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INFLUENCING FACTORS ON MARKETING OF CITRUS VIEWPOINT OF HORTICULTURE OF IRAN

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ABSTRACT

The aim of this study was to determine influencing factors on marketing of Citrus in Sari County. The methodological approach of this study was descriptive- correlative. The research population consisted of 18830 horticulturists, which was selected using stratified randomizing sampling method (n=330). Validity of the instrument was established by a panel of experts consisting of senior faculty members in agricultural extension and education department, and research committee advisors. Reliability analysis was conducted by using and Cronbach alpha formula and result was 0.89. Variables of age, experience, garden acreage, orange garden acreage, drip irrigation acreage, yield, connect to experts, cost-benefit and effect of extension- education activities with marketing of Citrus had been relationship of positive and significant. The results of the multiple regression analysis (stepwise method) revealed that the variables of garden acreage, effect of extension- education activities, yield, cost-benefit ratio and connect to experts in five steps explained a variation of 50.7% of marketing of Citrus.

Keywords: *Marketing of Citrus, Horticulturist, Sari County*

INTRODUCTION

Historically agriculture has played the most important role in the production of food items as well as many materials. There are many areas of agricultural products namely staples, raw material items like cotton, pulses etc, and succulent and nutritious fruits. In recent times fruits play the key role in enhancing trade and business of food items worldwide. The most wonderful gift given to humanity is the large varieties of fruits, especially citrus because of this distinct taste, quality and nutritional values (Tahir, 2004).

Globalization and technological advancement are key challenges to the business world in the 21st century. Countries, which would not cope with the changing environmental conditions, they are devastated. Developing countries like Iran need to concentrate on their comparative advantages, not only to survive in the global marketing competition but also benefit from globalization through fast means of communication and distribution through fast means of communication and distribution (Singh, 2012).

Inadequate and inefficient agricultural marketing system is known to be one of the principal reasons for failure of agricultural development and improvement of production and income in developing countries. Most of the field surveys done by agriculture experts now indicate that the present agricultural marketing system has been unable to adjust to the existing conditions. There is a general agreement that there is an inefficient marketing system for most of the agricultural products (Roy, 2012).

Generally, there are several challenges involved in citrus marketing of Iran according to a report by Agricultural Organization which include too many vultures that eat away the benefits that the gardeners are supposed to get, The producer's low portion of final price, high marketing cost coefficient, high wholesale margin and high growth of wholesale margin, high wholesale marketing net charge, high portion of marketing cost from farmer price and the role of the wholesale market in inefficiency of the citrus market. According to the same organization, the root of all these problems is the lack of an efficient marketing system which is caused by the lack of supporting policy, the lack of unanimous marketing cooperatives in the province, the shortage of processing factories in the province, the lack of systematic plans for construction of cold stores and prevention of the waste, and inaction regarding the removal of middlemen, brokers and commission agents (Agriculture Organization of Mazandaran, 2013).

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The study by Benfica and Mather (2013) demonstrated that it is significant to make investments to enhance and improve small-scale farmers' cooperation and performance in regard with infrastructures of building rural roads, developing the distribution of supplies, easy access to the information of the agriculture market, supporting local stores, and developing electricity in the rural areas.

Abdullah and Hossain (2013) in their study report that there are a big number of middlemen in the agriculture market to whom the farmers have to sell their products owing to an inefficient marketing system. They suggest that agricultural cooperatives and producers' organization be established and take over the responsibilities of collecting the raw material required by the farmers, managing the credits, developing the information system, and marketing which includes marketing research, collecting products, determining prices, distributing properly, transporting, storing, etc. This, they think, could be a strategy to reduce the share of the middlemen in the market.

Roy (2012) states that farmers seek minimum profit these days as they are in serious need of, and stressed by marketing their products. The government has so far failed to satisfy their needs. Hence, foreign and home investment could act as a big catalyst in the market to overcome the problems in the supplies, shortage of credits, and the presence of middlemen. Singh (2012) considers unavailability of enough credit, high costs of irrigation, irregular access to electricity, unavailability of manure and quality seeds, lack of proper means of transportation, shortage of processing equipment to be some of so many problems in agriculture marketing. What he thinks to be effective is activating the public sector, educational and extensional programs supported by the government, and building centers in the vicinity of the production centers to sell products directly.

Al-Oun (2012) in his study finds that some of the obstacles which small and average scale producers face due to in inefficient marketing system include producers' falling incomes, the government's strategies and policies involving the low communication between the farmers and the local governmental organizations, a poor pricing system, and increasing prices for the consumers owing to the middlemen. What he proposes includes improving the communication between the producers and the government, supporting their production, increasing educational and training activities according to the local needs, simplifying access of agriculture sector to semi capitals such as none-agricultural jobs, training and supplying agricultural labor, simplifying and improving opportunities for the producers to get low-interest loans to be paid after the harvest, and controlling pricing.

