

## Topic:- Impact of Irrigation on Agricultural Marketing Productivity in Solapur District

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### 1. Abstract

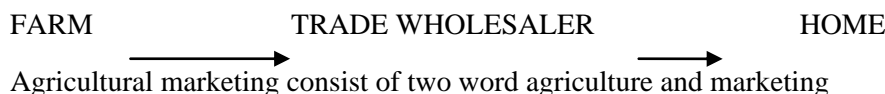
*Agriculture in India has directly or indirectly proceed to be the root of the income to majority of the population. Indian agriculture has been seen a lot of changes in its structure. various kinds of tools and techniques are used in the farm to increase productivity. one of the technique is irrigation which helps to grow agricultural crops ,maintain landscapes and revegetate. Now a days advance techniques are used for all this .one of them is agricultural marketing it covers the services involved in moving an agricultural product from the farm to the customer. These sevices involve the planning, organizing ,directing and handling of agricultural in such a way as to satisfy farmers, intermediaries and customers.*

*The main purpose of this study is to get an idea about what is the impact of irrigation on agricultural marketing productivity in solapur district and to analyze that how much people aware about agricultural marketing and new advanced technologies which are used now a days .with doing this research we will get an clear idea about it and which helps me in my research. The present study brings out past and present scenario of agricultural marketing, its challenges and future recommendations.*

**Key words:-** Agriculture marketing, solapur district, irrigation, awareness.

### 2. Introduction

India is a agricultural country and one third of its population depends on agricultural and agricultural activities.



Agriculture refers t the process of producing goods by raising crops at stock. And marketing is the activity use to sell those goods thus the combine term agricultural marketing plays a major role in moving the agricultural product from a farm to consumer.

According to the national commission on agriculture: agriculture marketing is defined as a process from which the farmer starts with a decision to produce saleable farm commodity and it involves all the aspects of market structure or system. Both functional and institutional based on technical and economics considerations and includes pre harvesting and post harvest operation. It includes process such as Assembling, Storage, Processing, Packaging, Transportation, grading and distribution of agricultural commodity.

Agricultural marketing covers the services involved in moving an agricultural product from the farm to the consumer. It involve planning, organizing, directing and handling of agricultural produce in such a way as to satisfy farmers, intermediaries and consumer.

Irrigation is the process of applying controlled amount of water to plants at needed interval. It helps to grow agricultural crops in proper manner.

The Government launched National Agriculture Market (e-NAM) scheme on 14.04.2017. It help to enhance transparency in transactions, price discovery and farmers' reach to larger number of markets.

An Agricultural produce market committee (APMC) is a marketing board established by state government to ensure farmers are safeguarded from exploitation by large retailers as well as ensuring the farmers get their interest on regular basis and they don't face any difficulty for future purpose.

Maharashtra state agriculture marketing Board (MSAMB) to help people in Maharashtra and they available a place where farmer easily sold their crops with proper process and with proper rate

Due to proper irrigation we can easily increase the quantity as well as quality of product so irrigation directly and indirectly affect the productivity of agricultural marketing. Many people are not aware about the new techniques and technologies which are coming in the market so for them we have to provide proper scheme from which we can trained farmers and tell them this new agendas for their farming skills.

They used all old traditional techniques so I want to check how many farmers are aware about agricultural marketing and I want to check the impact of irrigation on agricultural marketing productivity.

### 3. Research Problem

There are several problems and challenges involved in marketing of agricultural produce.

Lack of technical training, Lack of agricultural education, Lack of market and marketing knowledge, Defective weights and scales, Lack of financial sources. India's **irrigation** Efficiency is very low and poor.

### 4. Objectives

1. To understand the irrigational impact on agriculture.
2. To examine the increment in the productivity of agricultural marketing.
3. The impact to irrigation on the quantity of product.

### 4. Hypothesis

**H<sub>0</sub>** :- It is observed that the quantity of products are not significantly increased due to proper irrigation.

**H<sub>1</sub>** :- It is observed that the quantity of products are significantly increased due to proper irrigation.

**H<sub>0</sub>** :- It is observed that people in Solapur District are not significantly aware about agricultural marketing.

**H<sub>1</sub>** :- It is observed that people in Solapur District are significantly aware about agricultural marketing.

## 5. Literature Review

A considerable amount of research has been done on the working and performance of agricultural marketing.

**1. *The role of agriculture in economic development*** is the paper written by **Johnston and Mellor** in 1961. He done several amount of research in his paper and the types of research is done was a kind of Descriptive. There are some main key point which was mentioned in their paper they stated that commercial demand for agricultural produce increases due to income and population growth.

