

Problems Faced by Farmers in the Marketing of Pomegranates

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Abstract:

Pomegranate is an important fruit crop of Maharashtra. The wonderful variety of Pomegranate is known for its sweet taste, plentiful juice and health benefits that may help with Heart disease, Cancer and problem associated with Aging. Pomegranate is the fruit available throughout the year in Maharashtra due to its increasing production. In the recently years farmers turned towards pomegranate production due to its high returns. It results in to the production of pomegranate increased greatly due to which the farmers are suffering so the researcher with the help of this study tried to analyze the problems faced by farmers during marketing phase. It is also important to provide marketing facilities to the farmers so as to improve the present conditions in the pomegranate marketing and provide better returns to the farmers.

Key words: Pomegranate, production, marketing phase, improve

I. INTRODUCTION

Maharashtra has been the pioneer in the field of horticulture and can be said to be at least a decade-and-a-half ahead of other States. While the State Government gave a thrust to horticulture since 1990 itself, the same was done at the national level by way of the National Horticulture Mission only in 2005. Over the last 20 years, Maharashtra has galloped in the horticulture sector, around 1989-90, one would hardly see fruit stalls on roads. But the area under fruit production has increased tremendously since then. Fruit-production constitutes 25% of the total agricultural produce in the State. Approximately, 103 lakh tons of fruits are produced every year. Maharashtra ranks first in the country in the production of fruits. Bananas constitute 25% of the total fruit-production in the country, whereas the production of grapes, pomegranates and oranges is highest in Maharashtra as compared to other parts of the country. Other fruits like mango, coconut, cashew-nuts are also produced to a large extent in Maharashtra. The fruits from Maharashtra are in great demand in other States as well as in other countries.

Production of Pomegranates in Maharashtra:

Pomegranate is an important fruit crop of Maharashtra. It is cultivated in an area of 43,151 HA with a total production of 4,31,510 ton's producing about 85% of the total Indian production, thereby leading in Pomegranate production in the country. Within Maharashtra, production of Pomegranate is mainly concentrated in the Western Maharashtra region and the Marathwada region. Pomegranates are commercially cultivated in Solapur, Sangli, Nashik, Ahmednagar, Pune, Dhule, Aurangabad, Satara, Osmanabad and Latur districts. The variety Ganesh, Bhagwa (Red Ruby) cultivated in Maharashtra is suitable for export purposes. At present fair amounts of exports of Pomegranate takes place from the state in Reefer containers by sea. In Maharashtra There are four main variety of pomegranate available which are like Ganesh, Rubby, Arakta, and Bhagwa. The wonderful variety of Pomegranate is known for its sweet taste, plentiful juice and health benefits that may help with Heart disease, Cancer and problem associated with Aging.

An Agricultural Economic Zone (AEZ) for Pomegranate has been set up in districts of Solapur, Sangli, Ahmednagar, Pune, Nasik, Osmanabad and Latur for integrated development of this crop. Most of the pomegranate is marketed as a fresh fruit, although some quantity of its produce is also stored in cold stores since it has good shelf-life. If we see year's quantity of last ten years arrivals of pomegranate at different markets of Maharashtra then it shows a continuous rise in the quantity.

Present Scenario:

Pomegranate is the fruit available throughout the year. Pomegranate is a popular fruit due to its low price high nutrient value, and availability unabated. It is considered as ancient fruit. In ancient times the Pomegranate marketing is related only to Pomegranate fruit, but in modern marketing, Pomegranate marketing related to various product of Pomegranate. To reduce post harvest losses substantially and supply quality produce to consumers both domestic, and international level, we need marketing of Pomegranate. Secondly the production of pomegranate increased greatly due to which the farmers are suffering so the researcher with the help of this study tried to analyze the problems faced by farmers during marketing phase.

