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# Identification of the Suitable Extension –Educational Methods in Marketing of Pistachios (Rafsanjan city, Iran)

\*Seyyed Mehdi Mirdamadi, Farhad Lashgarara and Sonia Mirzaei

Department of Agricultural Extension, Science and Research Branch, Islamic Azad University, Tehran, Iran

# ABSTRACT

Agricultural products have a main role in nonoil exportation. Pistachio is on of the country's most important export products. Thus, this study is aimed at evaluating and identifying suitable extension and educational methods in marketing Rafsanjan's pistachio which is carried out in 2011. This is applied study and its methodology is correlation. The statistical population was 120 persons of agricultural extension experts of Rafsanjan city were studied by survey. The main research tool was questionnaire. SPSS16 statistical software was used to analyze the data. Finding showed that about 38.5% of the experts (most frequency), in relation to improvement of pistachio marketing in Rafsanjan stated that pistachio marketing improvement is relatively desirable. Prioritizing the experts' views about prioritizing methods showed the mass methods as the most effective extension is the first priority and group and individual methods are the next priorities suitable, respectively. Also findings revealed that the best individual, group, and mass educational–extension methods affecting the pistachio marketing improvement are pioneer farmer, field trip, and usage of TV, respectively. In addition, commodity approach is the most effective approach which could be used in Rafsanjan Township.

Keywords: Extension – Educational Methods, Marketing, Pistachios.

# **INTRODUCTION**

Nonoil exports is one of the most important economical issues in Iran which should be highly considered to release the country from oil export [7]. Agricultural products have a main role in nonoil exportation and is very important in bringing exchange to the country so, according to the agricultural products` stage in any country's economy, these products` marketing is important, too [2].

Pistachio is on of the country's most important export products. According to the customs of Iran, at the end of 2010,123 thousand tons of different pistachio were exported to different countries having a 43 percent weight growth to the 86 thousand tones of the 9 months of last

year. Considering the rate of pistachios export during the 2010s, an ascending of export is seen. Kerman province is the first with a 24.4 percent production of garden products; with 31 thousand hectares of pistachio gardens (74 percent of area under cultivation), is the largest forest mass in the world and is the first because of a 46.5 percent of the country's pistachios production. Value added of Kerman's agriculture sector is 29.1 and 65 percent of Iran's economical and agricultural sectors, respectively. 28.4 percent of Kerman's workers and labor are working in the agriculture sector. Rafsanjan city provides 90 percent of the province's pistachio.

Inefficiency of the pistachio marketing in Iran is because of the incorrect harvest, lack of processing amenities, pistachio culturists unawareness of doing marketing services, lack information about the market demands, culturists unawareness of the target market, unneeded brokers and intermediaries, cooperatives inefficiency, low interest of the gardeners in the production system, little and divided lands, low performance per hectare compared with international standards, market's lower-than –standard facilities, weak payment for product and seasonal limitations, weak storage facilities, problems of suitable and on time accessibility to credits, farmer's inability to sell the product , farmers' weakness in dealing and bargaining, lack of market transparency and lack of coordination between the related sectors [6].

Marketing, in this study, is a set of activities in the stage of pistachio harvest and after it for a better and more profitable distribution including all extensional acts in the area of improving the harvest condition, harvest situation, collection methods, transportation, processing, packing and storage.

The first duty of marketing begins after the product production. Transportation is one of the basic marketing activities causing the market to be widespread. Packing means the protection, or act, granting the safety of the good from production to consumption. Processing is undeniable due to the differences between products` production form and consumption needs form in addition to the necessity of long term maintenance. Calibration means that production is divided into different groups based on their quality and suitable for market demands. Storage is also one of the most important marketing operations during which the product is maintained from the production date to date of consumption need [4].

Mousavi (2007) indicated that the respondents' rate of technical knowledge, for pricing and understanding the market, is at the lowest level and the pre-harvest activities were the most important educational needs of them. Furthermore, the presence of extension agent in the farm and holding extensional courses were identified as the most important and effective educational methods.

Ahmadi (2006) showed that gaining information from neighbors and friends is the most important education resource. Visiting the pioneer farms, contacting with extension agents, taking education courses, and having relation with agriculture services in addition to use educational videos, journals, and educational press were done at medium and low levels, respectively. Totally, there were not good and enough extension and educational activities [1].

Ekanem & Singh (2001) concluded that production and management were the most important educational needs of the small farmers in marketing [3].

Ford (1995) in his evaluation of small farmers` educational priorities, showed that most farmers are interested in individual training and considered the farm visit as the most important method [5].

