

# Marketing Models for Sustainable Growth in Agriculture: A Case Study on Farmers in Selected Region of Prakasam District, AP

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## ABSTRACT

*Businesses that have lower production and operating costs are regarded efficient as can deliver products at competitive price. In most of the Western countries adequate marketing support to farmers is provided to produce agricultural products at lower input costs, leading to cost efficiency. However, India has no such direct support for agriculture especially in the marketing of agriculture produce. As a consequence, the system involves superfluous middlemen causing huge losses to the farmers.*

*Towards this end, this study was taken up with a focus on major challenges that are being faced by the farmers in the current agricultural marketing system, farmers' awareness on marketing models, marketing activities, and government efforts to promote agriculture sector in the region of Prakasam district in Andhra Pradesh (AP).*

*The study analyses the role and importance of agricultural marketing in India and establishes a strong case for an efficient marketing model for the survival of the agriculture and the farmers. It identifies feasible marketing models for sustainable growth and development in agriculture. It suggests suitable marketing models like Contract Farming, Co-operative Marketing, E-choupal and Public Distribution System (PDS) that are helpful for farmers' welfare by eliminating intermediaries in the market. It reports that the outcome of the study can make agriculture sector feasible and sustainable in Andhra Pradesh.*

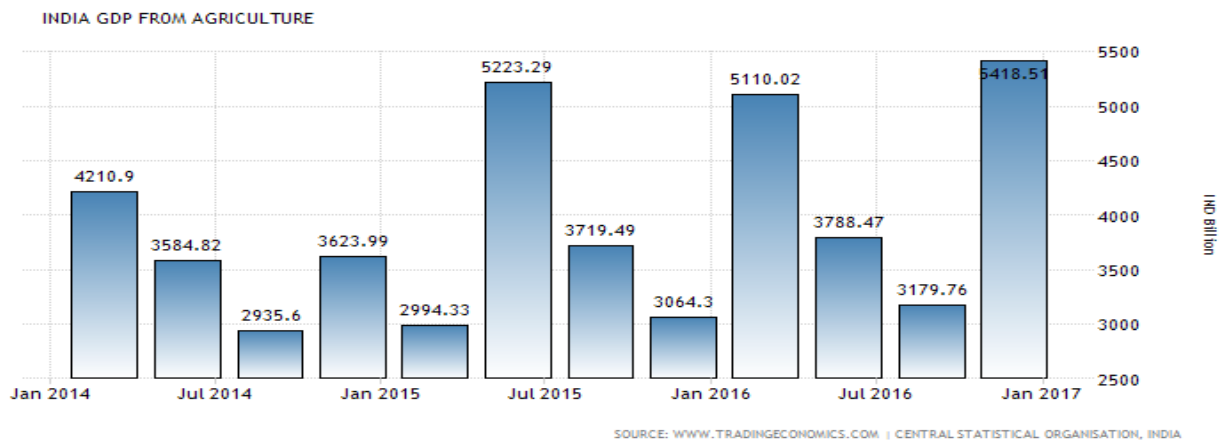
## Keywords

*Farmers, Agricultural Marketing, Intermediaries, Marketing Models*

## AGRICULTURE IN INDIA: AN OVERVIEW

Agriculture in India has a significant history. Today, India ranks second worldwide in farm output. Agriculture and allied sectors like forestry and fisheries accounted for 14 percent of the GDP in 2013-14, about 54 percent of the total workforce and in the year 2009 achieved GDP was 16.6 percent about 50 percent of the total workforce. The economic contribution of agriculture to India's GDP is steadily declining with the country's broad-based economic growth. Still, agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India.

GDP from Agriculture in India increased to 5418.51 IND Billion in the fourth quarter of 2016 from 3179.76 IND Billion in the third quarter of 2016. GDP From Agriculture in India averaged 3860.31 IND Billion from 2011 until 2016, reaching an all time high of 5418.51 IND Billion in the fourth quarter of 2016 and a record low of 2690.55 IND Billion in the third quarter of 2011. India is the world's largest producer of many fresh fruits, vegetables, milk, major spices, selected fresh meats, selected fibrous crops such as jute, several staples such as millets and castor oil seed. India is the second largest producer of wheat and rice, the world's major food staples. India is also the world's second or third largest producer of several dry fruits, agriculture-based textile raw materials, roots and tuber crops, pulses, farmed fish, eggs, coconut, sugarcane and numerous vegetables. India ranked within the world's five largest producers of over 80 percent of agricultural produce items, including many cash crops such as coffee and cotton, in 2010 (FAO world agriculture statistics) and also one of the world's five largest producers of livestock and poultry meat, with one of the fastest growth rates, as of 2011.



India has shown a steady average nationwide annual increase in the kilograms produced per hectare for various agricultural items, over the last 60 years. These gains have come mainly from India's green revolution, improving road and power generation infrastructure, knowledge of gains and reforms. Despite these recent accomplishments, agriculture in India has the potential for major productivity and total output gains, because crop yields in India are still just 30 percent to 60 percent of the best sustainable crop yields achievable in the farms of developed as well as other developing countries. Additionally, losses after harvest due to poor infrastructure and unorganized retail cause India to experience some of the highest food losses in the world. There should be an all-round rationalization and standardization of the prices through legislative means. Presently there is a vast gap between the marketing strategies of agricultural produce in India and abroad and the same needs to be bridged.

There is a need to set up marketing committees which have the representation of growers, merchants, local bodies, traders and nominees from the govt. There should be collective and integrative efforts and energies from all quarters for ensuring just and fair price for farmers. There is no doubt that in any marketing there is a motive towards profit involved and at the same time, the marketing is to be based on certain values, principles and philosophies such as offering just and fair prices to the farmers who toil hard to till. Bringing necessary reforms coupled with proper price discovery mechanism through the regulated market system will help streamline and strengthen the agricultural marketing.

In order to avoid isolation of small-scale farmers from the benefits of agricultural produce, they need to be integrated and informed with the market knowledge like fluctuations,

demand and supply concepts which are the core of the economy.

## AGRICULTURAL MARKETING SYSTEM AND CHALLENGES

According to the National Commission on Agriculture (NCA), Agricultural Marketing as a process starts with a decision to produce a saleable farm commodity and it involves all aspects of market structure of system, both functional and institutional, based on technical and economic considerations and includes pre and post-harvest operations of assembling, grading, storage, transportation and distribution.

The Indian Council of Agricultural Research (ICAR) states that Agricultural Marketing involves three important functions, namely (a) Assembling (Concentration) of goods (b) Preparation of consumption (Processing) and (c) Distribution of agricultural produce (Dispersion).

An organized marketing system ensures better returns to the farmer and stabilizes the market prices. It protects the interest of both consumers and producers. But in most of the underdeveloped and developing countries, agricultural marketing is not systematically organized. As a consequence, the farmers in these countries are facing many problems to sell their produce.

The major challenges in agricultural marketing system are: (1) Lack of Transportation Facilities (2) Poor Quality of Produce, (3) Role of Middleman, (4) Lack of Grading, (5) Lack of Credit Facilities, (6) Problems of Produce Collection, (7) Lack of Storage Facility, (8) Weight and Measures and (9) Market News.

## REVIEW OF LITERATURE

The critique comparison of the past literature will provide insights of the research that has been done on the topic and provide a base for selecting a research topic and gives a direction for the research. Various studies have contributed to understand the agriculture sector and its growth and development, agricultural marketing systems and development of the agricultural marketing for welfare of the farmers and economy as well.

