

Marketing of Agroproducts: Problems and Prospects

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Abstract

Purpose

The growth of Indian economy is highly dependent on the growth of Agriculture Sector. The current NDA lead Govt. is setting target to double the income of farmers within a targeted period. The successful achievement of target depends on successful elimination of problems associated with agriculture sector. On the above backdrop the current study identifies most important variable affecting agricultural marketing as well as tries to understand the perception farmers on different aspects of agricultural marketing.

Design/Methodology/Approach

The data are collected from 514 farmers spread over 4 blocks of 4 different district of Odisha. Convenient as well as direct personal interview method was followed to collect the questionnaire. A structured close ended questionnaire was designed for the survey. Descriptive as well as inferential statistics were used to manipulate the data to arrive at any conclusion.

Findings

Through descriptive analysis, the study clearly demonstrated that the farmers give importance on variables related to financing the activity. Also the formers admitted that they are using pesticides and fertilizers more than needed.

Research Limitations

This research has been only confined to four blocks from four different districts Odisha and the sample size is only 514.

Originality/Value

It provides insights into the actual need of the farmer and problems faced by them.

Keywords: Agro-Products, Agro-Production, Agricultural Marketing, Farmers.

Introduction

Agriculture is the world's oldest profession which is the main source of sustenance of life for human population. However, the Agriculture Sector still continues to be the mainstay of livelihood for human civilization. Growth of the agriculture is important not only for ensuing food security and reduction of poverty, but also sustaining the growth of rest of the economy. The aforesaid facts are apt for states like Odisha where more 60% people earn their livelihood through agriculture and allied activities.

India is experiencing a phenomenal rapid growth in agri-infrastructure. The envisaged infrastructure expenditure in the Eleventh Plan has been 20 lakh crore which is 2–3 times more than the expenditure recorded in the Tenth Plan. Similarly, investment in agricultural marketing infrastructure was estimated to the tune of Rs. 62043 crore for the Eleventh Plan. The current momentum in infrastructure spending is to be stepped up further to ensure India's vision to emerge as agricultural and horticultural advanced country (Astrurker and Deole, 1985). If Indian agriculture has to surface globally competitive, more investment in infrastructure is needed that can promote efficiency by reducing transaction costs and market risks. The prevalence of high levy charges in regulated markets also contributed to the sale of products by farmers at lower prices. It has been estimated, the farm-gate prices for vegetables and fruits range between 20–30 per cent of the eventual retail prices in India. In developed countries, such as the USA, the UK and Japan, the farm-gate prices for such products range between 40–55 per cent of retail prices (Mohan, 2002). In order to gauge the capability of agricultural marketing infrastructure in the country, it is imperative to estimate the marketed surplus. Generally, there is a positive correlation between production and marketed surplus. In the past 30 years,

while the production of food grains and non-food grains has approximately doubled, the production of vegetables, fruits, flowers and spices has risen even faster in response to the changing consumption pattern of the population. According to an estimate, the production of potatoes has multiplied by 12 times over the past three decades (Bhatt, 1988; Mohan, 2002). Hence there is an urgent need to develop rural periodic markets in a phased manner with necessary infrastructural amenities to have a strong grass-root level link in the marketing chain. The investment requirement for developing the market places was estimated at 2,146 crore. There is also a strong need for developing specialised markets for fruits and vegetables, flowers, cattle, etc. It has been assessed that there are at least 241 such places in the country where fruits and vegetables markets could be developed. The investment requirement for these markets was estimated to be around Rs. 970 crore. Besides, there is an urgent need to turn these markets into growth centres of farming community. Keeping these facts in view, an attempt has been made to examine the existing availability of different agricultural marketing infrastructure and its adequacy for marketing of fruits and vegetables in the study area.

Review of Literature

Mishra, (2015), concluded that the presence of better marketing infrastructure supports the performance of marketing functions as well as better price fixation of agro-products. Better marketing infrastructures have an impact on choice of technology, cost of transportation income distribution in favour of small and marginal farmers as well as necessary for the overall economic development. Further, he concluded that marketing infrastructures play a crucial role in fostering and sustaining the tempo of rural and economic development.

Bojnec, (2006), focusing marketing on agro- food chains and agro- food consumer prices, concluded that after joining EU membership, the real agro- food consumer prices have largely downward adjusted in Slovenian. The factors that have impact on Slovenian market structure are change in policy, presence of supermarkets and hypermarkets. In agro-product marketing the supermarkets and hypermarkets have positive impact on market structure. It is able to squeeze structures in consumer prices, including for farmers, processors and marketing margins for main agro- food staples.

Negi, & Anand, (2017), in their research article identified miss-management in supply chain of fresh agro-products as major cause of the food problem. The post harvest wastage is the major concern for agro supply chain industry. Further they concluded that India is the world's second-largest fresh agro producer and is also one of the biggest food wasters in the world.

Timiras (2009), concluded that all the strategic orientations aim to insure the safety and security of the food products, to diversify the range food products offered by the producer and to

increase the concerns for the protection of the environment among the farmers.

Burandt, Lang, Schrader & Thiem, (2013), concluded that due to network in rural area small and medium sized enterprises get opportunity to access markets. Further they pointed out that agricultural and food economy networks have a positive impact on social and cultural changes in the rural area it operates.

Sarkar, Kundu, & Chaudhuri, (2016) studied association between agricultural marketing and developmental marketing and identified a strong association between agricultural marketing and developmental marketing.

The developmental marketing activities like; appointment of local distributors, wholesalers and retailers enhances local employment and decreases information dissemination among rural mass on agricultural marketing. .

Singh,(1996) analysed the problems of international marketing of agro-food products for developing country and concluded that the agro product marketing in international market is affected by both controllable and uncontrollable factors. Better control over the controllable factors by the firms empowers the firms to minimise the impact of uncontrollable factors on the firm specific factors in general as well as in increasing market share.

Singh, & Prakash, (2015) measure the participation level of rural women in vegetables production, processing and marketing. They concluded that the participation level of rural women was very high in vegetable production. The study further examined that rural women shared roughly 62% in rearing of dairy animals/draught animals and more than 69% were engaged in keeping goats on the farm.

Timiras (2009), identified a fragmented agricultural and food marketing chain in Romania, which is highly problematic for the food processing industry and retailers. The fragmented agricultural and food marketing chain have an adverse impact on volume of stock of various agro products in the retail out let as well as absence of formal markets in rural Romania.

Tosun, Savran, Özge, Keskin, & Demirbas, (2014) analysed impact of warehouse receipt system on agricultural products markets. They confirmed that the proper warehouse receipt enhances supply of qualitative agro products at right price. Due to warehouse receipt system the price of agro products became more stable. The price stability is possible due to decrease in cost of storage and financing cost.

Caiazza, Volpe, & Audretsch, (2014), tried to identify divers of innovation in agro-food industry. Innovation is in general due to interaction between multiple factors for social or economical changes. The findings show the role of institutions, actors and activities in promoting innovation in agro-food system.

Xiong, Zhong, & Ding, (2013) tried to understand farmers' moral hazard in safe farming. They suggested profit and subsidiary as incentives for the farmers whereas production environmental

supervision and agricultural input supervision is considered as constrains of farmers' moral hazard in safe farming. They identified profit is inversely related to moral hazards but the role of agro subsidiary is not instantly recognizable. Constraint factors like production environmental supervision and agricultural input supervision minimise farmers' moral hazard.

Gellynck, Banterle, Kühne, Carraresi, & Stranieri, (2012) conducted a study on SMEs' marketing capabilities for traditional agro products. The authors concluded that generally SMEs have low level of marketing skill to promote the traditional agro food. Only a few firm well in marketing capabilities.