Chizari and Heidari (2010) found out that price support policy was not efficient for the maize market regulation. Furthermore, since government intervention in the market did not result in stabilization and regulation of maize market in practice, so the support from private sector and less restriction on trade are suggested. Balarane and Oladele (2012) and Vadivelu and Kiran (2013) demonstrated the positive effect of informing agricultural producers of trade and market, that is who buys the product, what quantity of the product should be produced, and what the price should be. Yao *et al.*, (2013) indicated capabilities of agricultural product marketing in China. Their conclusions shows that marketing capabilities of China's agricultural science and technology enterprises are categorized into seven aspects, channel management, new product development, brand management, pricing and information management, marketing communication, selling, marketing planning and implementation.

The purpose of this study was to determine influencing factors on marketing of Citrus. In order to achieve this objective, specific objectives are presented as below:

- Study of marketing of Citrus
- Relation of horticulture's personal, farming, social, economical, educational- extension characteristics with marketing of Citrus
- The role of horticulture's personal, farming, social, economical, educational- extension characteristics on marketing of Citrus

MATERIALS AND METHODS

In relation to objective, this research is functional, since the results can be employed by programmer and policy makers. In order to reach precise and reliable data we used quantitative method. Because this

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research simply investigates existed conditions and defines them and there is no possibility to control or manipulate the variables, it is descriptive. Because the gathering of information about the views, beliefs, thoughts and behaviors or group characteristics of a society is statistical and also it is under recognition, so it is measuring. Furthermore, because it investigates and analyzes the relations between independent and dependent variables, it is correctional. The research population consisted of 18830 horticulturists, which was selected using stratified randomizing sampling method (n=330).

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. We gave the questionnaire to 30 horticulturists which were similar to statistical society in regional, economical, cultural and social conditions. After gaining the data concluded the Cronbach alpha coefficient for all the variables with degree scale of 89%. Dependent variable was marketing of Citrus. Independent variables include horticulture's personal, farming, social, economical, educational- extension characteristics.

Personal characteristics (age, experience), farming characteristics (garden acreage, orange garden acreage, drip irrigation acreage, agro ecological situation, age of garden, number of pieces of garden), social characteristics (social participation), economic characteristics (yield, cost-benefit ratio) educational-extension characteristics (connect to experts, effect of extension- education activities).

RESULTS AND DISCUSSION

Marketing of Citrus

The marketing of Citrus was measured by 10 questions including: 6 pieces spectrum of likret. Score giving to the mentioned spectrum was as follows: none=0, very low=1, low=2, average=3, high=4, very high=5. Then, the maximum score was 50, and the minimal was zero. Table 1 illustrates the mean, coefficient of variance (C.V) and the rank of each question related to marketing of Citrus, from the viewpoint of horticulture. According to the table, health apparent, more marketable, appropriate packaging and appropriate sorting had been important related to marketing of Citrus. Table2 shows the marketing of Citrus. According to results, 12.6 percent of horticulture expressed that marketing of Citrus was moderate, 69.1 percent answered that it was good and the 18.3 percent answer was very good. The mean of marketing of Citrus was 36.1 and its measure standard deviation (SD) was 5.5.

Table 1: Priority of related questions with marketing of Citrus

Items	M	SD	C.V	Rank
Health apparent	3.91	0.67	0.172	1
More marketable	3.86	0.68	0.177	2
Appropriate packaging	4.00	0.72	0.180	3
Appropriate sorting	3.58	0.72	0.201	4
More retention	3.56	0.80	0.224	5
Appropriate storage	3.74	0.86	0.231	6
Suitable transportation	3.41	0.85	0.248	7
Suitable places for sale	3.39	0.85	0.252	8
Suitable price for sale	3.45	0.93	0.269	9
Existence of suitable store	3.22	0.87	0.271	10

None=0, very low=1, low=2, average=3, high=4, very high=5

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Table 2: Marketing of Citrus from the viewpoints of participants

Situation	Frequency	Percentage	Cumulative percentage
Very bad(0-10)	0	0	0
Bad(11-20)	0	0	0
Moderate(21-30)	40	12.6	12.6
Good(31-40)	219	69.1	81.7
Very good(41-50)	58	18.3	100
Total	317	100	-

M = 36.1 SD = 5.5

Relation of Horticulture's Personal, Farming, Social, Economical, Educational- Extension Characteristics with Marketing of Citrus

Table 3 showed intensity, relation orientation and a meaningful level of horticulture's personal, farming, social, economical, educational- extension characteristics with marketing of Citrus. As the table shows age, experience, garden acreage, orange garden acreage, drip irrigation acreage, yield, cost-benefit ratio, connect to experts and effect of extension- education activities have 99 percent of meaningful and positive relation with marketing of Citrus.