**Dantwala, M.L. (1966)** stated in his journal about agriculture that, a coordinated approach in modernizing agriculture necessitates the supply of institutional credit in agriculture. Provision of agriculture credit was considered so necessary, as Dantwala stated, that "it is a truism that supply of adequate and timely credit is a crucial constituent of any program of agricultural development".

**Robert Dortman (1967)** stated that the function of the market is to ensure the unhindered, unfettered interaction of the forces of demand and supply. A market, therefore, can be defined as a group of human beings, i.e., a group of buyers and sellers, with facilities for trading with each other.

**Government of India (1978)** stated in the draft five-year plan 1978-1983 about the prices of the agricultural commodities that, the development of the marketing structure would aim at ensuring remunerative price to the producer of agricultural commodities and thus narrowing down the price spread between the producer and the consumer and reducing non-functional margins of the traders and commission agents.

**Subbarao, K. (1978)** in his study on "Rice marketing system and compulsory levies in Andhra Pradesh- A study of public intervention in food grain marketing" examined the economic efficiency of the prevailing rice marketing system in Andhra Pradesh and to understand the forces promoting or impeding competitive environment between buyers and sellers in the villages.

**Varma, S.C. (1981)** while explaining the agricultural marketing in India assumes that the realization of a fair price for goods depends on an efficient agricultural marketing system and such a system is presented not just as a means of enhancing rural incomes but also as a catalyst for increasing agricultural output. He brings together information on various market development themes as well as analyzing some different problems.

**World Bank (2011)** conveyed about the agriculture marketing that it will be essential for India to build a productive, competitive, and diversified agricultural sector and facilitate rural, non-farm entrepreneurship and employment. The study reports that, encouraging policies that promote competition in agricultural marketing will ensure better prices for farmers."

**Dr.RM.Chidambaram (2015)** expressed that; 'agriculture' should be a compulsory component of education at all levels viz., primary, secondary, higher-secondary and higher education. It is opined in the study that cultivation aspects go beyond and should go up to marketing. Mere knowledge orientation is of no use and the skills associated with allied activities of agriculture are to be honed. The study suggests that at the higher education level, programmes on agricultural engineering, irrigation management, rural management, agricultural marketing, rural financing and the like are to be offered with more of practical orientation to lure the younger generation towards agriculture to contemplate a wedlock between 'young India' and 'Resourceful Bharat'.

## LITERATURE GAP

Review of the literature revealed that most of the earlier studies covered on remunerative prices to the producer of agricultural commodities, identified defects in the marketing system and in ensuring fair price to farmers. Several studies reported the price spread gap that existed between producer and consumer due to the involvement of superfluous middlemen in the agricultural marketing system, which led to unfair prices for the producers and consumers. The earlier studies revealed that fair price for commodities depend on agricultural marketing system. Such a system is helpful for enhancing rural incomes and increasing agricultural output. The review reveals that farmer's access to markets was hampered by road condition, market infrastructure and unregulated markets. Against this backdrop, this study is carried out to identify and analyze the major challenges faced by the farmers in the agricultural marketing. This study reviews the existing marketing models in practice in the selected regions of Prakasam District in Andhra Pradesh.

The study has an objective to explore the role of middlemen who are responsible for the defects of the existing marketing system. This paper establishes a case for better marketing systems, procedures and models that eliminate superfluous middlemen from the existing

agricultural marketing system in order to get fair prices for the farmers' crop that leads to agriculture towards sustainable growth and development.

## STATEMENT OF THE PROBLEM

Marketing of agriculture can be made effective and sustainable if it is looked at from the collective and integrative efforts of various quarters by addressing farmers, middlemen, researchers and administrators. It is high time we brought out significant strategies in agricultural marketing with innovative and creative approaches to bring fruits of labour to the farmers.

The GDP percentage of Agriculture is mere 14 percent even though it is the backbone of Indian economy and life support for more than 70 percent of the population. The rising input costs and stagnant output, age-old agricultural practices are making agriculture sector less attractive for youth and private investment. More than all, it is the marketing monopoly of greedy intermediary traders that has become a bottleneck in the agriculture sector. The Government effort to reduce the input cost, to increase the output by latest seed varieties, practices and technology are at various stages of implementation and would start giving results in few years. Even after the growth of output, if there is no improvement in the current marketing of agriculture produce, the benefits of farmers would be as same as of now.

Therefore, an effective marketing model, distribution channel for agriculture produce and cost-effective pricing strategies are required to develop the agriculture sector. And the agriculture sector must get support from the government to overcome the problems like credit facilities, transportation, awareness about the market price, storage and warehousing capacity, value added products (jam, pickle etc.) and marketing of the produces.

Thus, this study intends to make an effort towards filling the gap between farmers and general public by eliminating intermediaries in agricultural marketing through the development of best marketing model and enhancing the GDP percentage to meet the requirements of growing population and finally to make the agriculture sector attractive, profitable and sustainable.

## OBJECTIVES OF THE STUDY

- i. To identify and analyze the major challenges faced by farmers in agricultural marketing system

- ii. To review the existing marketing systems and models in practice in the study region
- iii. To examine how efficient market models can promote sustainable agriculture sector growth and development in Andhra Pradesh
- iv. To suggest the scope for reduction or elimination of intermediaries in the agricultural marketing system for suggesting improved marketing model for sustainable agriculture.

## METHODOLOGY OF THE STUDY

The universe of the study is farmers in Andhra Pradesh, the farming community of cultivated land extent between 4 to 12 acres taken as sampling frame. Farmers in the selected region of Prakasam District chosen as sampling unit and simple stratified random sampling method was applied and size of the sample was limited to 250.

**Data Sources:** The data collected from both primary and secondary sources. The primary data was collected personally from farmers in five villages of Racherla Mandal in Prakasam district viz., Gowthavaram, Anumula palli, Racherla, Chollaveedu and Akaveedu through questionnaires, personal interviews, and observation as collection instruments and agricultural officers through personal interview. The secondary data was collected from district handbooks, text books, magazines, newspapers, articles published on agriculture which includes Economic survey 2014-15 and journals like Yojana and Kurukshetra.

**Data Collection Instruments:** In order to overcome the problems of respondents, questionnaire, personal interviews and observation were used as instruments for collection of the data.

**Statistical tools used for analysis:** The primary data have been interpreted with the help of statistical tools like cross tables, correlation and chi-square tests with the help of SPSS.

### Agricultural Marketing Practices in the Study Area: A Review

Agricultural market is a place where agricultural produce is brought and sold. It is narrow and importance is given to place only whereas, agricultural marketing is buying and selling of agricultural produce. The study includes five villages of Racherla Mandal in Prakasam District, viz., Gowthavaram, Anumula palli, Racherla, Chollaveedu and

Akaveedu. From the inception of the produce the farmers are depending majorly on friends and family for usage of the seeds, pesticides, fertilizers and insecticides for the best crops, because their belief is more on them than the agricultural officers. They have been exchanging their resources for the produce which includes bullock's services, agricultural laborers and financial resources. In these villages, various marketing practices are adopted for transportation and distribution of agricultural produce to other locations. These marketing practices vary from crop to crop and village to village. This study represents a clear idea on marketing practices and marketing models adopted by selected villages for each produce to get sustainability in agriculture sector.

