. Can't say

**15.2) If no, Why have you not taken Kisan Credit Card?**

- A. Not required                      B. Not interested                      C. Complex process  
D. Lack of knowledge                      E. Lack of resources

**16.) Have you insured your crops?**

- A. Always                      B. Often                      C. Sometimes  
D. Rarely                      E. Never

**16.1) If yes, Do you satisfy with benefits of crop insurance?**

- A. Fully Satisfied                      B. Satisfied                      C. Dissatisfied  
D. Fully Dissatisfied                      E. Can't say

**16.2) If no, Why have you not insured your crops?**

- A. Not required/interested                      B. Lack of knowledge                      C. Lack of resources  
D. Corruption/No transparency                      E. Complex/Long process F. Not profitable

**17) Do you follow agriculture-related programs on T.V or electronic media?**

- A. Always                      B. Often                      C. Sometimes  
D. Rarely                      E. Never



**19.1) If yes, Do you satisfied with the benefits of these programs/schemes?**

S. N.	Variables	Fully Satisfied	Satisfied	Dissatisfied	Fully Dissatisfied	Can't say
1.	Rajasthan Kisan Aayog					
2.	Agriculture Technology Management Agency					
3.	Krishi Vigyan Kendra					
4.	AGMARKNET					
5.	Establishment of Agro & Food Processing Centre at State Level					
6.	Kishi Export Zone					
7.	Rajeev Gandhi Krashak Saathi Yojna					
8.	Kisan KalewaYojna					
9.	Gramin Sampark Sadak					
10.	Awareness Programs such as Kisan Mela, Minicut Exhibition, Crops Exhibition					
11.	Loan against farm produces stored in the govt. warehouses					
12.	Farmer's Training					
13.	Farm Machinery and Farm Distribution Scheme					
14.	Krashak Jagriti Karyakram					
15.	Krushak Bhraman					
16.	Kisan Bhawan					
17.	SFAC					

**20.) Which of following constraints do you face?**

S.N.	Variables	Always	Often	Sometimes	Rarely	Never
1.	Lack of credit facilities					
2.	Long marketing channel					
3.	Lack of processing infrastructure					
4.	High cost of transport charges\ Lack of transportation facility					
5.	Lack of storage facilities					
6.	Lack of knowledge of good cultivation practices					
7.	Lack of technical know-how on grading					
8.	Lack of knowledge on Packaging					
9.	Lack of Market Information					

**Thank You**



## CHANGING FACE OF INDIAN AGRICULTURE IN GLOBAL SCENARIO

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### ABSTRACT

Agricultural development is multidirectional having galloping speed and rapid spread with respect to time and space. After green revolution, farmers started using improvised cultural practices and agricultural inputs in intensive cropping systems with labor intensive programmes to enhance the production potential per unit land, time and input. By following the liberalization process and globalization of economies would call for competitiveness and efficiency of agricultural production. The aim of this paper is to bring out the present scenario of agriculture industry that is largely influenced by trends in the global market. This paper will discuss the various trends that are emerging presently in agriculture industry like agriculture import and export, kisan call centre, online mandi, agriculture retailing and organic farming etc. Indian government support towards these trends will also be discussed.

**KEYWORDS:** Globalization, Information Technology, Innovation, Agriculture Export & Import, Agriculture Retailing, Organic Farming

### INTRODUCTION

Agriculture is an important part of the Indian economy because more than 60% people live in rural areas and agriculture & its allied sectors contribute around 20% gross domestic product of the country. It generates employment to approximately 60 per cent of the population. It is also an important source of raw materials, industrial products and consumer goods for various industries. It plays a vital role in the socio-economic growth of the country. So it can be said that agriculture is backbone of the Indian economy. To make place in the list of developed countries it is essential to pay more attention and to be more focused towards new developments in the Indian agriculture industry.

After independence, the Indian agriculture industry has experienced a revolutionary breakthrough in food grain production, leading the country from deficit and import arena to the positive state of self sufficiency & buffer stock through several programmes such as Grow More Food Campaign - 1948, Community Development Programme - 1952, Intensive Agricultural District Programme (IADP)-1960, Intensive Agricultural Area Programmes (IAAP)-1966, High Yielding Variety Programme (HYVP) -1966, Operational Research Project (ORP) - 1971, Lab to Land Programme (LLP) - State Agricultural Extension Projects (T & V) 1974-75, National Agricultural Research Project (NARP) 1980-88 etc.