II. RESEARCH METHODOLOGY

The researcher selected six districts for study which are producing pomegranate fruits these six districts are like Aurangabad, Jalna, Ahmadnagar, Nashik, Dhule, Latur. The sample of 50 pomegranate producing farmers was selected

randomly from each district. In this way the total sample of 300 famers was selected for study. A questionnaire has been designed for collecting data from respondents. The questionnaire consists of four parts in which total 48 questions were asked to the farmers. First part was related to personal information, Second part was related to crop information, third part consists questions related to the pomegranate marketing, fourth part was related to other information. Out of 48 questions the selected questions related to marketing are explained in this paper.

Hypothesis:

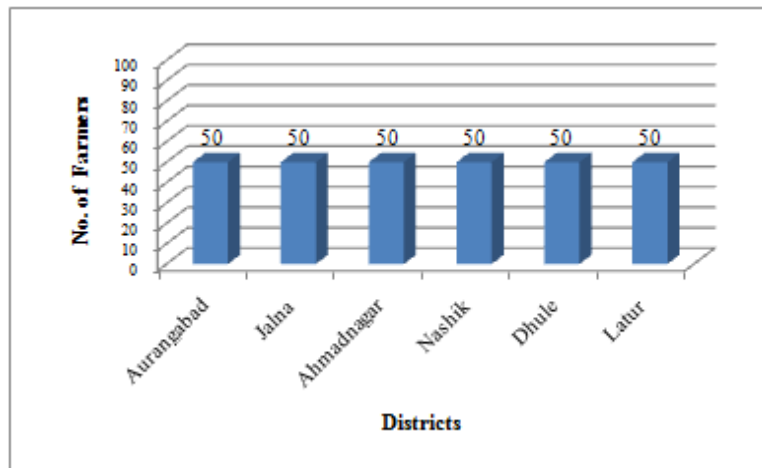
1. More than 25% farmers collecting information about pomegranate marketing through Government Agriculture Department.
2. Less than 10% farmers do direct marketing of pomegranates.
3. Less than 10% farmers exported their fruits previously.

III. DATA COLLECTION & INTERPRETATION

Q.1 Location of the farmers?

Table .1. Locations of Farmers

Districts	No. of Farmers	Percent
Aurangabad	50	16.7
Jalna	50	16.7
Ahmadnagar	50	16.7
Nashik	50	16.7
Dhule	50	16.7
Latur	50	16.7
Total	300	100.0



Graph No. 1. Locations of Farmers

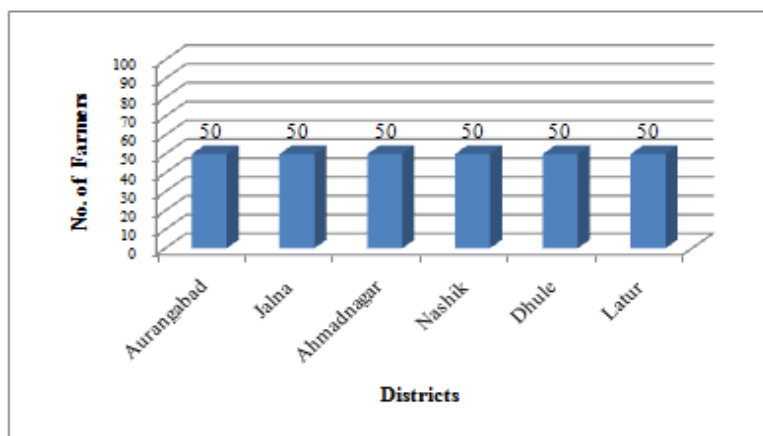
Interpretation:

On the above graph it is interpreted that for the study purpose fifty farmers were selected from each six districts as a sample. The six districts are Aurangabad, Jalna, Ahmadnagar, Nashik, Dhule, and Latur. Fifty pomegranate producing farmers were selected for study from each district.

Q.2 The source of getting information about pomegranate research extension & marketing?