**i) Gowthavaram:** Gowthavaram village is located in Racherla Mandal of Prakasam District, Andhra Pradesh. It is under developed village in Racherla Mandal, which is a drought prone area and farming purely based on the seasonal rainfall and to a small extent bore well system. Major crops are Chilly, Cotton, Chena, Tomato, Red gram, Bengal gram, Rice and some vegetables. The transportation facilities are not sufficient or costly for transporting the agriculture produce to other locations like Giddalur, Guntur and Nandyala, farmers have been depending on agricultural marketing agencies at village level, and they are: (a) Landlords; (b) Village Beoparis and (c) Mobile Beoparis.

Gowthavaram is an underdeveloped village, which requires transportation facilities for easy access with the APMCs instead of local markets and has to create awareness on Minimum Support Price (MSP) and other market related information through SMS, T.V and radio and also requires standard marketing model for transporting the agricultural commodities. Very few people are aware about ITC-Echoupal, but they are not involved in contract farming with ITC. Some of the farmers sell their produce in the same village and some other sell in neighboring villages.

**ii) Anumula palli:** Anumula Palli village is located in Racherla Mandal of Prakasam District, Andhra Pradesh. It is under developed village in Racherla Mandal, which is a drought prone area and farming purely based on the seasonal rainfall and bore well system. In this village 60 percent of the farmers are having bore well facilities. The major crops are Cotton, Chilly, Tomato, Red gram, Bengal Gram, Chena and some vegetables. Even though the transportation facilities are medium, the farmers transfer

the agriculture produce directly to the local markets without any involvement of intermediaries and 50 percent of the farmers are depending on the intermediaries for transporting the agriculture produce to other locations like Giddalur, Guntur and Nandyala. Farmers have been depending on agricultural marketing agencies at village level, and they are Landlords, Village Beoparis and Mobile Beoparis.

Very few people aware about ITC-Echoupal and they are involved in contract farming with ITC for cultivating corn crops. They will enter into a forward contract to produce corn crops under a buy-back agreement with an agency engaged in trading or processing. The government should create awareness on Minimum Support Price (MSP) and other market related information through SMS, T.V and radio and also requires standard marketing model for transporting the agricultural commodities.

**iii) Racherla:** Out of 56 Mandal in Prakasam District, Racherla village is one of them in Andhra Pradesh. It is developed village in Racherla Mandal, which is a drought prone area and farming purely based on the seasonal rainfall and very few are depending on the bore well system. The major crops are Cotton, Chilly, Tomato, Red gram, Bengal Gram, Chena and some vegetables. The transportation facilities are good, so the farmers themselves they can transfer the agriculture produce to the nearby market directly without any involvement of intermediaries and 40 percent of the farmers are depending on the intermediaries for transporting the agriculture produce to other locations like Giddalur, Guntur and Nandyala, and some of the farmers have been using agricultural marketing agencies at village level, and they are Landlords, Village Beoparis and Mobile Beoparis.

Racherla village is a developed village and one of the Mandal in Prakasam District, which requires collection center for 31 neighboring villages. Transportation is good, so accessing of the agricultural produce from Racherla to other local markets and locations is easy. The government should create awareness on Minimum Support Price (MSP) and other market related information through SMS, T.V and radio and also requires standard marketing model for transporting the agricultural commodities. Very few people are aware about ITC-Echoupal and they have been adopting contract farming for cultivating corn crops. Agricultural officers are very much interested to create awareness on seeds usage, pesticides, and fertilizer usage for best production. The farmers in Racherla village are

very interested to gain knowledge on agricultural education and they visit agricultural officers whenever required.

**iv) Chollaveedu:** Chollaveedu village is located in Racherla Mandal of Prakasam District, Andhra Pradesh. It is medium developed village in Racherla Mandal, which is a drought prone area and farming purely based on the seasonal rainfall, bore well facilities and drip systems and some of them have been using sprinklers for cultivation. In this village 10 percent of the farmers are having drip and sprinkler facilities, 40 percent of the farmers are having bore well system and the rest of the farmers are depending on the rainfall. The major crops are Cotton, Chilly, Tomato, Red gram, Bengal gram, Chena and some vegetables. Even though the transportation facilities are medium, the farmers can transfer the agriculture produce directly to the local markets without any involvement of intermediaries and 50 percent of the farmers are depending on the intermediaries for transporting the agriculture produce to other locations like Giddalur, Guntur and Nandyala. Farmers have been depending on agricultural marketing agencies at village level, and they are Landlords, Village Beoparis and Mobile Beoparis.

Chollaveedu is an underdeveloped village, which requires transportation facilities for easy access with the APMCs instead of local markets and has to create awareness on Minimum Support Price (MSP) and other market related information through SMS, T.V and radio and also requires standard marketing model for transporting the agricultural commodities. Very few people are aware about ITC-Echoupal and the farmers have been adopting contract farming for cultivating corn crops.

**v) Akaveedu:** Akaveedu village is located in Racherla Mandal of Prakasam District, Andhra Pradesh. It is under developed village in Racherla Mandal, which is a drought prone area and farming purely based on the seasonal rainfall. In this village 20 percent of the farmers are having bore well facilities. The major crops are Cotton, Chilly, Tomato, Red gram, Bengal gram, Chena and some vegetables. The transportation facilities are poor, so to transfer the agriculture produce they have been depending heavily on the intermediaries to other locations like Giddalur, Guntur and Nandyala. Farmers have been depending on agricultural marketing agencies at village level, and they are Landlords, Village Beoparis and Mobile Beoparis.

Akaveedu is an underdeveloped village, which requires transportation facilities for easy access with the APMCs instead of local markets and has to create awareness on Minimum Support Price (MSP) and other market related information through SMS, T.V and radio and also requires standard marketing model for transporting the agricultural commodities. Very few people are aware about ITC-Echoupal and the farmers have been adopting contract farming for cultivating corn crops.

### Marketing Models: A Review

In olden days, the farmers were used subsistence exchange of produce for each other and subsistence barter system they followed for the sustenance relationship between the agricultural laborers and the cultivators. Now a day, this culture exhausted due to abundant commercialization in the minds of people and even for the big land holding cultivators. In the minds of every people; every movement of transportation of the crops purely depending on the commercialization. From the producer to the consumer, involvement of superfluous middlemen in the market for selling the agricultural produce causing unjustifiable price for the farmers and they are not getting fruitful price for the produce. Finally, the producers are losing their hopes on fair price for the produces. The involvement of more intermediaries in the agricultural marketing causes non-availability of fruitful price for the farmers. It should be eliminated from the rural market and all these markets are regulated by the government.

The following are the various marketing models which are useful for the elimination of intermediaries and the farmers themselves they can transfer the agricultural produce without any involvement of intermediaries. These models should be implemented with the PPP mode wherever applicable, so that the farmers will get fair prices for their produces. A brief discussion on the marketing models which are useful for the farmers as follow.

**1. Contract Farming / Contract Marketing:** Contract farming is emerging as an important mode of procurement of raw materials by agri-business firms in India due to the developments in the field of agricultural marketing, changes in food habits and in agricultural technology in the new economic environment. This is an important initiative for reducing transaction costs by establishing farmer-processor linkages in addition to the already existing methods of linking the farmers to the consumers.