**2. *The role of irrigation in agricultural productivity*** is the paper written by **Kumar and singh** in the year 2003. This paper gives me an idea about the proper irrigation technique and how it is done on primary basis. optimum no of water and its resources at farm is needed because of its increase in demand. sufficient water management is the key factor to make irrigation process successful.

**3. *Agricultural development in India progress performance and determinant*** is the paper written by **Tripathi and Prasad** in the year 2009. He gave some valuable points which helps me a lot in my research paper to proceed further Indian agriculture has progressed not only in output and yield term but the structural changes have also contributed. He done descriptive research in his paper.

**4. *Contribution of agriculture to the development of Indian economy*** is the paper written by **Pathak** in the year 2014. Contribution of agriculture in growth of a nation is constituted by the growth of the products within the sector itself as well as the agricultural development by the goods produced in the domestic and international market.

**5. *Article related to fundamentals related to agricultural productivity*** is the paper written by **Bonneville power administration** in the year 2016. It suggest about the latest equipment which are very much useful and how by using them they can increase their productivity of the farm and also about tools which are use for irrigation and its latest techniques.

## 6. Research Methodology

**Research Design**—To find the answer store search questions, a frame work named “Research Design” is created. Research Design is also known as arrangement of conditions or collection. In this Research, Descriptive Research Method is used. This method helps to gather data with respect to current scenario in the respective research area.

**Area of Study**—This study is done to find out the Impact of irrigation on agriculture productivity in solapur district. We have collected response from all age group People.

**Data Collection Method**—In this Paper, Researchers has used the Primary Data collected by structured Questionnaire mostly dichotomous questions and secondary data was collected from Internet, Magazines, Journals.

**Sample size and Sampling Method**—As there was limitation for research due to Covid19 Crisis as well as time, sample size was restricted to 174. For Academic Purpose, Random sampling is used and questionnaires are sent over the internet by specified link.

**Statistical Tools Used**—Data Analysis was carried out using SPSS Software. Cross Tab using Chi Square was used in the analysis of Variables for Hypothesis and Other Valuable Findings.

### Analysis of Data

#### Reliability

| Case Processing Summary  |                           |     |       |
|--|---------------------------|-----|-------|
|  |                           | N   | %     |
| Cases  | Valid                     | 174 | 100.0 |
|  | Exclude<br>d <sup>a</sup> | 0   | .0    |
|  | Total                     | 174 | 100.0 |
| a. List wise deletion based on all variables in the procedure. |                           |     |       |

| Reliability Statistics |             |
|------------------------|-------------|
| Cronbach's Alpha       | No of Items |
| .631                   | 3           |

As the value of cronbach's alpha is greater than 0.5 which 0.631. so from this we can conclude that data is reliable and ready to use for further study and analysis.

#### Data analysis for hypothesis 1 :

| Case Processing Summary                 |       |         |         |         |       |         |
|---|-------|---------|---------|---------|-------|---------|
|   | Cases |         |         |         |       |         |
|   | Valid |         | Missing |         | Total |         |
|   | N     | Percent | N       | Percent | N     | Percent |
| Irrigation land ID*increase quantity ID | 174   | 100.0%  | 0       | .0%     | 174   | 100.0%  |

| Irrigationl and ID* increase quantity ID Cross tabulation |               |                      |         |       |                |       |
|---|---------------|----------------------|---------|-------|----------------|-------|
| Count   |               |                      |         |       |                |       |
|   |               | Increase quantity ID |         |       |                | Total |
|   |               | Disagree             | Neutral | Agree | Strongly agree |       |
| Irrigation land ID  | 0             | 0                    | 5       | 9     | 6              | 20    |
|   | below1acre    | 1                    | 0       | 2     | 7              | 10    |
|   | between1to2.5 | 0                    | 4       | 9     | 19             | 32    |
|   | between2.5to5 | 0                    | 0       | 12    | 21             | 33    |
|   | between5to10  | 0                    | 2       | 11    | 18             | 31    |
|   | above10       | 0                    | 5       | 17    | 26             | 48    |
| Total   |               | 1                    | 16      | 60    | 97             | 174   |

| Chi-Square Tests   |                     |     |                     |
|--|---------------------|-----|---------------------|
|  | Value               | D f | Asymp.Sig.(2-sided) |
| Pearson Chi-Square   | 31.417 <sup>a</sup> | 15  | .008                |
| Likelihood Ratio   | 23.435              | 15  | .075                |
| Linear-by-Linear Association   | 2.421               | 1   | .120                |
| No of Valid Cases  | 174                 |     |                     |
| 13 cells (54.2%) have expected count less than 5. The minimum expected count is .06. |                     |     |                     |