Rai, & Panigrahy, (2016) concluded that use of new technology in agriculture enhances production and assures more value addition to the agricultural output. But the enhanced production of agricultural leads to marketed surplus of agricultural output.

Singbo, Oude Lansink, & Emvalomatis, (2014) make study on urban farmers' productive and marketing efficiency. They remarked that the urban farmers are efficient in production of vegetable but inefficient in marketing of vegetables. According to the authors marketing inefficiency referred as selling better output at low price. Further, they pointed out due to lack of technical knowledge the production is less whereas marketing inefficiency is due to lack of marketing arrangements?

Jones, (1999) developed an integrated input-output econometric model to analyze the impact of agricultural economic changes on production of agricultural product. The model emphasizes production agriculture, augmented agriculture and employment and is designed to enable the study of economic impacts of both short-run and long-run changes in the supply of production agriculture. He identified that the change in climate has adverse impact on production and profitability of agro-products.

Chisasa, & Makina, (2013) examine the effect of bank finance on agricultural output. They analyse secondary data over 40 years. The variables of the study were agricultural output, bank credit, capital accumulation, labour and rainfall. They identified that bank credit and agricultural output as well as capital accumulation and agricultural output moves in same direction. Both bank credit and capital accumulation have significant positive impact on agricultural output.

Melhim, A. (2009) analyzes growth and diversification of U.S. agricultural farm. The study

focused on dairy, corn, wheat, apple, and beef farming. By examine the impact of marketing contracts on farm cost structure. He concluded that marketing contracts improved the returns for corn and wheat farms, but not for dairy farm. Finally, having diversified marketing schemes is found to benefit only corn farms.

Research Gap

Number of research work both at international level and national level have been made on different aspects of agro-marketing. But there are very few studies found in Odisha context. Most of the existing researchers have focus on marketing problems at macro level giving importance only on marketing aspects. The agro-production and marketing is interrelated with other aspects like use of pesticide, crime, basic infrastructure development and etc. A few researchers were found on the aspects explained above.

Objectives of the Study

1. To identify most important variable affecting agricultural marketing in Odisha
2. To understand the perception farmers on different aspects of agricultural marketing

Methodology

The current section of the study deals with methodology adopted on data collection, research tools used for analysis of data, procedure followed for the selection of respondents, methodology used to conduct research and observations made during the course of the study. The current study can be defined as an exploratory and a non-experimental research. The structure of the present analysis includes only primary sources of data. Being it is difficult to capture data from the farmers through Odisha data collected from some specific domains through a close ended questionnaire. The respondents are selected purposively over different demographic background. The sample frame for the study is Bouda, Khorda, Nayagarh and Puri district. The current study uses statistical tools like; Mean standard deviation, skewness, kurtosis and ANOVA for the analysis of data.

Universe

Farmers of Odisha.

Sample Domain

Four districts of Odisha named as Bouda, Khordha, Nayagarh and Puri are included under the sample domain. The details of sample domain are given in following table.

Table 1: Details of Sample Domain

| S.No. | District | Block | Gramapanchayat | Village |
|-------|----------|--------------|----------------|---|
| 1 | Bouda | Sarabhanga | Sarsara | Bankapada, Maunapali, Narayanpur, Sarsara, Bandisahi |
| | | | Bananda | Bankapada, Maunapali, Narayanpur, Sarsara, Bandisahi |
| 2 | Khordha | Bolgarh | Badakumari | Bilakhauruni, Dihakhauruni, Badakumari, Harikesar |
| | | | Bankoi | Kaneilo, Bankoi, Garvanipada, Sahajpur |
| 3 | Nayagarh | Rajsunakhala | Rajsunakhala | Kotagada, Ramabila, Nursinghpur, Tangisahi, Rajsunakhala |
| | | | Surukabadi | Surukabadi, Thanapali, Thanapali patna, Musajhari |
| 4 | Puri | Kanas | SIREI | Tipuri, Sirei, Sahana, Pasiapada, Akarukha, Dethiapada |
| | | | Trilochanpur | Trilochanpur, Haladipadar, Ranipada, Chancheipada, G aupada |

Sample Description

The farmers are selected with different demographic character like; education, habitation, age and amount of land.

Sample Size

Total population 8 gramapchyats is 30000 out of which 15160 are male. Out of 15160 male populations near about 10600 depend on agriculture. Out of which 514 farmers are consider as respondents which is near about 4.85% of population.

Sample Units

514 respondents selected randomly as the sample respondents. The data collected from 8 different Gramapachayats in Odisha (summarised in table 1). All these clusters show the agricultural

diversity of the state. From the above mention clusters questionnaires are collected disproportionately through Direct Personal Interview (DPI) method and snow ball sampling.

Instrument for data Collection

For primary data collection, questionnaire survey method is adopted. For the present study a close ended questionnaire, spread in 2 sections is administered.

The section-1 elucidates the details of demographic which include total 5 numbers of questions. Out of 5 questions, question 1 is on name of the respondent and optional in nature. Rrest 4 questions are mandatory questions. The details of four mandatory questions are given below.

Table 2
Demographic Division

| Question. No | Demographic Character | No of Sub-division | Sub division |
|--------------|-----------------------|--------------------|---|
| 1.2 | Age | 5 | < 30 Years, 30-39, 40-49, 50-59, 60 year and above |
| 1.3 | Education | 5 | School Dropout, 10 th Pass, Intermediate, Graduate, Above Graduate |
| 1.4 | Amount of Land | 4 | No Land, < 2 Akar, 2-5 Akar, >5 Akar |
| 1.5 | Locality | 2 | Rural, Sub-urban |

Section 2 of the questionnaire contains 42 questions variables of factors affecting agricultural marketing. The variables are 'Most part of population depends on agriculture', 'Marketing process of crops is difficult and complex', 'Market prices of crops are sufficient', 'Farmers should be independent to decide the market value of their crops', 'Subsidies provided for farmers are necessary', 'Pesticides and Fertilizers used are more than needed by farmers', 'Commodities like pesticides, quality seeds are also be provided on subsidy', 'Values of pesticides and other commodities should be verified', 'Crime cells to stop duplicity in agriculture products', 'Dangerous pesticides should be banned', 'Reduce the costs of agriculture that are more than income', 'Decreasing level of Ground water is a serious problem', 'Commercial crops should be Preferred', 'Agriculture sector should be Globalised', 'Green Revolution extends the productivity', 'People working in Fields are more than needed', 'Sizes of fields are small', 'Market training should be provided to farmers', 'Commission agent system of marketing process is best for farmers', 'Direct payment of crops value should be made to farmers', 'Insurance of farmer and his family necessary', 'Insurance of crops also needed', 'Make sure the use of Agriculture tools only as per needs', 'Farmers needed Agriculture Loans', 'Interest rates should be low', 'Cooperative Societies needed to establish in rural areas', 'Small farmers requires special attention by Govt', 'Are Subsidies needed to carry on', 'Govt. should enhance farmers to start assisted works like Dairy, Poultry, Fishery etc', 'Agricultural tools harvesters, Tractors, needed to supply on subsidy basis', 'Crops should be purchased

by private agencies', 'Crops should be purchased by govt. agencies', 'Market prices of crops should be added to Index number', 'Govt. should adopt Free Market policy', 'Globalization of agriculture is suitable for farmers', 'Subsidies are creating problems for farmers', 'Agricultural research university and institutions enough', 'Farmers needed special packages in case of natural disasters such as Droughts, Floods', 'Farmers should be enhanced to use the Organic Farming', 'Farmers should adopt a Agriculture versatility', 'Special aids given to farmers in case of lack of rain' and 'Labour is easily available or not and much expensive'. The perception of farmers on these questions is collected through fully aware to fully unaware. It has been assigned some specific weights' to the above mentioned 5 point Likert scale as 5 to fully aware with a continuum to 1 to fully aware. The reliability of the instrument tested and the alfa score is 0.827 which higher than the accepted level.