In July 1991, a new chapter began in the Indian Economy when the Indian government adopted a new economic policy broadly known as economy reforms 1991 to save the country from serious situation of economic crisis. End of license quota and many more restrictions and controls from many industries (Liberalization), the role of public sector was limited to four industries, rest all industries opened for private sector (Privatization), allowed FDI by providing Facilities to foreign companies to invest in different fields of economic activities of India, removing constraints and obstacles to the entry of MNC's in India, allowing Indian companies to enter foreign collaboration, to set up joint ventures abroad, removing many restrictions on import and export duties (Globalization) and major steps taken by government to implement new policy. After introducing this policy, India had shown its presence on the world map. Indian agriculture industry was

influenced by economic reform processes to a great extent. Some major steps taken were agricultural exports and imports, investment in new technologies and on rural infrastructure, patterns of agricultural growth, agriculture income and employment, agricultural prices and food security, reduction in commercial bank, credit to agriculture, Indian seed market opened up to global agribusinesses, encouragement to cash crop, and reduction of pesticide subsidy etc.

The journey of Indian agriculture industry from July 1991 to present is very contradictory. At times it enjoyed the globalization and some of the times it suffered from globalization. Introduction of better equipments and improvement in the techniques of agriculture in the process of globalization increased the production in terms of quantity as well as quality.

As such, farmers started earning more and having improved their per capita income and standard of living. After removing many controls and restrictions on export and import, Indian farmers got the option to sell their output to other countries and to expose them worldwide. However, reforms in the agricultural sector in particular, came under severe criticism in the late 1990s, when 221 farmers in the south Indian state of Andhra Pradesh committed suicide in one year. Reduced subsidy on electricity and pesticide due to liberalization policy, Indian seed market was opened up to global market leading to increment in seed price, agricultural land encroached for development of industries, increased no. of landless farmer, globalization, increased the competition in agriculture sector, devaluation of Indian rupee by 25%, agricultural sector was kept protected from FDI so capital formation in agricultural being negligible, were the main adverse effects of globalization on Indian agriculture industry. This combination along with deflationary policies which have hit rural public expenditure, created unprecedented agrarian crisis in India and pushed Indian farmers into the dark. But it will be a misconception if it is said that trade policy changes have not helped agriculture. It has accelerated the growth of agriculture and improved the framework of Indian agriculture industry. It gave new wings to Indian agriculture industry with new tools to fly in new global sky which have unlimited opportunity to make a strong presence on the world map.

## **RESEARCH METHODOLOGY**

The paper is basically conceptual and descriptive, the data which has been used for the analysis, has been gathered from various secondary sources like research articles, published and unpublished scholarly papers, books, journals, speeches, newspapers, annual reports, databases available on various websites. The analysis of the data has been done according to its nature.

### **New Trends in Agriculture**

here are so many political, technical and social changes that have taken place in the Indian agriculture infrastructure from 1991 till date, by which the Indian agriculture fabric meliorated. Lot of new concepts and innovations have been introduced to boost the pace of Indian agriculture.

## **INTERNATIONAL TRADE AND INDIAN AGRICULTURE**

### **Agricultural Exports**

It has increased trends in the present scenario. Indian agricultural exports have increased from Rs 39863.31 crore in 2004-05, to Rs 49802.92 crore in 2005-06. During the current year (April–September 2006), the value of agricultural exports was worth Rs 28157.52 crore as compared to Rs 21673.25 crore for the corresponding period of last year, registering a growth of 29.91 per cent. India's total export of agricultural and allied products at \$10.5 billion in 2005-06 constitutes 10.2% of its export share. Developed country markets account for nearly 35% of India's agri-exports. Contribution of various agricultural commodities in world exports has been listed below. Product Percentage share in World Export-

Table 1

Product Percentage Share in World Export	Product Percentage Share in World Export
Lac, gums, resins, vegetable products	10
Vegetable planting materials, vegetable products	4.9
Coffee, tea, mate & spices	3.7
Marine products	2.3
Residues, waste of food industry, animal fodder	2.1
Cereals	1.3
Fruits & nuts	1.1

Export of Marine products, which after a decline in 2003-04, had picked up in subsequent years, had grown by 6.3% in April-October 2006. In terms of export earnings, among marine products, frozen shrimp contributed to be the largest export item, followed by frozen fish, cuttlefish, squid, and dried items.