The necessity of the study is undeniable, in one hand, due to the agriculture duty of extension and education in the area of product in-garden preparation, packing, protection, product quality improvement, and put a stop to its wastage and, in the other hand, holding necessary training courses about the product's way of harvest, transportation from garden to maintain centers, conditions of maintaining the product in the store, and the quantitative and qualitative improvement of both agriculture products and gardeners` life. Thus, this study is aimed at evaluating and identifying suitable extension and educational methods in marketing Rafsanjan`s pistachio.

# MATERIALS AND METHODS

This is an applied study. The analysis used in this study involved a combination of descriptive and quantitative research and the main methodology is descriptive (non-experimental) and correlation. Statistical population was 120 persons of agricultural extension experts of Rafsanjan city were selected by survey. The main research tool is questionnaire. Content and face validity were established by a panel of experts consisting of faculty members and some specialists. Minor wording and structuring of the instrument were made based on the recommendation of the panel of experts. A pilot study was conducted with 25 persons. Cronbach Alpha score was 0.86 %, which indicated that the questionnaire was highly reliable.

Dependent variable of this study is pistachio marketing, to assess it, 22 statements were used in the form of a five-point Likert scale (from completely undesirable to completely desirable), and the mean score of the answered questions was identified as the respondent's attitude. After computing the statements, they were examined on an interval scale.

For analysis data, central tendency (mean, median, and mode) and variability tendency (variance and standard deviation) were used. Statistical analysis was done through SPSS Version 16.

# RESULTS

Average age of the respondents was 35.5 years, most frequency was 31-35 years; most of them (81 percent) were men and the rest were women. Most of the experts had bachelor (65 percent) and MS (27.5 percent) degrees. Average activity experience of the experts was 8 years, most of them (48.2 percent) had between 1 and 5 years of working experience in the agriculture sector.

About 38.5% of the experts (most frequency), in relation to improvement of pistachio marketing in Rafsanjan, stated that pistachio marketing improvement is relatively desirable in the studied region. Only 11% of experts assessed the marketing situation as undesirable (Table 1).

Level	Frequency	Percent	Valid percent	Cumulative percent
Completely undesirable	14	12.1	12.8	12.8
Undesirable	12	10.3	11	23.9
Moderate	42	36.2	38.5	62.4
Desirable	26	22.4	23.9	86.2
Completely desirable	15	12.9	13.8	100
Non respond	7	6	-	-

Mode: Moderate Median: Moderate

In relation to prioritizing the pistachio marketing dimensions (Table 2), calibration is in the first priority and transportation, packing, harvesting, storage, and processing are the next priorities, respectively.

Dimensions	Mean	Sd	Priority	Mode
Calibration	3.28	1.26	1	Desirable
Transportation	3.2	1.22	2	Desirable
Packing	3.17	1.32	3	Desirable
Harvesting	3.16	1.22	4	Desirable
Storage	3.04	1.24	5	Desirable
Processing	2.96	1.20	6	Desirable

Table 2: Prioritizing respondents view in relation to dimensions of pistachio marketing

1: Completely undesirable, 2: Undesirable, 3: Moderate, 4: Desirable, 5: Completely desirable

#### - Individual methods

28.6% (most frequency) expressed that effect of individual educational-extension methods on pistachio marketing improvement is moderate. Only 12.5% of experts believed the effect of individual methods is very little (Table 3).

#### Table 3: Respondents view about individual methods effects in pistachio marketing (n=116)

Level	Frequency	Percent	Valid percent	Cumulative percent
Very little	14	12.1	12.5	12.5
Little	17	14.7	15.2	27.7
Moderate	32	27.6	28.6	56.2
Much	27	23.3	24.1	80.4
Very much	22	19	19.6	100
Non respond	4	3.4	-	-
	Mode Mo	lorato	Median · Mod	orato

*Mode: Moderate* Median: Moderate

To identify the suitable individual methods in pistachio marketing improvement, experts ere asked to evaluate the suitable methods. According to table 4, the first priority was the pioneer farmers. In addition, phone contact, meeting the clienteles at home and farm, visiting client from extension organization, informal contacts to clienteles and E-mail were the next priorities, respectively.

#### Table 4: Prioritizing respondents view in relation to suitability of individual methods

Individual Methods	Mean	Sd	Priority
Pioneer farmers	3.42	1.45	1
Contact phone	3.32	1.31	2
Visiting clienteles at home	3.3	1.25	3
Visiting clienteles at office	3.29	1.27	4
Informal contacts	3.29	1.27	5
Email	2.99	1.40	6

1: Very little, 2: Little, 3: Moderate, 4: Much, 5: Very much

### - Group methods

Most experts 30.4% stated that effect of group methods on pistachio marketing improvement is much. Only 10.7% of experts believed the effect of group methods is little (Table 5).