Hypothesis

1. There is no difference in perception of farmers across their age on each variable affecting agricultural marketing.
2. There is no difference in perception of farmers across their education on each variable affecting agricultural marketing.
3. There is no difference in perception of farmers across type of farmer on each variable affecting agricultural marketing.
4. There is no difference in perception of farmers across their residency on each variable affecting agricultural marketing.

Table 3: Distribution of Respondents across Age Group

| Details | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------------|-----------|---------|---------------|--------------------|
| Bellow 30 Years | 36 | 7.0 | 7.0 | 7.0 |
| 30-39 Years | 47 | 9.2 | 9.1 | 16.1 |
| 40-49 Years | 166 | 32.3 | 32.3 | 48.4 |
| 50-59 Years | 193 | 37.5 | 37.5 | 86.0 |
| 60 Year and above | 72 | 14.0 | 14.0 | 100.0 |
| Total | 514 | 100.0 | 100.0 | |
| Details | Frequency | Percent | Valid Percent | Cumulative Percent |
| School Dropout | 399 | 77.6 | 77.6 | 77.6 |
| 10th pass | 72 | 14.0 | 14.0 | 91.6 |
| Intermediate | 14 | 2.7 | 2.7 | 94.4 |
| Graduate | 22 | 4.3 | 4.3 | 98.6 |
| Above Graduate | 7 | 1.4 | 1.4 | 100.0 |
| Total | 514 | 100.0 | 100.0 | |
| Amount of Land | Frequency | Percent | Valid Percent | Cumulative Percent |
| 0 Akar | 27 | 5.3 | 5.3 | 5.3 |
| <2 Akars | 375 | 73.0 | 73.0 | 78.2 |
| 2 to 5 Akars | 81 | 15.8 | 15.8 | 94.0 |
| >5 Akars | 31 | 6.0 | 6.0 | 100.0 |
| Total | 514 | 100.0 | 100.0 | |
| Residency | Frequency | Percent | Valid Percent | Cumulative Percent |
| Rural | 289 | 56.2 | 56.2 | 56.2 |
| Suburban | 225 | 43.8 | 43.8 | 100.0 |
| Total | 514 | 100.0 | 100.0 | |

Table 1 contains distribution of respondents across different age group. Out of 514 farmers participated in the survey, 7% farmers are of age less than 30 years old, 9.2% of farmers are of 30-39 years old, 32.3% of farmers are of 40-49 years of old, 37.5% of farmers are of 50 -59 years old and 14% of framers are of 60 years and above. It is clear from the data that the major share of respondents are above the age of 40 years.

It is observed from the above table that most of the farmers are less qualified. Out of 514 farmers, 77.6% of farmers are School Dropout whereas 14% of

farmers are able to complete their schooling. Only 8.4% of farmers are Intermediate or above intermediate.

As regards the Distribution of Respondents across Amount of Land, out of 514 farmers, 27 farmers are land less farmers, 375 Framers are small farmers who owned less than 2 Akars of land. 81 Farmers owned land in between 2 -5 Akars of land Out of total respondents more than 56% of respondents are from rural area whereas 43.8% of respondents are belonging to suburban area.

Table 4: Descriptive Statistics of Variables Affecting Agricultural Marketing

| | N | Mean | S. D | Skew | Kurt |
|--|-----|------|------|--------|--------|
| Most part of population depends on agriculture | 514 | 4.60 | 0.96 | (2.49) | 5.26 |
| Marketing process of crops is difficult and complex | 514 | 3.37 | 1.11 | (0.36) | (0.36) |
| Market prices of crops are sufficient | 514 | 3.41 | 1.07 | (0.34) | (0.33) |
| Farmers should be independent to decide the market value of their crops | 514 | 1.85 | 1.40 | 1.31 | 0.11 |
| Subsidies provided for farmers are necessary | 514 | 4.66 | 0.87 | (2.69) | 6.38 |
| Pesticides and Fertilizers used are more than needed by farmers | 514 | 4.60 | 0.96 | (2.48) | 5.26 |
| Commodities like pesticides, quality seeds are also be provided on subsidy | 514 | 3.12 | 0.93 | (0.38) | 0.30 |
| Values of pesticides and other commodities should be verified | 514 | 2.81 | 1.13 | 0.65 | (0.60) |
| Crime cells to stop duplicity in agriculture products | 514 | 3.79 | 0.99 | (0.93) | 0.18 |
| Dangerous pesticides should be banned | 514 | 4.33 | 1.18 | (1.45) | 0.49 |
| Reduce the costs of agriculture that are more than income | 514 | 3.57 | 0.88 | (0.68) | (0.10) |
| Decreasing level of Ground water is a serious problem | 514 | 3.07 | 1.15 | 0.58 | (0.96) |
| Commercial crops should be Preferred | 514 | 4.04 | 0.69 | (1.65) | 1.93 |
| Agriculture sector should be Globalised | 514 | 3.94 | 0.64 | (0.85) | 2.51 |
| Green Revolution extends the productivity | 514 | 3.83 | 0.64 | (1.11) | 2.91 |
| People working in Fields are more than needed | 514 | 2.54 | 1.34 | 0.53 | (1.05) |
| Sizes of fields are small | 514 | 2.63 | 1.03 | 0.92 | (0.39) |
| Market training should be provided to farmers | 514 | 2.49 | 1.33 | 0.45 | (1.12) |
| Commission agent system of marketing process is best for farmers | 514 | 1.71 | 1.17 | 1.57 | 1.27 |
| Direct payment of crops value should be made to farmers | 514 | 2.47 | 1.02 | 1.64 | 1.35 |

| | | | | | |
|--|-----|------|------|--------|--------|
| Insurance of farmer and his family necessary | 514 | 3.69 | 1.02 | (0.02) | (0.79) |
| Insurance of crops also needed | 514 | 3.93 | 0.59 | (2.45) | 1.07 |
| Make sure the use of Agriculture tools only as per needs | 514 | 3.96 | 0.52 | (1.86) | 1.96 |
| Farmers needed Agriculture Loans | 514 | 4.82 | 0.58 | (1.58) | 2.58 |
| Interest rates should be low | 514 | 4.09 | 0.55 | (1.45) | 2.95 |
| Cooperative Societies needed to establish in rural areas | 514 | 4.67 | 0.77 | (2.57) | 2.38 |
| Small farmers requires special attention by Govt. | 514 | 4.37 | 1.00 | (1.58) | 1.74 |
| Are Subsidies needed to carry on | 514 | 3.94 | 0.87 | (1.17) | 1.90 |
| Govt. should enhance farmers to start assisted works like Dairy, Poultry, Fishery etc. | 514 | 3.11 | 0.91 | 0.30 | 0.69 |
| Agricultural tools harvesters, Tractors, needed to supply on subsidy basis | 514 | 3.12 | 0.66 | 1.06 | 3.31 |
| Crops should be purchased by private agencies | 514 | 4.14 | 0.77 | (1.02) | 1.63 |
| Crops should be purchased by govt. agencies | 512 | 4.37 | 0.92 | (1.67) | 2.55 |
| Market prices of crops should be added to Index number | 514 | 2.35 | 1.03 | 1.43 | 1.36 |
| Govt. should adopt Free Market policy | 514 | 3.11 | 1.36 | (0.40) | (1.25) |
| Globalization of agriculture is suitable for farmers | 514 | 2.29 | 1.47 | 0.44 | (1.56) |
| Subsidies are creating problems for farmers | 514 | 1.84 | 1.36 | 1.26 | 0.02 |
| Agricultural research university and institutions enough | 514 | 1.81 | 1.41 | 1.39 | 0.28 |
| Farmers needed special packages in case of natural disasters such as Droughts, Floods | 514 | 2.58 | 1.30 | 0.59 | (0.80) |
| Farmers should be enhanced to use the Organic Farming | 514 | 3.46 | 1.04 | (0.74) | (0.29) |
| Farmers should adopt a Agriculture versatility | 514 | 2.57 | 0.90 | 1.17 | 1.21 |
| Special aids given to farmers in case of lack of rain | 514 | 1.90 | 1.43 | 1.27 | 0.03 |
| Labour is easily available or not and much expensive | 514 | 1.61 | 1.22 | 1.82 | 1.95 |