**Agriculture Import** - There has been a decline in agricultural import. The agricultural import has decreased from Rs. 22057.49 crore in 2004-05, to Rs. 21025.54 crore in 2005-06. The share of agricultural import to the country's total import has remained steady around 3.33 per cent. Import has registered a relative decline during April-September 2006, when it was only 2.88 per cent of the country's total import. The import of vegetable oils (edible), pulses, cashew- nuts; cotton (raw and waste) and wood products dominate our agricultural import.

#### **Government's Efforts toward Agriculture Export & Import**

- The Government is taking steps to encourage export of agro products through measures and incentives under Plan schemes of the Commodity Boards and Export Promotion Councils. Further, in order to boost export of Indian products, the Ministry of Commerce & Industry has put in place various schemes namely Market Development Assistance (MDA), Market Assistance Initiative (MAI), Assistance to State for Development Export Infrastructure and Allied Activities (ASIDE), Vishesh Krishi and Gram Upaj Yojana, Focus Product Scheme, Focus Market Scheme, Town of Export Excellence, etc. Agriculture and Processed Food Products Export Development Authority (APEDA), under the administrative control of the department of Commerce is also implementing various schemes to extend financial assistance to the eligible exporters registered with it to boost the overall agricultural export.
- The export of non-basmati rice from privately held stocks without any quantitative restriction or price restriction is permitted since 9th September, 2011. To promote export of medicinal plants and herbal products, export of plant portions, derivatives and extracts has been liberalized.
- Capital goods imported under EPCG for agriculture have been permitted to be installed anywhere in the Agri Export Zone (AEZ) and ASIDE funds are to be utilized for development for Agri Export Zones also.
- Import of seeds, bulbs, tubers and planting materials has been liberalized.

#### **RETAILING IN AGRICULTURE**

Retailing includes all activities involved in selling goods or services which are produced by farmers, to the final consumers for personal and non business use. Agricultural retail market in India is in a disadvantageous position, suffering from lack of avenues to reach out to the vast domestic as well as world market. This has largely been due to the inability of this sector to access latest technology and improve its marketing Interface. Development of organized retailing market either induced by indigenous capital or by foreign capital is very crucial where small and marginal farmers can supply their products directly to these big retailers (Indian or foreign).

Due to lack of adequate infrastructure facilities and lack of proper storage facilities, farmers are forced to sell their products at very low prices, which sometimes cannot even cover their cost of production. Overproduction or glut both becomes the cause of the farmer's distress. The survey data presents that 28% of paddy production is sold at zero profit margins and for 45% of the paddy production, the profit margin varies from 5 to 10 percent. Only it is the rest 26% of the total production where profit margin is above 10%, but the maximum profit margin is 15%. The main cause is the lack of storage facility, failure of the Government mechanism to reach the farmers with minimum support price and virtual non-existence of organized marketing infrastructure.

### **Government's Efforts toward Agriculture Retail Market**

Several states in the country permit retailers to purchase produce directly from the farmers. Farmers are making full use of this opportunity and are adopting to cultivate assigned crops which have a good market and which are required by big retail chains and they become their suppliers. This gets them instant credit at higher prices than what they used to receive from their old man or middleman. Corporate retailers like ITC, Godrej, Reliance, AV Birla and many others have already established the farm linkage.

In January 2012 central government has approved reforms for single brand stores welcoming anyone in the world to innovate Indian retail market with 100% ownership but imposed the requirement that the single brand retailer, sources out 30% of its goods from India. In September 2012 central government won Parliament's approval to the decision of allowing 51 % FDI multibrand in retail.

FDI in retail will help in introduction of new technologies in agrimarketing and will benefit farmers and consumers. It will transform from fragmented and stressed agriculture supply chains into efficient and vertically integrated supply chains. It will improve integrated cold-chain infrastructure and storage facilities to reduce heavy losses to farmers in terms of wastage as well as selling price.

## **INFORMATION TECHNOLOGY IN AGRICULTURE**

Agriculture is the backbone of Indian economy and food security is the major concern. India needs a second green revolution and it is possible only through the transfer of technologies from lab to land. Knowledge transfer to the agriculture sector with necessary inputs is most important. The country has a widespread telecom & internet network which could be put to effective use for delivering knowledge and information to the farming community.