Table No. 2. Source of Information

Source of Information	No. of Farmers	Percent
News Paper	37	12.3
T.V.	19	6.3
Internet	00	00
Agriculture Department	58	19.3
Other	186	62.0
Total	300	100.0



Graph No. 2. Source of Information

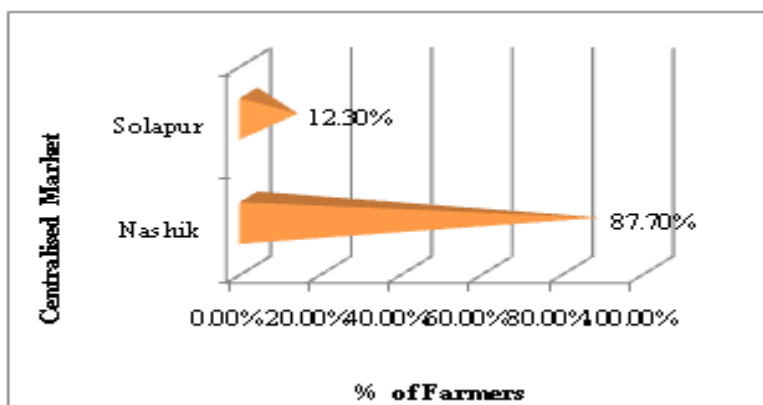
Interpretation:

Above graph shows the fact that maximum farmer i.e. 62% getting information about pomegranate research extension & marketing through other sources which includes friends, relatives etc., 19.30% farmer received information through Agriculture department, 12.30% through newspapers and 6.30% through Television. No farmer received information through internet media.

Q. 3 Which is the most important and centralized market of Pomegranate?

Table No. 3. Market of Pomegranate

Centralized Market	No. of Farmers	Percent
Nashik	263	87.7
Solapur	37	12.3
Total	300	100.0



Graph No. 3. Market of Pomegranate

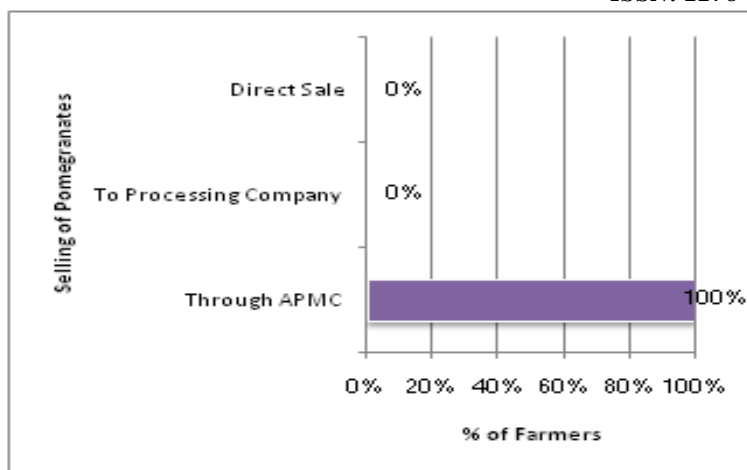
Interpretation:

According to 87.70% farmers Nashik market is the centralized market for selling pomegranate fruit and 12.30% farmers believes that solapur market is the centralized market. In Maharashtra their specific markets are very famous for selling pomegranates; the main markets are Nashik & Solapur, maximum farmers selling their pomegranate fruits in these markets only.

Q.4 How do you sale your product?