Contract farming is a system of farming, wherein farmers grow selected crops under a buy-back agreement with an

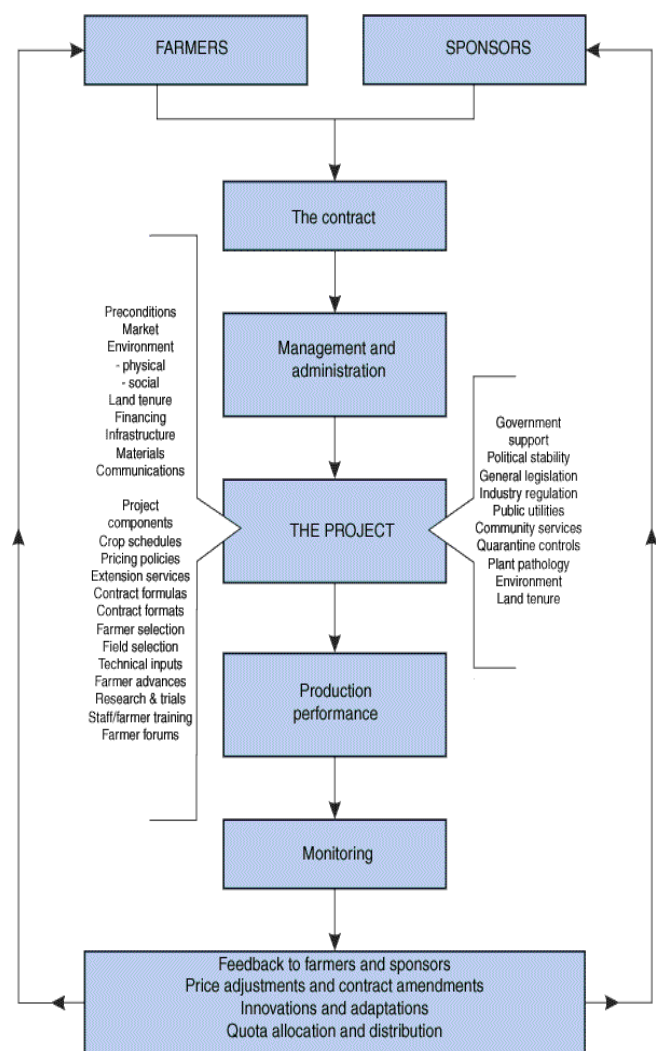
agency engaged in trading or processing. It is a system for the production and supply of agricultural produce under forward contracts between producers and buyers. Contract farming ensures adequate on time supply of quality produce, maintenance of price stability and adoption of best agricultural practices. Industrial houses like Reliance, Bharati, United Breweries, ITC, HUL and Tata are entering the agriculture sector scene in an effort to corporatize agriculture and remove the uncertainties associated with agriculture.

In contract farming, companies or organizations engaged in processing and marketing of agricultural commodities are entering into contracts with the farmers. They provide inputs to the farmers and buy back the product at a rate specified in advance.

The type of inputs and services are normally provided by the company to the farmers are (a) Seeds of the variety they need for processing/marketing, ( b) Guidelines to grow the crops, pesticides which do not result in residual toxicity, (c) Fertilizers/ hormones required for the crop, extension services, and (d) Other material if not locally available.

The contract may be entered into by parties anytime from the start of the sowing or planting to the harvesting, processing, packaging and marketing stage of the crop. Normally, the contract is entered before the start of the sowing or planting because the buyer can then stipulate the conditions of cultivation, use of the seed variety needed by them, use of pesticides and insecticides, and requirement of on farm grading, sorting, packaging and processing. The buyer of the product generally keeps the right to monitor the crop at every stage of its growth.

**ITC e-choupal:** E-choupal in Hindi means “village meeting place” and launched in June 2000. E-choupal has already become the largest initiative among all Internet-based inventions in rural India. E-choupal services today reach out to more than 4 million farmers growing a range of crops – soya beans, 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. The project e-choupal is a unique initiative for carrying out agricultural commodity trading in a number of locations. ITC has set up e-choupal which is an internet kiosk located in the house of an influential person known as Sanchalak who appointed by the company. The Sanchalak acts as the interface between the farmer and the computer terminal.



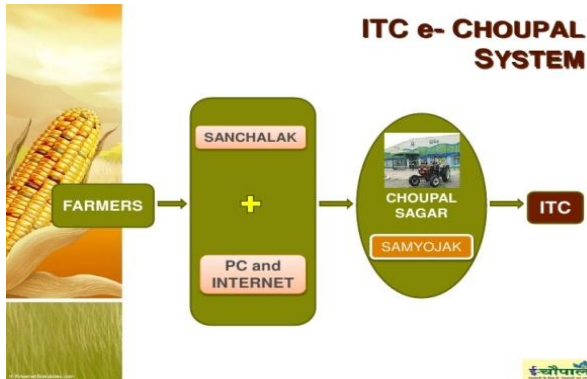
**Figure 1. Contract Farming**

(Source: <http://www.fao.org/docrep/004/y0937e/y0937e02.htm>)

ITC in order to overcome the problem of power availability in rural India for computer access, they provide battery based UPS back up. ITC has set up e-choupal in the villages which are within a radius of 15 k. m from town so that the technician can provide system support and maintenance of e-choupal. The farmer brings a sample of his produce to e-choupal. The Sanchalak inspects the produce and based on his assessment of the quality, gives the farmer a conditional quote. If the farmer chooses to sell his crops to ITC, the sanchalak gives him a note containing his name, village, particulars about quality test (foreign matter and moisture content) approximate quantity and conditional price. The farmer takes the note from the sanchalak and proceeds with his crop to the nearest ITC procurement Centre. At the ITC center, the

samples are tested by a chemist. After inspection and weighing are completed, the farmer collects his payment in full at payment counter. The farmer is also reimbursed transportation cost.

ITC has also incorporated a local commission agent known as Samyojak (collaborator) as the provider of



logistics support. Samyojak handles labor at the Centre, bagging, storage of the produce and transportation from purchase center to processing center. Both ITC and the farmers make a neat saving by by-passing the middlemen in the mandi. For instance, the farmer saves as much as Rs. 250 per tonne on soya been because he does not incur costs such as baggaging, transportation, loading and unloading, to haul his goods to the mandi. The company, on the other hand, saves over Rs. 200 a tonne by avoiding transporting the produce from the mandi to the company outlet even after reimbursing the farmer for transport and the sanchalak, the local-level entrepreneur, also makes money by getting a 0.5 percent commission on the total transaction made through this kiosk.

The kiosk can be used for reverse trading also for companies to sell products and services needed by farmers directly and ITC is already putting together a strategy to leverage the infrastructure to market and distribute goods and services that farmers require.

**Cooperative Marketing:** In our country, a majority of the farming community continues to be small and marginal farmers. They are forced to sell the produce at a low price to meet their cultivation and house hold expenses and repay the loan taken from moneylenders. The farmers are disorganized at village level, have low bargaining power and are at a disadvantage against the traders. Agricultural marketing has to meet: (a) A fair return for investing labor, money and materials in farming operations to the farmer, (b) The consumer pays a fair price for the produce he buys, and (c) Eliminating the chain of middlemen between producers and the ultimate consumers.

Selling the produce through marketing co-operative can change this situation. Therefore, co-operative marketing society is an organization formed by the producers for the producers that aims at eliminating the chain of middlemen operating between producers and the ultimate consumer and thus securing the maximum price for their produce. It is a collective and institutional form of rural marketing.

Cooperative marketing is the system by which a group of farmers join together to carry on some or all the processes involved in bringing goods from the producer to the consumer. According to the Reserve Bank of India (RBI), "A marketing society is a co-operative association of cultivators formed primarily for the purpose of helping the members to market their produce more profitably than is possible through private trade."