Table 4 contains descriptive statistics of 42 variables affecting agricultural marketing. The mean score of 'Most part of population depends on agriculture', 'Marketing process of crops is difficult and complex', 'Market prices of crops are sufficient', 'Farmers should be independent to decide the market value of their crops', 'Subsidies provided for farmers are necessary', 'Pesticides and Fertilizers used are more than needed by farmers', 'Commodities like pesticides, quality seeds are also be provided on subsidy', 'Values of pesticides and other commodities should be verified', 'Crime cells to stop duplicity in agriculture products', 'Dangerous pesticides should be banned', 'Reduce the costs of agriculture that are more than income', 'Decreasing level of Ground water is a serious problem', 'Commercial crops should be Preferred', 'Agriculture sector should be Globalised', 'Green Revolution extends the productivity', 'People working in Fields are more than needed', 'Sizes of fields are small', 'Market training should be provided to farmers', 'Commission agent system of marketing process is best for farmers', 'Direct payment of crops value should be made to farmers', 'Insurance of farmer and his family necessary', 'Insurance of crops also needed', 'Make sure the use of Agriculture tools only as per needs', 'Farmers needed Agriculture Loans', 'Interest rates should be low', 'Cooperative Societies needed to establish in rural areas', 'Small farmers requires special attention by Govt', 'Are Subsidies needed to carry on', 'Govt. should enhance farmers to start assisted works like Dairy, Poultry, Fishery etc', 'Agricultural tools harvesters, Tractors, needed to supply on subsidy basis', 'Crops should be purchased by private agencies', 'Crops should be purchased by govt. agencies', 'Market prices of crops should be added to Index number', 'Govt. should adopt Free Market policy', 'Globalization of agriculture

is suitable for farmers', 'Subsidies are creating problems for farmers', 'Agricultural research university and institutions enough', 'Farmers needed special packages in case of natural disasters such as Droughts, Floods', 'Farmers should be enhanced to use the Organic Farming', 'Farmers should adopt a Agriculture versatility', 'Special aids given to farmers in case of lack of rain' and 'Labour is easily available or not and much expensive' is 4.60, 3.37, 3.41, 1.85, 4.66, 4.60, 3.12, 2.81, 3.79, 4.33, 3.57, 3.07, 4.04, 3.94, 3.83, 2.54, 2.63, 2.49, 1.71, 2.47, 3.69, 3.93, 3.96, 4.82, 4.09, 4.67, 4.37, 3.94, 3.11, 3.12, 4.14, 4.37, 2.35, 3.11, 2.29, 1.84, 1.81, 2.58, 3.46, 2.57, 1.90 and 1.61 whereas the standard deviation score is 0.96, 1.11, 1.07, 1.40, 0.87, 0.96, 0.93, 1.13, 0.99, 1.18, 0.88, 1.15, 0.69, 0.64, 0.64, 1.34, 1.03, 1.33, 1.17, 1.02, 1.02, 0.59, 0.52, 0.58, 0.55, 0.77, 1.00, 0.87, 0.91, 0.66, 0.77, 0.92, 1.03, 1.36, 1.47, 1.36, 1.41, 1.30, 1.04, 0.90, 1.43 and 1.22. The skewness and kurtosis of all 42 variables are within the range of -3 to +3. High mean values and low standard deviation score of all the 42 variables as well as skewness and kurtosis score within the accepted range make the fit for further analysis.

Further, it is observed from the table that out 42 variables the most important five variables are 'Farmers needed Agriculture Loans', 'Cooperative Societies needed to establish in rural areas', 'Subsidies provided for farmers are necessary', 'Most part of population depends on agriculture', and 'Pesticides and Fertilizers used are more than needed by farmers'. The mean score of 'Farmers needed Agriculture Loans', 'Cooperative Societies needed to establish in rural areas', 'Subsidies provided for farmers are necessary', 'Most part of population depends on agriculture', and 'Pesticides and

Fertilizers used are more than needed by farmers' is 4.82, 4.67, 4.66, 4.6 and 4.6.

Table 5: Comparing Awareness of Farmer on Variables Affecting Agricultural Marketing across their Age