The Vision 2020 document of the department of agriculture and co-operation envisages that the tools of ICT will provide networking of agriculture sector not only in the country but also globally. The center and state government departments will have reservoir of databases. And it will also bring farmers, researchers, scientists and administrators together by establishing "Agriculture Online" through exchange of ideas and information. There are several ministries and departments in government dealing with agriculture marketing. The Government's digital initiatives include Agrisnet, Agris, Agmarknet, Dacnet, Fishnet, E-Chaupal, Digital mandi, Kisan call centre etc. with their independent websites. Facts and figures show they are working very successfully.

### **E-Chaupal**

E-Chaupal is a business platform consisting of a set of organizational subsystems and interfaces connecting farmers to global market. It has been initiated by International Tobacco Company (ITC) in June 2000, a large multi business conglomerate in India, to link directly with rural farmers via the Internet for procurement of agricultural and aquaculture products like soybeans, wheat, coffee, and prawns. E-Choupal was conceived to tackle the

challenges posed by the unique features of Indian agriculture, characterized by fragmented farms, weak infrastructure and the involvement of numerous intermediaries. The programme involves the installation of computers with Internet access in rural areas of India to offer farmers up-to-date marketing and agricultural information.

This e-chaupal business platform consists of layers, each of different level of geographic aggregation. Each of the layers is characterized by three key elements

- The infrastructure (physical or organizational) through which transaction takes place
- The entity (person or organization) orchestrating the transactions
- The geographical coverage of the layer.

The first layer consists of the village level kiosks with internet access (e-chaupals), managed by an ITC trained local farmer and within walking distance (1-5 kilometers) of each target farmer. Each cluster of five villages gets an e-chaupal, which is justified by sparse population in rural India. The second layer consists of a brick and mortar infrastructure called hubs managed by the traditional intermediary who has local knowledge called 'Samayojak' and within tractorable distance (25-30 kilometers) of the target farmer.

E-Choupal is based on a hub and spoke model which consists of villages serviced by a local farmer called 'Sanchalak'. These villages or spokes aggregate demand and supply to the next tier which is the district/town centered "hub". The e-Choupal villages supply agricultural produce to ITC at the hub level and also service smaller last mile villages with agricultural information. The next level is the district centered "hub" which is mainly a procurement and storage space. Enhanced hubs, called 'Sagars' in addition to procurement and storage functions also serve as retail outlets (rural hyper marts) for products and services ranging from soaps and apparel to tractors and insurance.

The initiative was launched in June 2000 and it has already become the largest initiative among all internet-based interventions in rural India. 'E-Choupal' services today reach out to over 4 million farmers growing a range of crops - soybean, coffee, wheat, rice, pulses, and shrimp - in over 40,000 villages through 6500 kiosks across ten states (Madhya Pradesh, Haryana, Uttarakhand, Karnataka, Andhra Pradesh, Uttar Pradesh, Rajasthan, Maharashtra, Kerala and Tamil Nadu).

### **Kisan Call Centre**

In January 21, 2004, the Department of Agriculture and Co-operation (DAC) launched Kisan call centers as centrally sponsored scheme under the Union Ministry of Agriculture across the country to deliver extension service to the farming community. The purpose of these call centers is to respond to issues raised by farmers, instantly, in the local language. There are call centers for every state which are expected to handle the queries from any part of the country. Queries related to agriculture and allied sectors are being addressed through these call centers. When a call is received by a KCC representative, he/she answers the query based on his/her knowledge and a computerized knowledge database created over the years. Call centre representatives are of various levels ranging from Agriculture graduates / post graduates to subject matter specialists and scientists. In case a higher level of expert advice is required, the representative arranges for a call-conference with the expert and also sends the query to his/her nodal officer. Nodal officers are senior agricultural scientists and experts located in the government system, agricultural universities and ICAR institutes.

In order to monitor the activities of Kisan Call Centers, a State-level monitoring committee has been constituted comprising Secretary (Agriculture), Directors in Agriculture and allied Departments, a representative of local BSNL office, and the nodal officer. The committee reviews the issues related with organization of training programmes, publicity and

telephone connection issues, and ascertains the authenticity and accuracy of answers given by KCC representatives to farmers. In 2011-12, over 20 lakh calls were received by the Kisan Call Centers and 9 lakh calls in the previous year. Since its inception in 2004, KCCs have received more than 62 lakh calls. At present, 25 KCCs are operating in the country.