Objectives of Co-operative marketing: (1) To sell the members' product directly in the best market, (2) To help the members to produce the best products and those are most in demand, (3) To grade the produce in such a way that best price is obtained for all qualities, to the advantage of the grower, (4) To handle the crop cleanly without damage or waste in a way that it will increase, not decrease its value, (5) To provide for fair trading practice and to use its influence against rings and manipulations of prices, (6) By advances on fair terms, to help the member to finance himself while he is waiting for his crop to ripen and (7) To give fair weight and to give a farmer better understanding of all stages in marketing process.

Functions of marketing cooperatives are, marketing of the produce, distribution of fertilizers, distribution of sales and agricultural machinery, grading and pooling of produce, processing activities, provision of storage facilities, provision of financial assistance, foreign and inter-state trade and activities like, elimination of long chain of middlemen and connect to the producer with the consumer, reduces wastes and stands for fair trading practices, teaches business methods to the farmers and serves them as agencies for supplying market information and marketing societies stabilize prices over long periods by adjusting the supply according to market demand.

**Public Distribution System (PDS):** The Public Distribution System (PDS) evolved as a system of management of scarcity and for distribution of food grains at affordable prices. Over the years, PDS has become an important part of Government's policy for management of food economy in the country. PDS is supplemental in nature and is not intended to make available the entire requirement of any of the commodities distributed under it to a household or a section of the society. PDS is operated



under the joint responsibility of the Central and the State Governments. The Central Government, through Food Corporation of India (FCI), has assumed the responsibility for procurement, storage, transportation and bulk allocation of food grains to the State Governments. The operational responsibility including allocation within State, identification of eligible families, issue of Ration Cards and supervision of the functioning of Fair Price Shops (FPSs) etc., rest with the State Governments. Under the PDS, presently the commodities namely wheat, rice, sugar and kerosene are being allocated to the States/UTs for distribution. Some States/UTs also distribute additional items of mass consumption through the PDS outlets such as pulses, edible oils, iodized salt, spices, etc.

All these models are useful for the benefit of farmers and to eliminate intermediaries from agricultural marketing. If these models are implemented successfully and effectively by the central and state governments' involvement, the farmers will overcome the challenges which they have been facing and the agricultural marketing will become viable, economical and sustainable for long time.

## ANALYSIS OF FARMERS' SURVEY RESULTS

### I. Demographic Characteristics of Farmers

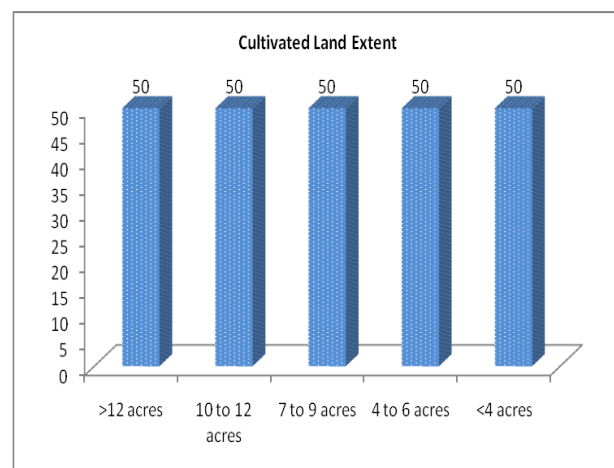
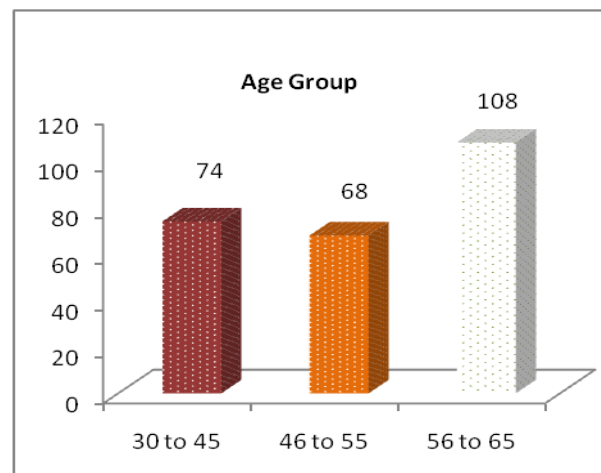
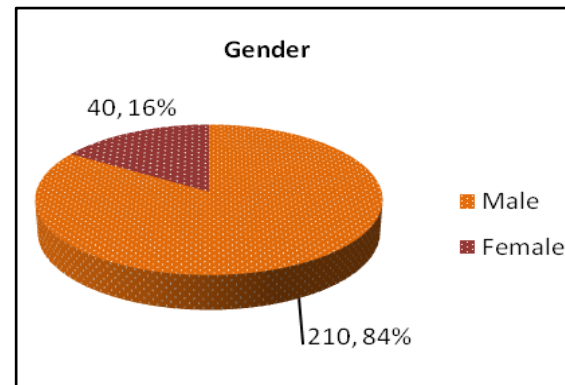
Distribution of Gender, Age and Cultivated Land extent: Proportion of the sample data is presented in the Table 1 which shows the distribution of the gender, age and Cultivated Land extent in the total samples of 250.

**Table 1. Demographic Characteristic of Respondents**

	Categories	Frequency	Percentage
<b>Gender</b>	Male	210	84.0
	Female	40	16.0
<b>Age Group</b>	30 to 45	74	29.6
	46 to 55	68	27.2
	56 to 65	108	43.2
<b>Cultivated Land Extent</b>	>12 acres	50	20
	10 to 12 acres	50	20
	7 to 9 acres	50	20
	4 to 6 acres	50	20
	<4 acres	50	20
	<b>Total</b>	<b>250</b>	<b>100</b>

The data presented in the above table indicates that sample is dominated by male respondent as it is indicated by 84 percent respondents in the sample. Age analysis of respondents indicates that most of the respondents fall in the age group of 56 to 65 years as it is indicated by 43

percent respondents in the sample. The information related to Cultivated Land extent of the respondents indicates that all groups are equal i.e., 50 samples for each cultivated land extent from greater than 12 acres to less than 4 acres, altogether 250 samples.



**Figure 2. Diagram representation for Gender, Age and Cultivated Land Extent**

**II. Identification of Major Challenges in Agricultural Produce**

**MARKETING:**

**Table 2. Rotated Component Matrix**

Variables	Component		
	1	2	3
Lack of rain fall	.613		
Seeds failure		.872	
Pesticides, Fertilizers and insecticides		.713	
Lack of irrigation facility	.333		
Lack of machinery/ technology		.555	
Inadequate credit facilities	.766		
Lack of market information	.897		
Lack of proper education	.716		
Transportation		.564	
Intermediaries	.726		
Rural Communication	.711		
Market information	.791		
Status of village transportation facility			.508
Status of storage facility in the district			.852
Opinion on warehousing facility in the district			.822
Awareness on market news regarding the price of agricultural produce		.571	
Transportation and Distribution		.605	
Communication	.743		
Storage and warehousing		.645	
Inadequate credit facilities	.701		
Intermediaries	.678		
Low market intelligence	.850		
Opinion on current distribution of agricultural produce from one place to other			.525

**Inference**

From the above analysis it can be observed that, lack of rain fall, lack of irrigation facility, inadequate credit facilities, lack of market information, lack of proper education are the challenges which are heavily influencing on the production of agriculture produce. Intermediaries, rural communication, market information, communication and low market intelligence are the challenges which are medially influencing on the agricultural produce marketing and seeds failure, pesticides, fertilizers and insecticides failure, lack of machinery or technology, transportation, awareness on market news regarding the price of the produce, transportation and distribution and storage and ware housing are the challenges which are

influencing less effective on the agriculture production and agricultural marketing.