| | Age in Years | | | | | ANOVA | |
|--|--------------|-------|-------|-------|--------|-------|------|
| | < 30 | 30-39 | 40-49 | 50-59 | 60 & > | F | Sig. |
| Most part of population depends on agriculture | 4.25 | 4.64 | 4.71 | 4.64 | 4.38 | 2.852 | .023 |
| Marketing process of crops is difficult and complex | 3.36 | 3.04 | 3.36 | 3.41 | 3.50 | 1.346 | .252 |
| Market prices of crops are sufficient | 3.50 | 3.49 | 3.27 | 3.50 | 3.42 | 1.153 | .331 |
| Farmers should be independent to decide the market value of their crops | 2.33 | 2.00 | 1.89 | 1.82 | 1.51 | 2.317 | .056 |
| Subsidies provided for farmers are necessary | 4.22 | 4.66 | 4.70 | 4.72 | 4.65 | 2.621 | .034 |
| Pesticides and Fertilizers used are more than needed by farmers | 4.11 | 4.70 | 4.66 | 4.60 | 4.64 | 2.648 | .033 |
| Commodities like pesticides, quality seeds are also be provided on subsidy | 3.11 | 3.06 | 3.15 | 3.09 | 3.14 | .134 | .970 |
| Values of pesticides and other commodities should be verified | 2.89 | 2.85 | 2.96 | 2.76 | 2.53 | 2.083 | .082 |
| Crime cells to stop duplicity in agriculture products | 3.94 | 3.85 | 3.78 | 3.81 | 3.67 | .579 | .678 |
| Dangerous pesticides should be banned | 4.47 | 4.40 | 4.34 | 4.33 | 4.18 | .464 | .762 |
| Reduce the costs of agriculture that are more than income | 4.06 | 3.57 | 3.63 | 3.47 | 3.46 | 3.972 | .003 |
| Decreasing level of Ground water is a serious problem | 3.19 | 3.15 | 3.05 | 3.06 | 3.04 | .184 | .947 |
| Commercial crops should be Preferred | 3.97 | 3.98 | 4.06 | 4.06 | 4.04 | .260 | .904 |
| Agriculture sector should be Globalised | 3.75 | 3.91 | 4.00 | 3.92 | 3.93 | 1.221 | .301 |
| Green Revolution extends the productivity | 3.69 | 3.94 | 3.89 | 3.77 | 3.85 | 1.540 | .189 |
| People working in Fields are more than needed | 2.78 | 2.53 | 2.50 | 2.60 | 2.32 | .907 | .459 |
| Sizes of fields are small | 2.50 | 2.66 | 2.60 | 2.70 | 2.57 | .499 | .736 |
| Market training should be provided to farmers | 2.22 | 2.21 | 2.40 | 2.58 | 2.76 | 2.055 | .086 |
| Commission agent system of marketing process is best for farmers | 2.03 | 1.74 | 1.67 | 1.70 | 1.65 | .777 | .541 |
| Direct payment of crops value should be made to farmers | 2.64 | 2.45 | 2.47 | 2.42 | 2.50 | .361 | .836 |
| Insurance of farmer and his family necessary | 3.47 | 3.68 | 3.73 | 3.65 | 3.78 | .682 | .604 |
| Insurance of crops also needed | 3.69 | 3.94 | 3.99 | 3.95 | 3.86 | 2.298 | .058 |
| Make sure the use of Agriculture tools only as per needs | 4.00 | 4.02 | 3.90 | 3.97 | 4.00 | .946 | .437 |
| Farmers needed Agriculture Loans | 4.75 | 4.66 | 4.86 | 4.88 | 4.74 | 2.097 | .080 |
| Interest rates should be low | 4.00 | 4.11 | 4.10 | 4.10 | 4.08 | .302 | .877 |
| Cooperative Societies needed to establish in rural areas | 4.53 | 4.62 | 4.65 | 4.74 | 4.65 | .755 | .555 |
| Small farmers requires special attention by Govt. | 4.22 | 4.13 | 4.35 | 4.54 | 4.17 | 3.045 | .017 |
| Are Subsidies needed to carry on | 3.72 | 3.62 | 4.04 | 4.05 | 3.76 | 4.366 | .002 |
| Govt. should enhance farmers to start assisted works like Dairy, Poultry, Fishery etc. | 3.28 | 3.28 | 3.08 | 3.07 | 3.10 | .827 | .509 |
| Agricultural tools harvesters, Tractors, needed to supply on subsidy basis | 3.33 | 3.19 | 3.07 | 3.11 | 3.11 | 1.321 | .261 |
| Crops should be purchased by private agencies | 4.11 | 4.02 | 4.06 | 4.23 | 4.18 | 1.432 | .222 |
| Crops should be purchased by govt. agencies | 4.19 | 4.26 | 4.42 | 4.37 | 4.39 | .648 | .628 |
| Market prices of crops should be added to Index number | 2.56 | 2.26 | 2.42 | 2.35 | 2.17 | 1.226 | .299 |
| Govt. should adopt Free Market policy | 3.19 | 3.15 | 3.10 | 3.13 | 3.04 | .098 | .983 |
| Globalization of agriculture is suitable for farmers | 2.39 | 2.36 | 2.38 | 2.21 | 2.21 | .409 | .802 |
| Subsidies are creating problems for farmers | 2.28 | 1.83 | 1.80 | 1.74 | 1.99 | 1.432 | .222 |
| Agricultural research university and institutions enough | 2.00 | 1.98 | 1.87 | 1.70 | 1.78 | .719 | .579 |
| Farmers needed special packages in case of natural disasters such as Droughts, Floods | 2.97 | 2.72 | 2.47 | 2.54 | 2.64 | 1.331 | .257 |

| | | | | | | | |
|---|------|------|------|------|------|-------|------|
| Farmers should be enhanced to use the Organic Farming | 3.33 | 3.30 | 3.37 | 3.60 | 3.49 | 1.555 | .185 |
| Farmers should adopt a Agriculture versatility | 2.75 | 2.62 | 2.59 | 2.50 | 2.58 | .724 | .575 |
| Special aids given to farmers in case of lack of rain | 2.33 | 1.77 | 1.69 | 1.96 | 2.10 | 2.321 | .056 |
| Labour is easily available or not and much expensive | 2.25 | 1.62 | 1.57 | 1.59 | 1.47 | 2.825 | .024 |

The mean score of forty two variables affecting agricultural marketing is summarised in Table 5. The mean score of each variable calculated across the age of the farmer. It is observed from the table that the mean score of each variable across the age of the farmer is close to each other and the difference in mean values is negligible. The perception of farmers across age on each variable affecting agricultural marketing is same or not tested. The ANOVA result suggests the farmers of different ages are not giving equal importance to some of the variables. Out of forty two variables, the p value of Most part of population depends on agriculture, Subsidies provided for farmers are necessary, Pesticides and Fertilizers used are more than needed by farmers, Reduce the costs of agriculture that are

more than income, Small farmers requires special attention by Govt., Are Subsidies needed to carry on, Labour is easily available or not and much expensive is less than 0.05. For the rest of the variables the p value is greater than 0.05. Most part of population depends on agriculture, Subsidies provided for farmers are necessary, Pesticides and Fertilizers used are more than needed by farmers, Reduce the costs of agriculture that are more than income, Small farmers requires special attention by Govt., Are Subsidies needed to carry on, Labour is easily available or not and much expensive the mean score of different age farmers is significantly different from each other. And for the rest of the variables the difference in mean of each variable score across age of the farmer is not different.

Table 6
Comparing Awareness of Farmer on Variables Affecting Agricultural Marketing across their Education

| | Education | | | | | ANOVA | |
|--|-----------|------|------|------|------|-------|------|
| | SD | 10th | +2 | +3 | > +3 | F | Sig. |
| Most part of population depends on agriculture | 4.59 | 4.53 | 5.00 | 4.64 | 4.71 | 0.74 | 0.56 |
| Marketing process of crops is difficult and complex | 3.36 | 3.22 | 3.57 | 3.77 | 3.71 | 1.35 | 0.25 |
| Market prices of crops are sufficient | 3.39 | 3.49 | 3.71 | 3.45 | 3.43 | 0.43 | 0.79 |
| Farmers should be independent to decide the market value of their crops | 1.92 | 1.85 | 1.00 | 1.36 | 1.43 | 2.36 | 0.05 |
| Subsidies provided for farmers are necessary | 4.69 | 4.47 | 5.00 | 4.50 | 4.71 | 1.73 | 0.14 |
| Pesticides and Fertilizers used are more than needed by farmers | 4.65 | 4.26 | 5.00 | 4.36 | 4.86 | 3.60 | 0.01 |
| Commodities like pesticides, quality seeds are also be provided on subsidy | 3.16 | 2.86 | 3.00 | 3.32 | 2.86 | 2.05 | 0.09 |
| Values of pesticides and other commodities should be verified | 2.84 | 2.85 | 2.00 | 2.59 | 2.71 | 2.16 | 0.07 |
| Crime cells to stop duplicity in agriculture products | 3.72 | 3.99 | 4.14 | 4.27 | 3.57 | 3.06 | 0.02 |
| Dangerous pesticides should be banned | 4.25 | 4.51 | 5.00 | 4.86 | 4.00 | 3.35 | 0.01 |
| Reduce the costs of agriculture that are more than income | 3.53 | 3.63 | 3.86 | 3.91 | 3.29 | 1.62 | 0.17 |
| Decreasing level of Ground water is a serious problem | 3.16 | 2.69 | 2.71 | 3.00 | 3.14 | 2.87 | 0.02 |
| Commercial crops should be Preferred | 4.07 | 3.86 | 4.00 | 4.09 | 4.43 | 2.03 | 0.09 |
| Agriculture sector should be Globalised | 3.94 | 3.93 | 4.00 | 3.86 | 3.86 | 0.14 | 0.97 |
| Green Revolution extends the productivity | 3.83 | 3.78 | 4.00 | 3.95 | 3.86 | 0.58 | 0.67 |
| People working in Fields are more than needed | 2.59 | 2.49 | 1.36 | 2.32 | 2.86 | 3.21 | 0.01 |
| , Sizes of fields are small | 2.70 | 2.46 | 2.00 | 2.36 | 2.86 | 2.77 | 0.03 |
| Market training should be provided to farmers | 2.49 | 2.74 | 2.00 | 2.05 | 2.57 | 1.72 | 0.14 |
| Commission agent system of marketing process is best for farmers | 1.72 | 1.81 | 1.00 | 1.59 | 1.86 | 1.52 | 0.20 |
| Direct payment of crops value should be made to farmers | 2.46 | 2.67 | 2.00 | 2.36 | 2.00 | 1.87 | 0.11 |
| Insurance of farmer and his family necessary | 3.65 | 3.74 | 4.36 | 3.86 | 3.43 | 1.97 | 0.10 |
| Insurance of crops also needed | 3.95 | 3.82 | 4.00 | 3.86 | 4.00 | 0.96 | 0.43 |
| Make sure the use of Agriculture tools only as per needs | 3.95 | 3.99 | 4.00 | 4.00 | 4.14 | 0.37 | 0.83 |
| , Farmers needed Agriculture Loans | 4.83 | 4.81 | 5.00 | 4.95 | 4.00 | 4.30 | 0.00 |
| Interest rates should be low | 4.12 | 4.07 | 4.07 | 3.86 | 3.86 | 1.50 | 0.20 |
| Cooperative Societies needed to establish in rural areas | 4.68 | 4.58 | 5.00 | 4.68 | 4.43 | 1.07 | 0.37 |
| Small farmers requires special attention by Govt. | 4.38 | 4.40 | 4.36 | 3.86 | 4.86 | 1.85 | 0.12 |
| Are Subsidies needed to carry on | 3.97 | 3.94 | 4.07 | 3.36 | 4.14 | 2.74 | 0.03 |
| Govt. should enhance farmers to start assisted works like | 3.06 | 3.26 | 3.07 | 3.45 | 3.71 | 2.45 | 0.05 |