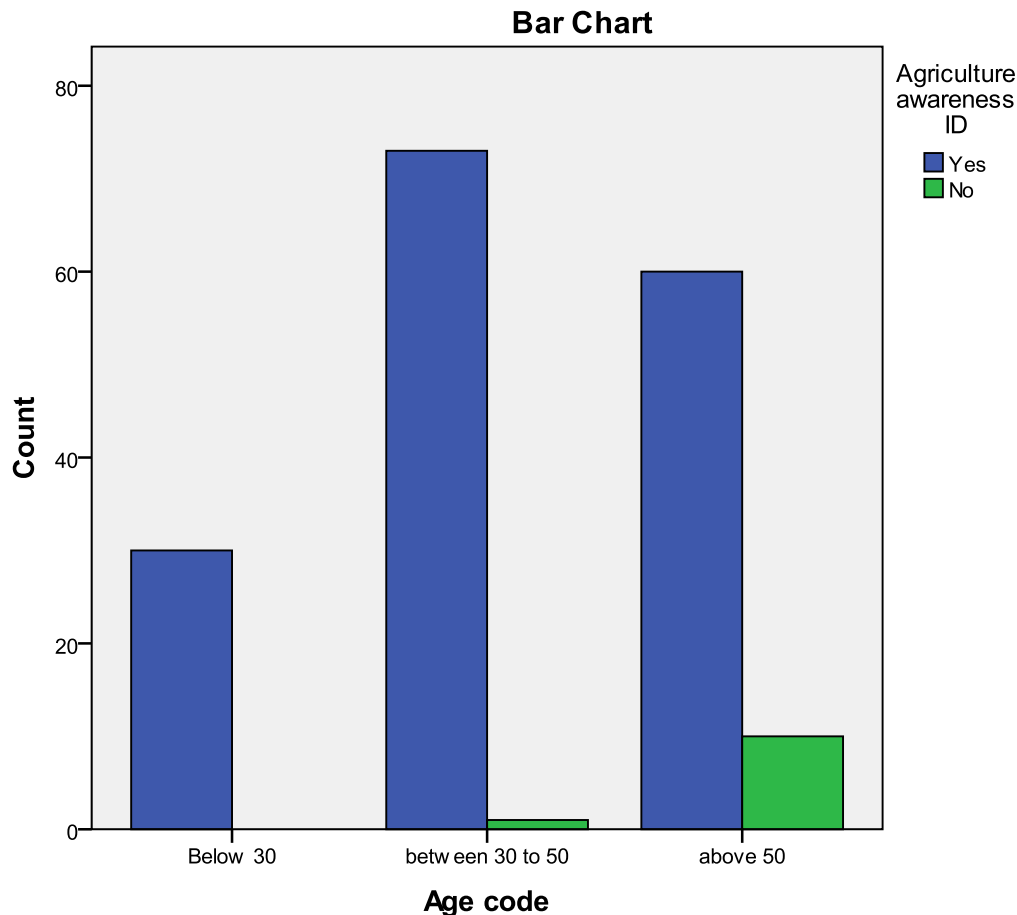
As you can see Asymp. Significance value (0.008) is lesser than 0.05, then here **we Accept Alternate hypothesis** which is " It is observed that the quantity of products are significantly increased due to proper irrigation" and **reject the Null**. From the cross table we can conclude that higher the land under irrigation better is the result.

#### Data analysis for hypothesis 2 :

| Case Processing Summary            |       |         |         |         |       |         |
|------------------------------------|-------|---------|---------|---------|-------|---------|
|                                    | Cases |         |         |         |       |         |
|                                    | Valid |         | Missing |         | Total |         |
|                                    | N     | Percent | N       | Percent | N     | Percent |
| Age code* Agriculture awareness ID | 174   | 100.0%  | 0       | .0%     | 174   | 100.0%  |

| <b>Age code*Agriculture awareness ID Cross tabulation</b> |               |                          |    |       |
|---|---------------|--------------------------|----|-------|
| Count   |               |                          |    |       |
|   |               | Agriculture awareness ID |    | Total |
|   |               | Yes                      | No |       |
| Age code  | Below30       | 30                       | 0  | 30    |
|   | between30to50 | 73                       | 1  | 74    |
|   | above50       | 60                       | 10 | 70    |
| Total   |               | 163                      | 11 | 174   |