**III. Existing Marketing Models and Channels in Practice**

**Table 3. Rotated Component Matrix**

Variables	Component		
	1	2	3
Opinion on Direct Marketing (DM) and Public Distribution System (PDS)		.965	
Rating on Public Distribution System (PDS) and Direct Marketing (DM)		-.967	
Opinion on Minimum Support Price (MSP) for each produce			.998
Opinion on government support for agriculture sector growth	.997		
Opinion on government support for agricultural produce marketing	.997		

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 a. Rotation converged in 4 iterations.  
 b. Only cases for which Cultivated Land extent = 4 to 6 acres are used in the analysis phase.

**Inference**

From the table it can be observed that, the component one variables are highly influencing on growth of the farmers' viz., government support for growth of the agriculture sector and agricultural produce marketing. The component two variables are medium effective for growth of the farmers viz., direct marketing and public distribution systems and the third component variables are less effective on the agriculture produce marketing viz., minimum support price for each produce.

From the above analysis it is observed that, there is an impact on the agricultural produce marketing through direct marketing and public distribution system for the farmers who are cultivating land between 4 to 6 acres very effectively. They are not using these models for transportation of agriculture produce, the farmers lack awareness on Minimum Support Price (MSP) for each produce and the supporting measures from the government is not adequate and not sufficient for the agricultural produce marketing.

**Table 4. Cultivated Land Extent and Type of Marketing Model Aware for Transportation of Agriculture Produce**

Cultivated Land extent	Type of marketing model aware for transportation of agriculture produce		Total
	Direct marketing	Two-level channel	
> 12 acres	19	31	50
10 to 12 acres	19	31	50
7 to 9 acres	16	34	50
4 to 6 acres	14	36	50
<4 acres	16	34	50
<b>Total</b>	<b>84</b>	<b>166</b>	<b>250</b>

**Inference**

From the table it is observed that, the respondents who are cultivating greater than 12 acres of land i.e., 31 out of 50, between 10 to 12 acres of land i.e., 31 out of 50, between 7 to 9 acres of land i.e., 34 out of 50, between 4 to 6 acres of land i.e., 36 out of 50 and less than 4 acres of land 34 out of 50 are well aware of two-level channel for transportation of agriculture produce.

At the outset, the majority of the respondents i.e., 166 out of 250 are aware of two-level channel for transportation of agriculture produce and 84 out of 250 respondents are aware of direct marketing for transportation of agriculture produce. The marketing models like E-Choupal, PDS, Contract farming and cooperative marketing do not exist in these five villages. So, the awareness should be increased in rural villages by government and private organizations those who are involved such type of marketing models for agriculture produce.

**Table 5. Cultivated Land Extent and Type of Distribution Channel Adopted for Transportation of Agriculture Produce from one Place to other**

Cultivated Land extent	Type of distribution channel is adopted for transportation of agriculture produce from one place to other			Total
	Direct Marketing or Zero-level channel	One-level channel	Two-level channel	
> 12 acres	11	29	10	50
10 to 12 acres	10	34	6	50
7 to 9 acres	10	28	12	50
4 to 6 acres	6	33	11	50
<4 acres	11	29	10	50
<b>Total</b>	<b>48</b>	<b>153</b>	<b>49</b>	<b>250</b>

**Inference**

From the table it is observed that, the respondents who are cultivating land greater than 12 acres i.e., 29 out of 50, between 10 to 12 acres i.e., 34 out of 50, between 7 to 9 acres i.e., 28 out of 50, between 4 to 6 acres i.e., 33 out of 50 and less than 4 acres i.e., 29 out of 50 are adopted one-level channel for transportation of agriculture produce from one place to another. At the outset, the majority of the respondents i.e., 153 out of 250 are adopted one-level channel for transportation of agriculture produce from one place to another. In order to overcome the problem of superfluous middlemen in the agricultural marketing, the farmers are transporting their produce through one-level channel, so that they will get fair price for their produce.

**Table 6. Crosstab for Cultivated Land Extent and Awareness on the Process of Marketing or Distribution of Agriculture Produce**

Cultivated Land extent		Awareness on the process of marketing or distribution of agriculture produce		Total
		Yes	No	
>12 acres	Count	43	7	50
	Expected Count	35.2	14.8	50
10 to 12 acres	Count	38	12	50
	Expected Count	35.2	14.8	50
7 to 9 acres	Count	35	15	50
	Expected Count	35.2	14.8	50
4 to 6 acres	Count	34	16	50
	Expected Count	35.2	14.8	50
<4 acres	Count	26	24	50
	Expected Count	35.2	14.8	50
<b>Total</b>	<b>Count</b>	<b>176</b>	<b>74</b>	<b>250</b>
	<b>Expected Count</b>	<b>176</b>	<b>74</b>	<b>250</b>

From the table it is observed that, the respondents who are cultivating land greater than 12 acres i.e., 43 out of 50, between 10 to 12 acres i.e., 38 out of 50, between 7 to 9 acres i.e., 35 out of 50, between 4 to 6 acres i.e., 34 out of 50, less than 4 acres i.e., 26 out of 50 are aware on the process of marketing or distribution of agriculture produce. But the expected number of respondents are in each category are 35.2 basing on the past experience. In the case of respondents who are cultivating greater than 12 acres and 10 to 12 acres, the observed respondents are less than the expected respondents, and in the remaining cases

the observed respondents are greater than the expected respondents who are aware of process of marketing or distribution of agriculture produce.

At the outset, the majority of the respondents i.e., 176 out of 250 are aware of marketing or distribution of agriculture produce. Since the farmers were well aware about the process of marketing, this will help for the farmers to transfer the produce from one place to other without involvement of intermediaries. This could be useful for the agriculture sector and agricultural marketing for its sustainability.

**Table 7. Cross Tabulation for Cultivated Land Extent of Land Cultivated and Knowledge in the Process of Marketing**

			Knowledge in the process of Marketing			Total	
			Through Media (electronic and print media)	Through Agricultural officers	Through friends and family		
Cultivated Land extent	>12 acres	Count	8	2	33	43	
		Expected Count	9.5	1.5	32	43	
	10 to 12 acres	Count	10	1	27	38	
		Expected Count	8.4	1.3	28.3	38	
	7 to 9 acres	Count	12	1	22	35	
		Expected Count	7.8	1.2	26.1	35	
	4 to 6 acres	Count	6	2	26	34	
		Expected Count	7.5	1.2	25.3	34	
	<4 acres	Count	3	0	23	26	
		Expected Count	5.8	0.9	19.4	26	
	Total		Count	39	6	131	176
			Expected Count	39	6	131	176

From the table, it can be observed that, the respondents who are cultivating land greater than 12 acres are expressed as 8 out of 43 through media, 2 out of 43 through agricultural officers' and 33 out of 43 through friends and family, the respondents who are cultivating between 10 to 12 acres opined as 10 out of 38 through media, 1 out of 38 through agricultural officers' and 27 out of 38 through friends and family, the respondents who are cultivating between 7 to 9 acres are expressed as 12 out of 35 through media, 1 out of 35 through agricultural officers' and 22 out of 35 through friends and family, the respondents who are cultivating between 4 to 6 acres are opined as 6 out of 34 through media, 2 out of 34 through agricultural officers and 26 out of 34 through friends and

family and the respondents who are cultivating less than 4 acres are opined as 3 out of 26 through media, 23 out of 26 through friends and family, they know the process of marketing through the above channels. But the observed information is not similar to expected one.