Table No. 4. Selling of Pomegranates

Sale of Pomegranates	Frequency	Percent
Through APMC	300	100.0
To Processing Company	0	00
Direct Sale	0	00
Total	300	100



Graph No. 4. Selling of Pomegranates

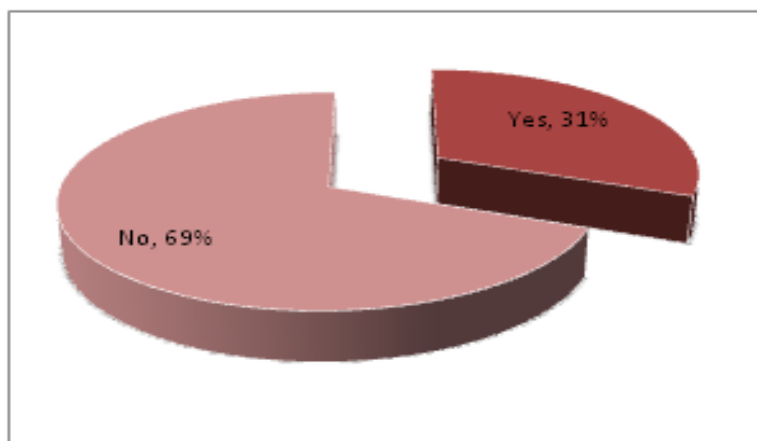
Interpretation:

As per the graph all farmers (100%) sales the pomegranate fruits through APMC’s. The farmers don’t uses any other way of selling pomegranates as there is no assure way of selling the pomegranates. No farmer do direct selling of pomegranates or selling the pomegranates to processing company as the companies are not available in the area.

Q.5 Do you get reasonable prices for pomegranates?

Table No. 5. Prices of Pomegranates

Reasonable Prices	No. of farmers	Percent
Yes	93	31.0
No	207	69.0
Total	300	100.0



Graph No. 5. Prices of Pomegranates

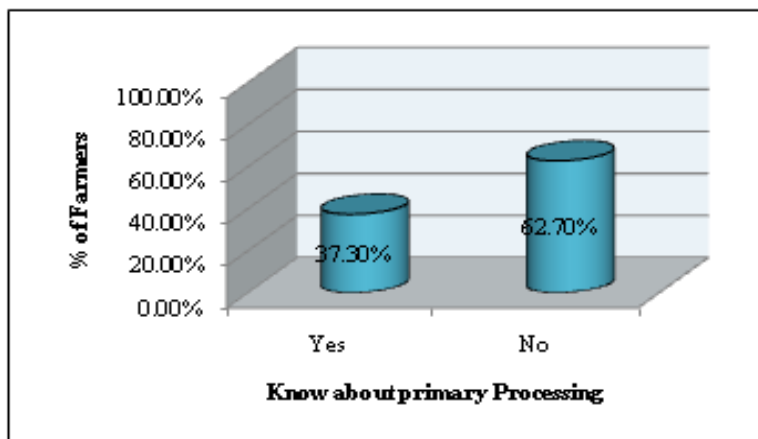
Interpretation:

According to 69% farmers they don’t get reasonable prices for their pomegranates, 31% farmers said they get reasonable prices for their pomegranates in the APMC market. As farmers not decide the rates of pomegranates in the market so some times they won’t get good prices because of excess supply. In all APMCs the rates are decided in same method that is bidding.

Q.6 Do you know primary processing on fruits?

Table No. 6. Know Primary Processing

Know Primary Processing	No. of Farmers	Percent
Yes	112	37.3
No	188	62.7
Total	300	100.0



Graph No. 6. Know Primary Processing

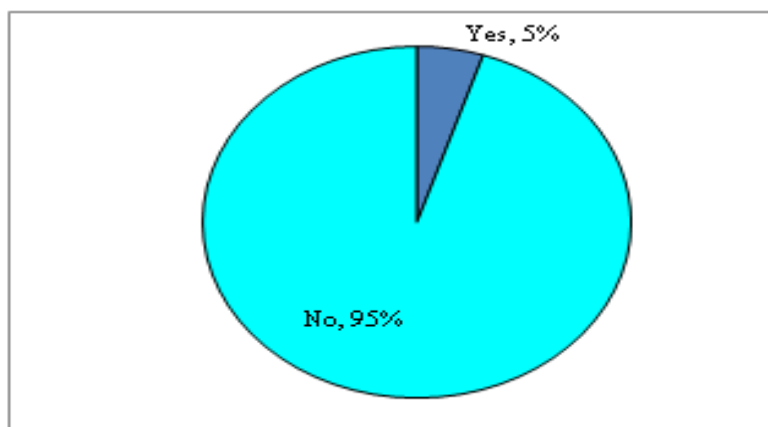
Interpretation:

As per the above graph it is interpreted that 62.70% farmers don't know the primary processing on fruits like cleaning, grading. 37.30% farmers know about primary processing. Primary processing is important on fruits after them cutting from plant & before taking them to market. As it is also observed by researcher that the farmers facing problems of getting low prices because of absence of primary processing knowledge.

Q. 7 Is your pomegranates exported previously?

Table No. 7. Exported Pomegranates Previously

Export	No. of Respondent	Percent	Type of export
Yes	15	5%	Through Mediators
No	285	95%	-
Total	300	100.0	-



Graph No. 7. Exported Pomegranates Previously

Interpretation:

As per above graph only 5% farmers exported their pomegranate fruits previously whereas 95% farmers are not engaged in the activity of exporting before. Since there is heavy demand of Pomegranates in foreign countries like Europe, Arab countries etc. many farmers untouched with this trade because of unavailability of information related to export procedure & scope. Government promoting farmers but still it is not reached up to farmers. It is also observed that farmers are having some sort of myths in mind regarding loss & damage.

Q. 8 Do you get any kind of help from Government for Pomegranate marketing?

Table No. 8. Help from Government

Help for Marketing	No. of Respondent	Percent
Yes	0	00

No	300	100.0
Total	300	100.0

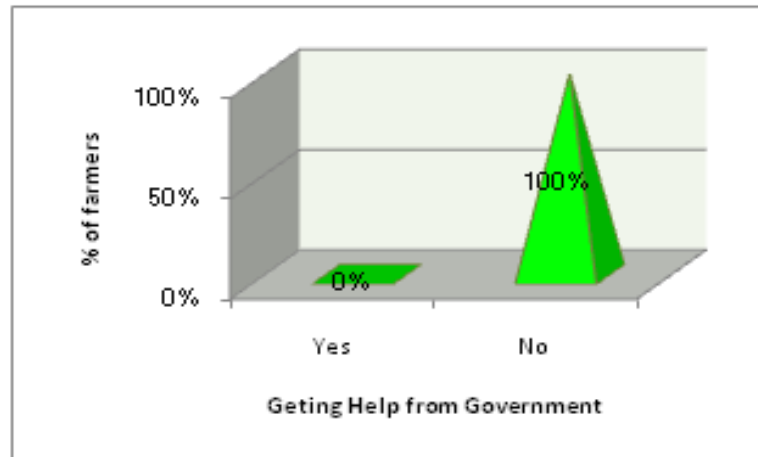


Table No. 8. Help from Government

Interpretation:

The graph shows that all i.e. 100% farmers are of view that they are not getting any kind of help related to marketing from government. The farmers are facing problems in marketing process. As different government departments are trying to help farmers for marketing like ATMA, but the help they provide is not reached up to all farmers & restricted up to specific fruit crops. Some farmers also inform about the help they get from government during drought & heavy rain situations. But the farmers expect active support from government for marketing of pomegranate.