Level	Frequency	Percent	Valid percent	Cumulative percent
Very little	14	12.1	12.5	12.5
Little	12	10.3	10.7	23.2
Moderate	29	25	25.9	49.1
Much	34	29.3	30.4	79.5
Very much	23	19.8	20.5	100
Non respond	4	3.4	-	-
	Mode: Much		Median: Mucl	h

Table 5: Respondents view	about group metho	ds effects in pistachio	marketing (n=116)
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According to table 6, the first priority among group methods was the field trips. Moreover, question and answer sessions, result demonstration, informal discussion, method demonstration, field day, holding contests and lecture were the  $2^{nd}$  to  $8^{th}$  priorities, respectively.

Table 6: Prioritizing respondents view in relation to suitability of group methods

Group Methods	Mean	Sd	Priority
Field trips	3.57	1.21	1
Question and answer	3.55	1.31	2
Result demonstration	3.44	1.30	3
Informal discussion	3.42	1.27	4
Method demonstration	3.3	1.33	5
Field day	3.26	1.32	6
Holding contests	3.21	1.26	7
Lecture	3.18	1.35	8

1: Very little, 2: Little, 3: Moderate, 4: Much, 5: Very much

### - Mass Media methods

In relation to the effect of mass methods on pistachio marketing, in opinion of 31.8% (most frequency), the effect of these methods on pistachio marketing is much. Also 25.4% assessed this effect very little to little (Table 7).

Table 7: Respondents view about mass methods effects in pistachio marketing (n=116)
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Level	Frequency	Percent	Valid percent	Cumulative percent
Very little	14	12.1	12.7	12.7
Little	14	12.1	12.7	25.5
Moderate	21	18.1	19.1	44.5
Much	35	30.2	31.8	76.4
Very much	26	22.4	23.6	100
Non respond	6	5.2	-	-
	Mode:	Much	Median: Mucl	h

Mass Methods	Mean	Sd	Priority
TV	3.7	1.46	1
Radio	3.63	1.39	2
Exhibition	3.48	1.34	3
New electronic devices	3.38	1.48	4
Newspaper	3.36	1.42	5
Booklet	3.29	1.36	6
Poster	3.08	1.35	7

1: Very little, 2: Little, 3: Moderate, 4: Much, 5: Very much

According to Table 8, the first priority among mass methods was the usage of TV. Moreover, usage of radio, exhibitions, usage of new electronic devices, newspaper, booklet and posters were in the next priorities, respectively.

Prioritizing the experts` views about pistachio marketing improvement (Table 9), shows the mass methods as the most effective extension method with the maximum average is the first priority; group and individual methods are the next priorities suitable for pistachio marketing improvement, respectively.

Extension Methods	Mean	Sd	Priority
Mass	3.4	1.32	1
Group	3.35	1.27	2
			_

Individual3.231.231: Very little, 2: Little, 3: Moderate, 4: Much, 5: Very much

# - Extension approaches

Prioritizing in relation to extension approaches indicates that the commodity approach with the maximum average is in the first priority. Participation, cost sharing, project, and common approaches are the  $2^{nd}$  to  $5^{th}$  priorities affecting the pistachio marketing improvement (Table 10).

Table 10: Prioritizing respondents view in relation to suitability of extension approaches

Mass Methods	Mean	Sd	Priority
Commodity	3.61	1.08	1
Participation	3.38	1.03	2
Cost sharing	3.35	1.1	3
Project	3.24	1.1	4
Common	3.19	1.1	5

1: Very little, 2: Little, 3: Moderate, 4: Much, 5: Very much

# DISCUSSION

Results showed that the best individual, group, and mass educational-extension methods affecting the pistachio marketing improvement are pioneer farmer, field trip, and usage of TV, respectively. In addition, commodity approach is the most effective approach which could be used in Rafsanjan Township. Results of studies by Ahamadi (2006), Ekanem & Singh (2001), and Ford (1995) confirmed that marketing is affected by the educational methods, which is confirmed by this study, too.

The followings are suggested according to the results of this study:

- Using the mass (TV), group (field trip), and individual (pioneer farmer) educational –extension methods, respectively, in Rafsanjan is suggested.

- Holding educational –extension courses for gardeners related to the product harvest's new method and reduction of the pistachio waste amount in the region.

- Results showed that commodity approach is the most effective approach, so it is suggested for this region.

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