### **Digital Mandi and Agricultural Commodities Exchanges**

To introduce future trading in agricultural commodities in India, two commodity exchanges have been introduced in 2003 for future trading. They are National Commodity & Derivatives Exchange Limited (NCDEX) and Multi Commodity Exchange of India Limited (MCX). It purposes to offer an electronic trading platform for trading in a host of commodities, both agricultural and non-agricultural to various market participants, primary producers including farmers, traders and processors. NSEL attempts to remove the middle man. They are the first to show up agricultural commodity index in India. These exchanges are majorly dealing in agricultural commodities. They are involved in forward trading to mitigate price risks of the farmers.

Commodity exchange in India plays an important role where the prices of any commodity are not fixed, in an organized way. Earlier, only the buyer of produce and its seller in the market judged upon the prices. Others never had a say. Today, commodity exchanges are purely speculative in nature. Before discovering the price, they reach to the producers, end-users, and even the retail investors, at the grass-root level. It brings a price transparency and risk management into the vital market.

In 2003, **Digital Mandi** project was developed by Media Lab Asia, Zonal Coordination Unit-IV ICAR – Kanpur, Shramik Bharti, Wifin Technologies, Food Corporation of India (FCI), IIT Kanpur.

Digital Mandi is an agricultural information portal for the farmers that aim at providing pricing information, higher yields for outputs. The Digital mandi is another new concept which works through internet access. Every State's agriculture marketing board gives an option on their website as online mandi, where a farmer can register himself and start trading in this mandi.

### **ORGANIC FARMING**

Organic agriculture is a holistic production management system which is supportive to environment, health and sustainability. Organic farming system emphasizes on the use of organic matter for enhancing soil properties, minimizing food chain associated health hazards and attaining closed nutrient cycles, the key factors for sustainable agriculture.

Organic farming is an important pillar of sustainable agriculture, which is beneficial for both producers and consumers. India has a great potential for organic farming using traditional wisdoms prevailing in the villages of India. In fact, a large section of Indian agriculture uses more or less organic methods of farming, using minimum level of chemical inputs. Promotion of organic farming in India could prove beneficial to increase the share of Indian agricultural export in the world export.

Organic farming has emerged as a potential alternative for meeting food demand, maintaining soil fertility and increasing soil carbon pool. However, Indian organic farming industry is almost entirely export oriented, running as contract farming under financial agreement with contracting firms, and as per the latest report, about 585,970 tonnes of organic products worth US\$ 6.8 million are being exported from India. Most of the farmers are opting organic farming due to price margins which may shift motive of the commercial farmers towards economic vantage rather than for safe agricultural produce to competitively discourage small farm holders. Additionally, limitations regarding bulk availability of organic supplements further constrain organic farming in India. Despite these issues, the increasing market demand and

institutional support coupled with growing inclination of farmers to go organic have resulted in rapid growth in certified organic area during the last 2-3 years. The objective of this review is to assess the status and potential of organic farming and the constraints therein impeding the adoption of this sustainable agricultural practice in India.

### Production and Exports

The aggregate production of organic agriculture came to about 14,000 tonnes during 2002 and the exports amounted to 11,925 tons. Details are given in table

**Table 2**

<b>Products</b>	<b>Tons</b>
Tea	3000
Rice	2500
Pulses and Vegetables	1800
Cotton	1200
Wheat	1150
Spices	700
Coffee	550
Cashew nut	375
Pulses	300
Herbal products	250
Oil seeds	100
<b>Total</b>	<b>11925</b>

### Government's Efforts towards Organic Farming

Central government has taken many measures to promote organic farming in Indian agriculture; A National Institute for Organic Farming has been established to spearhead research in organic agriculture. The government of India constituted task force had also recommended the initiation of the postgraduate level courses in organic farming. The Morarka Foundation and Maharana Pratap University of Agriculture and Technology (MPUAT), Rajasthan have collaborated in the design and implementation of such a programme. State Governments are also promoting organic farming at their own levels.

### CONCLUSIONS

Agriculture is the mainstay of Indian economy. In the last 20 years, globalization has made a great impact on the Indian agriculture. There is a significant change in social, physical and economic infrastructure in Indian agriculture. Some new innovations have taken place in agriculture as e-chaupal, digital mandi, online agri marketing etc. Indian agriculture turned into corporate agriculture & continues making a strong presence on the world map. Indian government is taking new steps and measures to improve working and to make efficient infrastructure of Indian agriculture and continuing working towards the welfare of farmers. It has accelerated the growth of agriculture and has improved the framework of Indian agriculture industry. Now we need to pay more attention and to be more focused towards new developments in the Indian agriculture industry.