At the outset the majority of the respondents who knows the process of marketing through friends and family i.e., 131 out of 176. Hence, the farmers are depending more on their friends and family rather than media which includes electronic and print media and agricultural officers. It is suggested to increase the awareness on the process of marketing or distribution of agriculture produce through media and agricultural marketing officers to all the farmers for their sustainability.

**Table 8. Cross Tabulation for Cultivated Land Extent and Awareness on E-Choupal**

			Do you have awareness on E-CHOUPAL		Total
			Yes	No	
<b>Cultivated Land extent</b>	>12 acres	Count	20	30	50
		Expected Count	12.8	37.2	50.0
	10 to 12 acres	Count	12	38	50
		Expected Count	12.8	37.2	50.0
	7 to 9 acres	Count	13	37	50
		Expected Count	12.8	37.2	50.0
	4 to 6 acres	Count	11	39	50
		Expected Count	12.8	37.2	50.0
	<4 acres	Count	8	42	50
		Expected Count	12.8	37.2	50.0
<b>Total</b>		<b>Count</b>	<b>64</b>	<b>186</b>	<b>250</b>
		<b>Expected Count</b>	<b>64.0</b>	<b>186.0</b>	<b>250.0</b>

From the table it is observed that, the respondents who are cultivating the land greater than 12 acres i.e., 20 out of 50, between 10 to 12 acres i.e., 12 out of 50, between 7 to 9 acres i.e., 13 out of 50, between 4 to 6 acres i.e., 11 out of 50 and less than 4 acres i.e., 8 out of 50 are aware of E-Choupal. The respondents who are cultivating the land greater than 12 acres i.e., 30 out of 50, between 10 to 12 acres i.e., 38 out of 50, between 7 to 9 acres i.e., 37 out of 50, between 4 to 6 acres i.e., 39 out of 50 and less than 4 acres i.e., 42 out of 50 are not aware of E-CHOUPAL. The expected numbers of respondents who are not aware of E-Choupal are 37.2.

At the outset, the majority of the respondents i.e., 186 out of 250 respondents are not aware of E-Choupal. Hence, the awareness has to improve on E-Choupal through agricultural officers and ITC officers and the majority of the respondents who are cultivating land less than 4 acres i.e., 42 out of 50 are not aware of E-Choupal. E-choupal is a best marketing model for the survival of the farmers from the marketing. Hence, the awareness should be increased with the help of media and agri-business organization employees for its sustainability.

**Table 9. Cultivated Land Extent and Type of Distribution Channel - Best Suitable for Sustainable Agricultural Marketing**

		Type of distribution channel is best suitable for sustainable agricultural marketing			Total
		Zero-level channel	One-level channel	Two-level channel	
<b>Cultivated Land extent</b>	>12 acres	31	19	0	50
	10 to 12 acres	25	24	1	50
	7 to 9 acres	26	23	1	50
	4 to 6 acres	23	27	0	50
	<4 acres	22	28	0	50
<b>Total</b>		<b>127</b>	<b>121</b>	<b>2</b>	<b>250</b>

**Inference**

From the above table it is observed that, the respondents who are cultivating greater than 12 acres of land i.e., 31 out of 50, between 10 to 12 acres i.e., 25 out of 50, between 7 to 9 acres i.e., 26 out of 50, between 4 to 6 acres i.e., 23 out of 50 and less than 4 acres i.e., 22 out of

50 are expressed as zero-level channel is best suitable for sustainable agricultural marketing and the respondents who are cultivating greater than 12 acres of land i.e., 19 out of 50, between 10 to 12 acres i.e., 24 out of 50, between 7 to 9 acres 23 out of 50, between 4 to 6 acres i.e., 27 out of 50 and less than 4 acres i.e., 28 out of 50 are

responded as one-level channel is best suitable for sustainable agricultural marketing.

At the outset, the majority of the respondents i.e., 127 out of 250 are expressed as zero-level channel is best suitable for sustainable agricultural marketing and 121 out 250 respondents are expressed as one-level channel is best suitable for sustainable agricultural marketing.

**Table 10. Cultivated Land Extent and Awareness of the Schemes for Sustainable Agriculture Marketing Introduced by the Government**

Cultivated Land extent	Crop Loan	MSP	PDS	Direct Marketing	FSS	Raitu Bazaar
>12 acres	50	22	17	22	8	42
10 to 12 acres	50	21	14	17	2	41
7 to 9 acres	50	28	16	12	0	40
4 to 6 acres	50	25	21	17	4	38
<4 acres	50	21	16	16	0	40
<b>Total</b>	<b>250</b>	<b>117</b>	<b>84</b>	<b>84</b>	<b>14</b>	<b>201</b>

**Inference**

From the table it is observed that, the respondents i.e., 250 who are cultivating land greater than 12 acres to less than 4 acres are aware on crop loans which are provided by the public and private banks, the respondents who are cultivating land greater than 12 acres i.e., 42 out of 50, between 10 to 12 acres i.e., 41 out of 50, between 7 to 9 acres i.e., 40 out of 50, between 4 to 6 acres i.e., 38 out of 50 and less than 4 acres i.e., 40 out of 50 are well aware about Raitu bazaar which is introduced by the government for the survival of the farmers from intermediaries and for sustainable agricultural marketing.

At the outset, the majority of the respondents i.e., 250 out of 250 are well aware about crop loans and the majority of the respondents i.e., 201 out of 250 are well aware about Raitu Bazaar which were introduced by the government for survival of the farmer and for sustainable agricultural marketing.

**IV. Reduction of Intermediaries in Agricultural Marketing**

**Component Matrix**

The element of the loading matrix or the coefficients of the factor model are displayed in the Component Matrix table. In this table all the empty cells correspond to factor

loading that are less than 0.1. Factor loadings of this order are usually neglected. From this table, it noted that, there are some values that are loaded on more than one factor. This complicates the problem of identification of factors. This necessitates the rotation of the factors for the purpose of naming the factor.

**Table 11. Component Matrix**

Variables	Component		
	1	2	3
Opinion on the role of intermediaries in the agriculture produce marketing	.805		
Opinion on the requirement of intermediaries in marketing of agriculture produce	.775		
Elimination of intermediaries	.641		
Reduction in multiplicity of market charges			.689
Improvement in storage and warehousing facilities		.902	
Improvement in transportation facilities		.893	
Provision of marketing news	.768		
Opinion on requirement of standard marketing models for sustainable growth in agriculture sector			.674
Extraction Method: Principal Component Analysis.			
a. 3 components extracted.			
b. Only cases for which Cultivated Land extent are used in the analysis phase.			

**Inference**

From the above table, it is observed that the component one variables are more effective on agriculture produce marketing viz., the role of intermediaries in the agriculture produce marketing, the requirement of intermediaries in the agriculture produce marketing and the elimination of the intermediaries. The second component variables are medium effective on agriculture produce marketing viz., improvement in storage and warehousing facilities and transportation facilities and the third component variables are less effective by the farmers viz., reduction in multiplicity of market charges and the requirement of standard marketing models for sustainable growth in agriculture sector.

From the above analysis, it is observed that the role of intermediaries in the agriculture produce marketing is very effectively impacting on the agricultural marketing and the

farmers are opined that, there is no requirement of intermediaries in agriculture produce marketing and the elimination of intermediaries is very much required for sustainability of the farmers. Most of the farmers required standard marketing models which are suitable to market their agriculture produce from one place to other. The farmers are opined that improvement in storage and warehousing facilities, transportation facilities and reduction in multiplicity of market charges are essential for the sustainability of agricultural produce marketing and regulated markets should be developed.