Q. 9 Is there any processing unit of Pomegranate in your district?

Table No. 9. Processing Unit in District

Processing Unit	No. of Respondent	Percent
Yes	0	00
No	300	100.0
Total	300	100.0

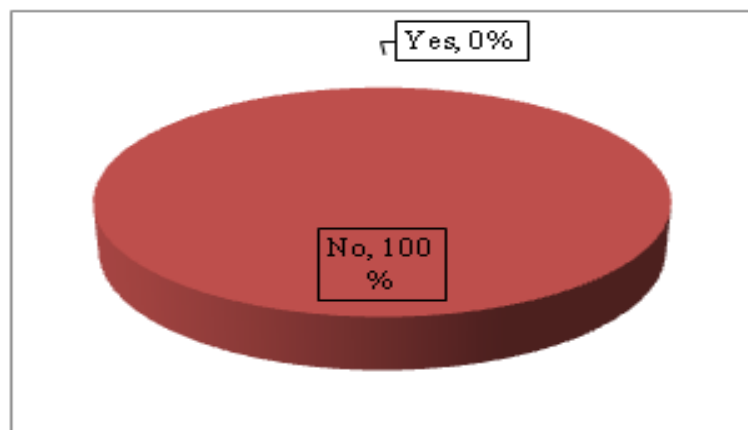


Table No. 9. Processing Unit in District

Interpretation:

As the graph shows that there was no pomegranate processing unit available in the selected districts. There fore farmers don't have scope to sale pomegranate fruits to the processing units. In fact there is requirement of such unit in each district so that farmers can take benefits of it & the demand for pomegranates can be created.

Q.10 What is your opinion about the functioning of market of Pomegranate?

Interpretation:

The farmers are having similar opinions about functioning of Pomegranate markets, the similar opinions clubbed together. 15% farmers don't provide any kind response for this question whereas the opinions of all other farmers are like...

1. The market is changing according to supply of pomegranates.
2. We don't get reasonable price at market as per our expectations.
3. Market is working properly & rates are fluctuating
4. Commission agent provides low rates, taken some percentage of it.
5. Market is high in specific months
6. No Stable market prices, No grading require, availability of sale of pomegranates during specific period.
7. The selling process of pomegranates is not proper at APMC, can not control by APMC.
8. When production increases prices decreases.
9. Markets are to away from farms so transportation cost increased.
10. Only specific purchasers (retailers) are available in the market, so they control the market.
11. No export market facility.
12. We can not decide the rates.

Hypothesis Testing:

Hypothesis 1: More than 25% farmers collecting information about pomegranate marketing through Government Agriculture Department.

In the study amongst the sample of 300 pomegranates producing farmers, 58 (19.3%) farmer collected information about marketing & technology from government agriculture department.

1. Formulate the hypothesis.

Null Hypothesis: $H_0: p \leq 25\%$

Alternate Hypothesis: $H_1: p > 25\%$

2. Formulate an analysis plan.

For this analysis, $n = 300$, $x = 58$, P_0 and the significance level is, $\alpha = 5\%$

and sample proportion of success: $\bar{P} = \frac{58}{300} = 0.19$

The test method is a two sample z-test because sample size, $n > 30$.

3. Analyse sample data.

$$\begin{aligned} z &= \frac{(\bar{P} - P_0)}{\sqrt{\frac{P_0(1-P_0)}{n}}} \\ &= \frac{(0.19 - 0.25)}{\sqrt{\frac{0.25(1-0.25)}{300}}} \\ &= \frac{-0.04}{0.18} \\ &= -0.22 \end{aligned}$$

Since H_1 is two sided and the rejection regions at 5% level of significance which comes to as under, normal curve area table, then the critical value is:

The critical value, $|z_{\alpha}| = \pm 1.64$

4. Interpret results.

Since the calculated value of z is -0.22 which is less than the critical values, i.e. -1.64 . Hence, the null hypothesis H_0 is accepted & alternate hypothesis H_1 is rejected. It is conclude that percentage of farmers collecting information about pomegranate marketing through Government Agriculture Department is less than or equal to 25%.

Hypothesis 2: Less than 10% farmers do direct marketing of pomegranates.

In the study amongst the sample of 300 pomegranates producing farmers no farmers (i.e. 0%) did direct marketing of pomegranates previously.

1. Formulate the hypothesis.

Null Hypothesis: $H_0: p \geq 10\%$

Alternate Hypothesis: $H_2: p < 10\%$

2. Formulate an analysis plan.

For this analysis, $n = 300$, $x = 0$, P_0 and the significance level is, $\alpha = 5\%$

and sample proportion of success: $\bar{P} = \frac{00}{300} = 00$

The test method is a two sample z-test because sample size, $n > 30$.