Table 3: The relation of horticulture's personal, farming, social, economical, and educational-extension characteristics with marketing of Citrus

Variables	Pearson correlation coefficient	Significant level
age	0.189**	0.008
experience	0.175**	0.000
garden acreage	0.463**	0.000
orange garden acreage	0.696**	0.000
drip irrigation acreage	0.227**	0.000
agro ecological situation	0.027	0.632
age of garden	0.116	0.184
number of pieces of garden	0.120	0.144
social participation	0.036	0.577
yield	0.439**	0.000
cost-benefit ratio	0.337**	0.000
connect to experts	0.368**	0.000
effect of extension-education activities	0.447**	0.000

*p<0.05 **p< 0.01

The Role of Horticulture's Personal, Farming, Social, Economical, Educational- Extension Characteristics on Marketing of Citrus

In order to predict the role of research variables on marketing of Citrus, we used step by step regression. Analyzing the regression enables the researcher to predict the variance of dependent variable through independent variables and determine the role of every independent variable in explanation of dependent variable. In step by step method, the strongest variables enter the equation one after another. This process goes on until the errors of meaning exam reaches to 0.05 errors. Results showed garden acreage, effect of extension- education activities, yield, cost-benefit ratio and connect to experts enter the equation in five of steps, respectively. This means that garden acreage have the highest influence on marketing of Citrus.

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This variable alone explained 29.5 percent of variance in dependent variable. Garden acreage and effect of extension- education activities communally explained 44.8 percent of variance in dependent variables, in step two. In final, garden acreage, effect of extension- education activities, yield, cost-benefit ratio and connect to experts in five steps explained a variation of 50.7% of marketing of Citrus.

Table 4: Analyzing the regression of marketing of Citrus

Step	R	R Square	Adjusted R Square	F	sig
1	0.543	0.295 ^a	0.291	127.78	0.000
2	0.669	0.448 ^b	0.443	84.65	0.000
3	0.684	0.467 ^c	0.461	68.44	0.000
4	0.698	0.487 ^d	0.479	59.05	0.000
5	0.712	0.507 ^e	0.496	45.47	0.000

a: garden acreage,

b: garden acreage, effect of extension- education activities

c: garden acreage, effect of extension- education activities, yield

d: garden acreage, effect of extension- education activities, yield, cost-benefit ratio

e: garden acreage, effect of extension- education activities, yield, cost-benefit ratio, connect to experts

Table 5: The standardized and non- standardized coefficients of marketing of Citrus

Variables	B	Beta	t	Sig
garden acreage	0.54	0.70	13.51	0.000
effect of extension- education activities	0.21	0.33	6.29	0.000
yield	0.013	0.23	4.11	0.000
cost-benefit ratio	0.089	0.14	3.18	0.002
connect to experts	0.16	0.08	1.93	0.05
Constant	0.47	-	2.46	0.014

According to the amount of beta in table 5, we can write the regression equation as follows:

$$Y = 0.70X_1 + 0.33X_2 + 0.23X_3 + 0.14X_4 + 0.08X_5$$

X₁ = garden acreage

X₂ = effect of extension- education activities

X₃ = yield

X₄ = cost-benefit ratio

X₅ = connect to experts

Conclusions

This study aimed at studying the marketing of Citrus, indicated that more of the respondents (87.4 percent) believed that marketing of Citrus was good and very good. According of results health apparent, more marketable, appropriate packaging and appropriate sorting had been important related to marketing of Citrus. Results from analyzing the Pearson correlation showed that age, experience, garden acreage, orange garden acreage, drip irrigation acreage, yield, cost-benefit ratio, connect to experts and effect of extension- education activities have 99 percent of meaningful and positive relation with marketing of Citrus. Furthermore, the results of step- by- step regression illustrated that garden acreage, effect of extension- education activities, yield, cost-benefit ratio and connect to experts in five steps explained a variation of 50.7% of marketing of Citrus. These results conform to the researches of Benfica and Mather (2013), Abdullah and Hossain (2013), Roy (2012), Al-Oun (2012), Chizari and Heidari (2010). For improvement marketing of citrus suggest establish stores of Health and citrus own and in during the harvest implement price stability. Also Greater importance given to the needs and trends of customers and activities of processing are spread.

For improvement marketing of citrus suggest Extension activities in the horticulture with higher level, they do. Also relationship between expert and gardeners are more.

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For improvement marketing of citrus suggest increasing yield among the farmers is necessary and they encourage toward more Profitability.

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