| | | | | | | | |
|--|------|------|------|------|------|------|------|
| Dairy, Poultry ,Fishery etc. | | | | | | | |
| Agricultural tools harvesters, Tractors, needed to supply on subsidy basis | 3.14 | 3.07 | 3.00 | 3.14 | 3.00 | 0.34 | 0.85 |
| Crops should be purchased by private agencies | 4.13 | 4.07 | 4.64 | 4.23 | 4.14 | 1.75 | 0.14 |
| Crops should be purchased by govt. agencies | 4.38 | 4.39 | 4.36 | 4.05 | 4.57 | 0.78 | 0.54 |
| Market prices of crops should be added to Index number | 2.33 | 2.53 | 2.00 | 2.45 | 2.14 | 1.09 | 0.36 |
| Govt. should adopt Free Market policy | 3.15 | 3.15 | 2.07 | 2.95 | 3.29 | 2.26 | 0.06 |
| Globalization of agriculture is suitable for farmers | 2.46 | 1.89 | 1.00 | 1.55 | 1.86 | 7.22 | 0.00 |
| ,Subsidies are creating problems for farmers | 1.75 | 2.10 | 2.93 | 2.18 | 1.29 | 4.08 | 0.00 |
| Agricultural research university and institutions enough | 1.81 | 1.99 | 1.29 | 1.77 | 1.57 | 0.82 | 0.51 |
| ,Farmers needed special packages in case of natural disasters such as Droughts, Floods | 2.49 | 2.89 | 2.64 | 2.86 | 3.57 | 2.82 | 0.02 |
| Farmers should be enhanced to use the Organic Farming | 3.42 | 3.57 | 4.00 | 3.50 | 3.86 | 1.60 | 0.17 |
| Farmers should adopt a Agriculture versatility | 2.53 | 2.67 | 2.86 | 2.73 | 2.43 | 0.93 | 0.45 |
| Special aids given to farmers in case of lack of rain | 1.96 | 1.78 | 1.00 | 1.82 | 2.00 | 1.72 | 0.14 |
| Labour is easily available or not and much expensive | 1.62 | 1.74 | 1.00 | 1.64 | 1.29 | 1.21 | 0.31 |

The mean score of different variables affecting agricultural marketing across the education of farmer is summarised in the table 6. The mean score of each variable computed for School Dropout, 10th pass, Intermediate, Graduate and Above Graduate farmers. The perception of differently educated farmers on different variables affecting agricultural marketing is measured from the mean score of each variable. It is observed from the table that the mean score of each variable for School Dropout, 10th pass, Intermediate, Graduate and Above Graduate farmers is not same. The F value of Farmers should be independent to decide the market value of their crops, Pesticides and Fertilizers used are more than needed by farmers, Crime cells to stop duplicity in agriculture products, Dangerous pesticides

should be banned, Decreasing level of Ground water is a serious problem, People working in Fields are more than needed, Sizes of fields are small, Farmers needed Agriculture Loans, Are Subsidies needed to carry on, Govt. should enhance farmers to start assisted works like Dairy, Poultry ,Fishery etc., Globalization of agriculture is suitable for farmers, Subsidies are creating problems for farmers, Farmers needed special packages in case of natural disasters such as Droughts, Floods is significant at 95% confidence level. The result suggested that the difference in mean value of above variables is significantly different for different group of farmers. For the rest variables the difference in mean value across the education of the farmer is not significant.

Table 7: Comparing awareness of Farmer on Variables Affecting Agricultural Marketing Across their Amount of Land owned by Farmer

| | Amount of Land | | | | ANOVA | |
|--|----------------|------|------|------|-------|------|
| | 0 | <2 | 2-5 | >5 | F | Sig. |
| Most part of population depends on agriculture | 4.67 | 4.57 | 4.63 | 4.74 | 0.39 | .763 |
| Marketing process of crops is difficult and complex | 3.44 | 3.33 | 3.32 | 3.87 | 2.37 | .070 |
| Market prices of crops are sufficient | 3.67 | 3.36 | 3.44 | 3.71 | 1.61 | .187 |
| Farmers should be independent to decide the market value of their crops | 1.74 | 1.85 | 1.94 | 1.74 | 0.22 | .882 |
| Subsidies provided for farmers are necessary | 4.48 | 4.71 | 4.54 | 4.58 | 1.35 | .257 |
| Pesticides and Fertilizers used are more than needed by farmers | 4.30 | 4.67 | 4.38 | 4.58 | 2.89 | .035 |
| Commodities like pesticides, quality seeds are also be provided on subsidy | 2.85 | 3.14 | 3.07 | 3.19 | 0.93 | .427 |
| Values of pesticides and other commodities should be verified | 2.78 | 2.84 | 2.81 | 2.45 | 1.14 | .333 |
| Crime cells to stop duplicity in agriculture products | 3.85 | 3.72 | 4.04 | 4.00 | 2.86 | .036 |
| Dangerous pesticides should be banned | 4.56 | 4.25 | 4.46 | 4.74 | 2.48 | .061 |
| Reduce the costs of agriculture that are more than income | 3.48 | 3.54 | 3.59 | 3.94 | 2.07 | .104 |
| Decreasing level of Ground water is a serious problem | 3.00 | 3.16 | 2.77 | 2.84 | 3.20 | .023 |
| Commercial crops should be Preferred | 4.07 | 4.07 | 3.93 | 4.00 | 1.07 | .363 |
| Agriculture sector should be Globalised | 3.81 | 3.93 | 4.02 | 3.87 | 0.96 | .410 |
| Green Revolution extends the productivity | 3.93 | 3.81 | 3.88 | 3.87 | 0.50 | .680 |
| People working in Fields are more than needed | 2.63 | 2.58 | 2.46 | 2.06 | 1.59 | .192 |
| Sizes of fields are small | 2.70 | 2.66 | 2.62 | 2.32 | 1.07 | .359 |
| Market training should be provided to farmers | 2.56 | 2.42 | 3.00 | 2.00 | 5.96 | .001 |
| Commission agent system of marketing process is best for farmers | 1.70 | 1.71 | 1.75 | 1.61 | 0.11 | .955 |
| Direct payment of crops value should be made to farmers | 2.52 | 2.39 | 2.80 | 2.42 | 3.66 | .012 |
| Insurance of farmer and his family necessary | 3.78 | 3.64 | 3.83 | 3.84 | 1.10 | .348 |