3. Analyse sample data.

$$\begin{aligned} z &= \frac{(\bar{P} - P_0)}{\sqrt{\frac{P_0(1-P_0)}{n}}} \\ &= \frac{(00 - 0.10)}{\sqrt{\frac{0.10(1-0.10)}{300}}} \\ &= \frac{-0.10}{0.017} \\ &= -5.88 \end{aligned}$$

Since H_2 is two sided and the rejection regions at 5% level of significance which comes to as under, normal curve area table, then the critical value is:

The critical value, $|z_{\alpha}| = \pm 1.64$

4. Interpret results.

Since the calculated value of z is -5.88 which is greater than the critical values, i.e. -1.64 . Hence, the null hypothesis H_0 is rejected & alternate hypothesis H_2 is accepted. It is concluding that percentage of Pomegranate producing farmers do direct marketing is less than 10 per cent.

Hypothesis 3: Less than 10% farmers exported their fruits previously.

In the study amongst the sample of 300 pomegranates producing farmers 15 farmers did export of pomegranates previously.

1. Formulate the hypothesis.

Null Hypothesis: $H_0: p \geq 10\%$

Alternate Hypothesis: $H_3: p < 10\%$

2. Formulate an analysis plan.

For this analysis, $n = 300$, $x = 15$, P_0 and the significance level is, $\alpha = 5\%$

and sample proportion of success: $\bar{P} = \frac{15}{300} = 0.05$

The test method is a two sample z -test because sample size, $n > 30$.

3. Analyse sample data.

$$\begin{aligned} z &= \frac{(\bar{P} - P_0)}{\sqrt{\frac{P_0(1-P_0)}{n}}} \\ &= \frac{(0.05 - 0.10)}{\sqrt{\frac{0.10(1-0.10)}{300}}} \\ &= \frac{-0.05}{0.017} \\ &= -2.94 \end{aligned}$$

Since H_2 is two sided and the rejection regions at 5% level of significance which comes to as under, normal curve area table, then the critical value is:

The critical value, $|z_{\alpha}| = \pm 1.64$

4. Interpret results.

Since the calculated value of z is -2.94 which is more than the critical values, i.e. -1.64 . Hence, the null hypothesis H_0 is rejected & alternate hypothesis H_3 is accepted. It is conclude that percentage of Pomegranate producing farmers do export of pomegranates is less than 10 per cent.

IV. SUGGESTIONS

1. Maximum farmers collecting information through important source i.e. friends so it is suggested that farmers should use new media's of information like internet, through which they can get updated information & help related to research extension and marketing.
2. It is also recommended to government agriculture departments that they should provide updated information on internet & try to send it up to farmers through mobile messages.
3. As farmers preferring Nashik & Solapur as two main APMC's Markets for selling pomegranates, for some districts these places are away from their villages. It is suggested that the farmers should sale their pomegranates at each district level APMC's so that the local market will be generated for pomegranates.
4. It is found that many farmers don't know primary processing, although the government's agriculture department had mention the standards of grading, it is also expected that farmers should grade, clean the fruits and bring it to market.
5. As the farmers had very less knowledge about export procedures & not engaged in the export activity previously, it is recommended that there should be a department which train & help farmers regarding export procedures.
6. So it is recommended that government should promote local unemployed youth for establishment of small processing units.

V. CONCLUSION

On the basis of above it is concluded that the number of pomegranate producers is increasing rapidly so government should provide processing help to them so that they can survive. The farmers need to educate & guide about market structure. Also need to provide marketing help to farmers. With the help of above study the researcher tried to understand the related problems of pomegranate producers or farmers. The data collected were represented & hypothesis made were tested with the help of statistical test. Hence it is concluded that the suggestions provided by researcher can help the farmers in improving their marketing systems.

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