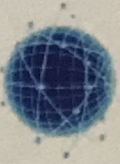
### REFERENCES

1. Ms. Ku.P.V. Pohare "Impact Of Globalization On Indian Agriculture" "International Referred Research journal, ISSN- 0974-2832,RNI-RAJBIL2009/29954, VoL.II ISSUE-26 March, 2011.

2. Navjit Singh “Indian Agriculture: Before and After Economic Reforms” European Journal of Business and Management ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol 3, No.4, 2011.
3. M.Roy and S.Kumar “Foreign Direct Investment in Agricultural Retailing in India”
4. International Conference on Humanities, Economics and Geography (ICHEG’2012), March 17-18, 2012 Bangkok.
5. Dr. S. Narayanan “Organic Farming In India: Relevance, Problems And Constraints” Published by the National Bank for Agriculture & Rural Development, Department of Economic Analysis & Research, Mumbai.
6. Jitendra Pandey and Ashima Singh “Opportunities And Constraints In Organic
7. Farming: An Indian Perspective” Journal of Scientific Research Banaras Hindu University, Varanasi Vol. 56, 2012 : 47-72 ISSN : 0447-9483
8. B.V. Muralidhar, D.M. Mamatha, G. Stanley Jayakumar, and Roseline Mary “Globalization and Its Impact on Indian Agriculture: A Study of Farmers’ Suicides in the State of Andhra Pradesh *Nepalese Journal of Public Policy and Governance, Vol. xxix, No.2, December, 2011.*
9. Dr. Subhash Pandurang Jadhao “Impact Of Modern Globalization On Indian Agricultural Sector” Shodh, Samiksha aur Mulyankan (International Research Journal)—ISSN-0974-2832, Vol. II, Issue-11-12 (Dec.2009—Jan.2010)
10. Piali haldar and Dr.S.L.Gupta “Changing Face of Rural Retailing In India “Proficient An International Journal Of Management vol.4 issue1 january2012.
11. <http://www.digitalmandi.net/>
12. <http://popularinformation.blogspot.com/>
13. [www.krishiworld.com](http://www.krishiworld.com)
14. [www.yahooanswer.com](http://www.yahooanswer.com)
15. [www.wikipedia.com](http://www.wikipedia.com)
16. [www.itcportal.com/ruraldevelopment/echoupal/htm](http://www.itcportal.com/ruraldevelopment/echoupal/htm)
17. Economics times
18. Times of India



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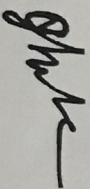
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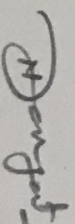
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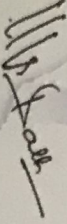
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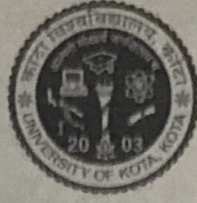
in two days International Conference held in Jawaharlal Nehru University (J.N.U.), New Delhi.

  
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This is to certify that Ms. **Megha Goyal D/o Sh. Chiranji Lal Goyal** has been successfully completed her Ph.D. Course Work - 2013 in the subject of Business Administration Under the Department of Commerce & Management, University of Kota, Kota (Raj.) as per the norms of UGC [UGC Minimum Standards and Procedures for award of Ph.D. degree Regulations 2009]. The details are as follows:

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Faculty: Commerce

Subject: Business Administration

Department: Commerce & Management

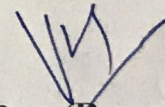
Ph.D. Course work Result:

NAME OF PAPER	MAX. MARKS	MARKS OBTAINED
PAPER I : Research Methodology Computer Application & Mechanics of Writing	100	58
PAPER II : Review of Literature & Research Technique	GRADE : Good	
	RESULT	Pass

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LEVEL  
A  
Thesis  
Submitted for the Award of Ph.D. degree of  
UNIVERSITY OF KOTA  
in the  
Faculty of Commerce and Management  
Doctor of Philosophy  
by  
Megha Goyal  
Under the supervision of  
Dr. Anukrati Sharma  
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