## MAJOR FINDINGS OF THE STUDY

1. Lack of rain fall, lack of irrigation facilities, inadequate credit facilities, lack of market information and lack of proper education are highly influencing negatively on the production of agriculture produce.
2. Intermediaries, rural communication, market information and low market intelligence are effectively influencing on the agricultural produce marketing and Seeds failure, pesticides, fertilizers and insecticides failure, lack of machinery or technology, transportation, awareness on market news regarding the price of the produce, transportation and distribution and storage and warehousing are the variables which are influencing on the agriculture production and agricultural marketing.
3. The farmers are not satisfied with the warehousing facilities in the district and it will impact heavily on strengthening of agricultural economy. Direct marketing and Public Distribution System are having very much impact on the agricultural marketing and the farmers are not interested to visit agricultural officers on problems related to production and farmers lack awareness on Minimum Support Price (MSP) for each produce and the supporting measures from the government is not adequate for the agricultural produce marketing.
4. The majority of the respondents i.e., 166 out of 250 are aware of two-level channel for transportation of agriculture produce and 84 out of 250 respondents are aware of direct marketing for transportation of agriculture produce and the marketing models like E-Choupal, PDS and cooperative marketing do not exist in these five villages for their agricultural produce marketing practice.
5. The majority of the respondents i.e., 153 out of 250 are adopted one-level channel for transportation of agriculture produce from one place to another and majority of the respondents i.e., 176 out of 250 are aware of marketing or distribution of agriculture produce from one place to other and 74 out of 250 respondents are not aware of marketing or distribution of agriculture produce.
6. The majority of the respondents i.e., 131 out of 176 who knows the process of marketing or distribution of agriculture produce through friends and family, 39 out of 176 are aware the process of marketing through media which includes electronic and print media and 6 out of 176 are aware the process of marketing through agricultural officers.
7. The majority of the respondents i.e., 127 out of 250 are expressed as zero-level channel is best suitable for sustainable agricultural marketing and 121 out of 250 respondents are expressed as one-level channel is best suitable for sustainable agricultural marketing.
8. All the respondents i.e., 250 out of 250 are well aware about crop loans and the majority of the respondents i.e., 201 out of 250 are well aware about Raitu Bazaar which is introduced by the government for survival of the farmers and for sustainable agricultural marketing.
9. The role of intermediaries in the agriculture produce marketing is very effective, there is no requirement of intermediaries in agriculture produce marketing and the elimination of intermediaries is very much required for sustainability of the farmers and the farmers are required standard marketing models which are suitable to market their agriculture produce from one place to other.
10. Improvement in storage and warehousing facilities and transportation facilities are essential for the sustainability of agricultural produce marketing and reduction in multiplicity of market charges is also very essential for the agricultural produce through regulated markets.

## MEASURES TO OVERCOME THE CHALLENGES

The measures for improvement of agricultural marketing will help to overcome the challenges in agricultural produce marketing, through these measures the agricultural marketing will become viable and fruitful for both the farmers and economy. Following measures can be adopted to improve agricultural marketing: (1) Improved Transportation Facilities, (2) Increase in the Credit Facilities, (3) Increase in Storage Facility, (4) Market Reforms, (5) New Markets, (6) Cold Storage, (7) Market Information, (8) Grading of Product and (9) Marketing Research.

All the above measures are useful to overcome the challenges being faced by the farmers in agricultural marketing. If the above measures are implemented successfully, the farmers and agricultural economy may sustain for longer periods. The following are the suggestions given to farmers, agricultural officers and government to strengthen agriculture sector.

### SUGGESTIONS TO THE FARMERS

1. It is suggested that the farmers should be thorough with the market prices through electronic media and print media so that they can communicate with the market people and the farmers have to visit agricultural officers frequently to get the information on usage of seeds, fertilizers and insecticides for the best crops and for solving various problems in the production.
2. The farmers should pay the crop loans in time, so that the bankers will give more loans for the production with trust and the farmers should use sprinklers, drip systems and machinery or technology for production with the help of government subsidy.
3. The farmers should establish "Farmers Societies or Unions" to solve the problems related to production, marketing and distribution and to get all the facilities from the government time to time.

### SUGGESTIONS TO THE AGRICULTURAL OFFICERS

1. The agricultural officers should create awareness on "Farmers' education" and usage of the best seeds,

fertilizers and insecticides and machinery or technology for the production in easy way.

2. The agricultural marketing officers should create awareness on the process of marketing of agriculture produce to all the farmers and they should give the information on market prices and they should create awareness on best marketing channel for transportation of the agriculture produce and usage of the best marketing model for survival of the farmers.
3. The agricultural marketing officers should take an initiation to procure the agriculture produce from the farmers directly by facilitating transportation services to the rural villages so that intermediaries are eliminated from the marketing.

### SUGGESTIONS TO THE GOVERNMENT

1. The government should plan and allocate adequate resources to provide irrigation facilities for under developed villages and government should provide credit facilities for the crop production and in deserving case the crop loan amount should be increased. And also the government should design and introduce more innovative courses to attract and retain the younger generation in the agriculture sector to make it sustainable in the long-run.
2. The government need to create awareness on the various welfare schemes aimed at providing agricultural inputs at subsidized rates to the farming community for purchasing sprinklers, drip systems and machinery and modern technology for the crop production and the government should initiate steps to provide market information through media which includes both electronic and print media and also through agricultural officers.
3. The government should provide adequate crop insurance, storage and warehousing facilities in the region to overcome the shortage of these basic facilities for minimization of wastages of the agricultural produce and stabilization of prices and also the government should create awareness on Minimum Support Price (MSP) for each produce through electronic and print media that has reach and popularity in the rural areas to ensure fair price and contain middlemen exploitation.



4. More Procurement centers should be established at a Mandal level for collection of agriculture produce; from there it should be transferred to the agricultural market committees where in regulated market procedures should be strictly implemented and also the government should invite more private companies for partnership (PPP Mode) in the development of agricultural economy through contract farming, e-choupal and cooperative marketing. These models will certainly help the farmers to sustain in agriculture and develop economy.

## CONCLUSION

The agriculture sector needs well-functioning markets to drive growth, employment and economic prosperity in rural areas of India. In order to provide dynamism and efficiency into the marketing system, large investments are required for the development of post-harvest and cold-chain infrastructure nearer to the farmers' field. A major portion of this investment is expected from the private sector, for which an appropriate regulatory and policy environment is necessary as it strengthens Indian agriculture. This policy must address not only farm production (farmers) but also processing, marketing, trading and distribution. Through this method the farmers can be linked to agricultural markets. In this endeavor, both marketing and rural credit systems are extremely important.

Indian agricultural marketing and rural credit systems have undergone several changes during the last decade. Marketing and institutional credit systems have always remained critical for agricultural development. Their role has been enhanced in the liberalized economic environment. By creating awareness through electronic media and print media on market news related to Minimum Support Price, demand and supply of agricultural produce, the farmers can be protected from the clutches of the intermediaries. Marketing models like e-choupal, contract farming, cooperative marketing and PDS provide for the establishment of private markets/yards, direct purchase centres, consumers/farmers' markets for direct sale through which superfluous middlemen's can be eliminated from the market and farmers will get fair price for their crops. The government should promote Public Private Partnership (PPP) in the management and development of agricultural markets in India. By implementing all the above mentioned reforms, the

challenges being faced by the farmers can be handled successfully for sustainable growth and development in agriculture.

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