| | | | | | | |
|--|------|------|------|------|------|------|
| Insurance of crops also needed | 4.07 | 3.97 | 3.78 | 3.84 | 3.11 | .026 |
| Make sure the use of Agriculture tools only as per needs | 4.07 | 3.94 | 4.02 | 3.90 | 1.12 | .339 |
| Farmers needed Agriculture Loans | 4.96 | 4.81 | 4.81 | 4.87 | 0.66 | .576 |
| Interest rates should be low | 4.15 | 4.10 | 4.12 | 3.90 | 1.44 | .231 |
| Cooperative Societies needed to establish in rural areas | 4.67 | 4.68 | 4.59 | 4.74 | 0.40 | .754 |
| Small farmers requires special attention by Govt. | 4.33 | 4.36 | 4.57 | 3.94 | 3.04 | .029 |
| Are Subsidies needed to carry on | 3.78 | 3.95 | 4.11 | 3.61 | 2.88 | .036 |
| Govt. should enhance farmers to start assisted works like Dairy, Poultry, Fishery etc. | 3.19 | 3.10 | 3.07 | 3.32 | 0.69 | .559 |
| Agricultural tools harvesters, Tractors, needed to supply on subsidy basis | 3.26 | 3.10 | 3.19 | 3.06 | 0.84 | .473 |
| Crops should be purchased by private agencies | 4.48 | 4.11 | 4.06 | 4.35 | 3.05 | .028 |
| Crops should be purchased by govt. agencies | 4.19 | 4.41 | 4.30 | 4.23 | 0.97 | .407 |
| Market prices of crops should be added to Index number | 2.41 | 2.33 | 2.51 | 2.23 | 0.85 | .467 |
| Govt. should adopt Free Market policy | 2.78 | 3.17 | 3.15 | 2.68 | 1.83 | .140 |
| Globalization of agriculture is suitable for farmers | 1.89 | 2.44 | 2.05 | 1.45 | 6.27 | .000 |
| Subsidies are creating problems for farmers | 2.33 | 1.73 | 2.00 | 2.39 | 4.19 | .006 |
| Agricultural research university and institutions enough | 1.48 | 1.76 | 2.27 | 1.58 | 3.89 | .009 |
| Farmers needed special packages in case of natural disasters such as Droughts, Floods | 2.37 | 2.56 | 2.60 | 2.90 | 0.90 | .441 |
| Farmers should be enhanced to use the Organic Farming | 3.52 | 3.40 | 3.65 | 3.68 | 1.86 | .136 |
| Farmers should adopt a Agriculture versatility | 2.52 | 2.51 | 2.77 | 2.77 | 2.36 | .071 |
| Special aids given to farmers in case of lack of rain | 1.52 | 1.96 | 1.88 | 1.61 | 1.27 | .284 |
| Labour is easily available or not and much expensive | 1.63 | 1.58 | 1.81 | 1.55 | 0.89 | .446 |

The perception of farmers collected on different variables affecting agricultural marketing collected across the volume of land owned by them. The farmers are sub-divided into four sub-categories as per the amount of land owned by them. Table 7 contains the mean score of each variable across the volume of land held by the farmers. Out of 42 variables, the p value of Pesticides and Fertilizers used are more than needed by farmers, Crime cells to stop duplicity in agriculture products, Decreasing level of Ground water is a serious problem, Market training should be provided to farmers, Direct payment of crops value should be made to farmers, Insurance of crops also needed, Small farmers requires special attention by Govt., Are Subsidies needed to carry on, Crops should be purchased by private agencies, Globalization of agriculture is suitable for farmers,

Subsidies are creating problems for farmers, Agricultural research university and institutions enough is less than 0.05 whereas for the rest of the p value is greater than 0.05. The mean score of Pesticides and Fertilizers used are more than needed by farmers, Crime cells to stop duplicity in agriculture products, Decreasing level of Ground water is a serious problem, Market training should be provided to farmers, Direct payment of crops value should be made to farmers, Insurance of crops also needed, Small farmers requires special attention by Govt., Are Subsidies needed to carry on, Crops should be purchased by private agencies, Globalization of agriculture is suitable for farmers, Subsidies are creating problems for farmers, Agricultural research university and institutions is significantly different across the different categories of farmer.

Table 8: Comparing awareness of Farmer on Variables Affecting Agricultural Marketing across Residency

| | Residency | | t- test | |
|--|-----------|-----------|---------|------|
| | Rural | Sub-urban | t | Sig. |
| Most part of population depends on agriculture | 4.6713 | 4.5022 | 1.980 | .048 |
| Marketing process of crops is difficult and complex | 3.3806 | 3.3556 | .255 | .799 |
| Market prices of crops are sufficient | 3.3356 | 3.5111 | -1.850 | .065 |
| Farmers should be independent to decide the market value of their crops | 1.9619 | 1.7111 | 2.016 | .044 |
| Subsidies provided for farmers are necessary | 4.7405 | 4.5644 | 2.284 | .023 |
| Pesticides and Fertilizers used are more than needed by farmers | 4.7301 | 4.4267 | 3.577 | .000 |
| Commodities like pesticides, quality seeds are also be provided on subsidy | 3.2180 | 2.9867 | 2.819 | .005 |
| Values of pesticides and other commodities should be verified | 2.8270 | 2.7867 | .402 | .688 |
| Crime cells to stop duplicity in agriculture products | 3.8893 | 3.6711 | 2.503 | .013 |
| Dangerous pesticides should be banned | 4.3564 | 4.2933 | .599 | .549 |
| Reduce the costs of agriculture that are more than income | 3.4983 | 3.6578 | -2.048 | .041 |
| Decreasing level of Ground water is a serious problem | 3.0554 | 3.0933 | -.371 | .711 |
| Commercial crops should be Preferred | 4.0727 | 4.0089 | 1.045 | .297 |
| Agriculture sector should be Globalised | 3.9031 | 3.9778 | -1.317 | .188 |
| Green Revolution extends the productivity | 3.8547 | 3.8000 | .965 | .335 |