| <b>Chi-Square Tests</b>   |                     |    |                         |
|---|---------------------|----|-------------------------|
|   | Value               | df | Asymp.<br>Sig.(2-sided) |
| Pearson Chi-Square  | 12.608 <sup>a</sup> | 2  | .002                    |
| Likelihood Ratio  | 14.024              | 2  | .001                    |
| Linear-by-Linear<br>Association   | 10.320              | 1  | .001                    |
| No of Valid Cases   | 174                 |    |                         |
| a. 3cells(50.0%)haveexpectedcountlessthan5.Theminimumexpe<br>ctedcountis1.90. |                     |    |                         |



As you can see Asymp. Significance value(0.002) is lesser than 0.05, then here we **Accept Alternate hypothesis** which is "It is observed that people in Solapur District are significantly aware about agricultural marketing" and **reject the Null**. From the cross table and bar chart we can conclude that people between the age of 30 to 50 and below 30 are very much known about agricultural marketing people above 50 are slightly unaware to some extent so we have to make them aware about it.

**From the above study we can infer that: -**

**1. H<sub>1</sub>:-It is observed that the quantity of products are significantly increased due to proper irrigation .**

**2. H<sub>1</sub>:-It is observed that people in Solapur District are significantly aware about agricultural marketing.**

## **6. Findings**

- Over 60-70% people have irrigation in their land and ratio of males are much more higher than female.
- Most of the people are doing both job and farming that's why more people have farming as their secondary occupation. Some people do farming for their backup income and some are doing for developing their interest and skill and other have farming as a primary occupation.

- People with higher land under irrigation have more result for productivity in terms of quantity compare to other which have less land under irrigation. Almost all people are very well known about all the irrigation techniques and skills
- Around 90-95% people believe that proper irrigation helps to increase the quantity of product and that's why they used irrigation in their farms for better results.
- Almost 95% are aware about agricultural marketing through various Media such as internet, books, family, advertisement. But they need proper guidance about this as there is no such medium which reached up to them. They are aware but they don't know the proper process about agricultural marketing.
- One thing I noticed is that they are not aware about the schemes which are given by government such as pesticides and other helps so we have to makes them aware about this things for their betterment and for Future use.
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## 7. Discussion

This research was carried out to understand the impact of irrigation on agricultural marketing productivity and to check people are aware about techniques of irrigation and to check people are aware about agricultural marketing.

As we already seen from the findings that people are accept that proper irrigation helps to increase the quantity of product and also help to increase the productivity. When asked about are they aware about proper irrigation techniques and are they aware about agricultural marketing then around 90% respondent said that they are aware of this.

They don't get proper knowledge about the advanced techniques and tools which are came in the market they use only those old traditional techniques so we have to make them aware about new latest technologies which are very beneficial for their farms.

### Suggestions and Future Scope

In this research paper, the research area was limited to only one district with random sampling. In the upcoming research paper if anyone willing to do research related to this thesis, researcher if possible can choose broad area.

As this was random sampling the data collected is quite befuddled. So convenient sampling can be used in the Future to extract even more in-depth Information on this. Due to covid I am not able to collect data related to field. Data collected by simple Questionnaire but in future other can visit field they can take samples and checked it minutely so that they get better results of irrigation for productivity.

Below are the certain measures that can be implemented to bring out the reforms in agricultural marketing so as to ensure just and fair deal for farming community.

- Establish physical communication.
- Develop Agricultural infrastructure.
- Establishment of Regulated markets.
- Storage and warehouse facilities must be established up to the most remote areas.
- Education of Agriculture to masses.
- Information Technology must reach all over the country. There must be proper road connectivity and good all weather roads.
- Enhance control and coordination over the agricultural markets.



- Extent of financial support to farmers and agro processing units.
- Training of new marketing techniques should be implemented.
- Enhancement and support for Public-Private cooperation.
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### 8. Conclusion

- At last we can conclude that from the research paper we get to know that people believe that proper irrigation help to increase the agricultural marketing productivity. we saw that the ratio of female compare to male is much more less we can make them aware that farming is not only for men they can also equally contribute.
- Government must have to provide sources which helps farmers in their farming for batter irrigation and increase productivity they must have to taught about new technology and their benefits. People which have higher land under irrigation gets better result and had good benefits.
- There is less involvement of young generation which is at the range of below 30. It is a great opportunity for them but they need a proper guidance at their early age so that they make it possible.

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