| | | | | |
|--|--------|--------|--------|------|
| People working in Fields are more than needed | 2.5190 | 2.5556 | -.307 | .759 |
| Sizes of fields are small | 2.5952 | 2.6844 | -.980 | .328 |
| Market training should be provided to farmers | 2.4671 | 2.5200 | -.447 | .655 |
| Commission agent system of marketing process is best for farmers | 1.5882 | 1.8667 | -2.702 | .007 |
| Direct payment of crops value should be made to farmers | 2.3149 | 2.6622 | -3.889 | .000 |
| Insurance of farmer and his family necessary | 3.7336 | 3.6267 | 1.176 | .240 |
| Insurance of crops also needed | 3.9343 | 3.9333 | .018 | .986 |
| Make sure the use of Agriculture tools only as per needs | 3.9550 | 3.9644 | -.203 | .839 |
| Farmers needed Agriculture Loans | 4.8512 | 4.7867 | 1.259 | .209 |
| Interest rates should be low | 4.0796 | 4.1111 | -.648 | .517 |
| Cooperative Societies needed to establish in rural areas | 4.7682 | 4.5467 | 3.281 | .001 |
| Small farmers requires special attention by Govt. | 4.4533 | 4.2533 | 2.249 | .025 |
| Are Subsidies needed to carry on | 4.0104 | 3.8578 | 1.986 | .048 |
| Govt. should enhance farmers to start assisted works like Dairy, Poultry ,Fishery etc. | 3.1869 | 3.0133 | 2.142 | .033 |
| Agricultural tools harvesters, Tractors, needed to supply on subsidy basis | 3.0727 | 3.1822 | -1.876 | .061 |
| Crops should be purchased by private agencies | 4.1696 | 4.1022 | .987 | .324 |
| Crops should be purchased by govt. agencies | 4.4599 | 4.2489 | 2.595 | .010 |
| Market prices of crops should be added to Index number | 2.2907 | 2.4356 | -1.583 | .114 |
| Govt. should adopt Free Market policy | 3.2042 | 3.0000 | 1.688 | .092 |
| Globalization of agriculture is suitable for farmers | 2.3564 | 2.2089 | 1.127 | .260 |
| Subsidies are creating problems for farmers | 1.5952 | 2.1556 | -4.725 | .000 |
| Agricultural research university and institutions enough | 1.7197 | 1.9333 | -1.707 | .088 |
| Farmers needed special packages in case of natural disasters such as Droughts, Floods | 2.5502 | 2.6178 | -.583 | .560 |
| Farmers should be enhanced to use the Organic Farming | 3.4429 | 3.4889 | -.498 | .618 |
| Farmers should adopt a Agriculture versatility | 2.5363 | 2.6089 | -.904 | .367 |
| Special aids given to farmers in case of lack of rain | 1.8616 | 1.9511 | -.705 | .481 |
| Labour is easily available or not and much expensive | 1.5260 | 1.7289 | -1.883 | .060 |

It is observed from the table 8 that the difference in mean score of different variables of affecting agricultural marketing across rural and sub-urban farmers negligible. The difference is significant or not tested. The result of t test is summarised in table 6. Further it is observed from the table, out of 42 variables, the p value of Most part of population depends on agriculture, Farmers should be independent to decide the market value of their crops, Subsidies provided for farmers are necessary, Pesticides and Fertilizers used are more than needed by farmers, Commodities like pesticides, quality seeds are also be provided on subsidy, Crime cells to stop duplicity in agriculture products, Reduce the costs of agriculture that are more than income, Commission agent system of marketing process is best for farmers, Direct payment of crops value should be made to farmers, Cooperative Societies needed to establish in rural areas, Small farmers requires special attention by Govt., Are Subsidies needed to carry on, Govt. should enhance farmers to start assisted works like Dairy, Poultry ,Fishery etc, Crops should be purchased by govt. agencies and Subsidies are creating problems for farmers is less than 0.05. For the above variables the difference in mean value across residency of farmer is significant whereas for the rest of the variables the difference is not significant.

Findings and Conclusion

The farmers of India continue to be pivotal to the sustainable growth and development of the Indian economy. Not only the farmers are able to feed the

huge population of 1.3 billion, but also contribute significantly to production, and generating employment through various backward and forward linkages. The agricultural sector is also helping in alleviating poverty and in ensuring the sustainable development of the economy is well established.

The sector is, however, currently facing problems. While it has made large strides in achieving the agricultural development goals still the sector is challenged by number of problems. The need for current time is to focus on the welfare and prosperity of farmers understanding the problems face by them. On the above backdrop, the current paper tries to focus on the perception of farmers at micro level on variables affecting agricultural marketing. The major findings of the study are

1. Most important variables affecting agricultural marketing are 'Farmers needed Agriculture Loans', 'Cooperative Societies needed to establish in rural areas', 'Subsidies provided for farmers are necessary', 'Most part of population depends on agriculture', and 'Pesticides and Fertilizers used are more than needed by farmers'.
2. Out of 42 variables, the perception of all categories of framers (Age, education, volume of land and residency) is different for 'Pesticides and Fertilizers used are more than needed by farmers', and 'Are Subsidies needed to carry on'
3. The perception of farmers across their age is different on 'Most part of population depends on agriculture', 'Subsidies provided for farmers are

necessary', 'Pesticides and Fertilizers used are more than needed by farmers', 'Reduce the costs of agriculture that are more than income', 'Small farmers requires special attention by Govt.', 'Are Subsidies needed to carry on' and 'Labour is easily available or not and much expensive'

4. The perception of farmers across their education is different on 'Farmers should be independent to decide the market value of their crops', 'Pesticides and Fertilizers used are more than needed by farmers', 'Crime cells to stop duplicity in agriculture products', 'Dangerous pesticides should be banned', 'Decreasing level of Ground water is a serious problem', 'People working in Fields are more than needed', 'Sizes of fields are small', 'Farmers needed Agriculture Loans', 'Are Subsidies needed to carry on', 'Govt. should enhance farmers to start assisted works like Dairy, Poultry, Fishery etc.', 'Globalization of agriculture is suitable for farmers', 'Subsidies are creating problems for farmers', and 'Farmers needed special packages in case of natural disasters such as Droughts, Floods'
5. The perception of farmers across type of farmer is different on Pesticides and Fertilizers used are more than needed by farmers, Crime cells to stop duplicity in agriculture products, Decreasing level of Ground water is a serious problem, Market training should be provided to farmers, Direct payment of crops value should be made to farmers, Insurance of crops also needed, Small farmers requires special attention by Govt., Are Subsidies needed to carry on, Crops should be purchased by private agencies, Globalization of agriculture is suitable for farmers, Subsidies are creating problems for farmers, Agricultural research university and institutions enough
6. The perception of farmers across their residence is different on Most part of population depends on agriculture, Farmers should be independent to decide the market value of their crops, Subsidies provided for farmers are necessary, Pesticides and Fertilizers used are more than needed by farmers, Commodities like pesticides, quality seeds are also be provided on subsidy, Crime cells to stop duplicity in agriculture products, Reduce the costs of agriculture that are more than income, Commission agent system of marketing process is best for farmers, Direct payment of crops value should be made to farmers, Cooperative Societies needed to establish in rural areas, Small farmers requires special attention by Govt., Are Subsidies needed to carry on, Govt. should enhance farmers to start assisted works like Dairy, Poultry, Fishery etc, Crops should be purchased by govt. agencies and Subsidies are creating problems for farmers.

Agricultural sector in the State of Orissa is distinctly different from that of other states of India. Odisha is an agrarian state with Agriculture and Animal Husbandry sector providing employment directly or indirectly near about 60% of total work force and contributes more than 20% to NSDP. The

natural resources endowment of the State is eminently suitable for a wide variety of food grains, cash crops and horticultural crops and offers immense scope for agricultural growth. The climate of the State is tropical, characterized by high temperature, high humidity, medium to high rainfall and mild winters. But the state has poor record in growth of agriculture and farmers. The current study tries to find out the common problems on the basis of perception of the farmers of the state. Out of 42 variables, the farmers view is different across all the demographic character on use of 'Pesticides and Fertilizers'. The uneducated farmers are giving importance on use of more pesticide. Further, on usefulness of subsidies no unanimous opinion is found across the demographic character of the farmers. On the basis of the result of the current study, it is suggested to reduce use of 'Pesticides and Fertilizers' for long run sustainability of agriculture. Further, it is advised to support the sector the subsidies must be provided by different agencies.

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