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Research Article

ANALYZING SATISFACTION OF RICE FARMERS REGARDING AGRICULTURAL EXTENSION AND EDUCATION METHODS

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ABSTRACT
The purpose of this research was to analyze satisfaction of farmers regarding agricultural extension and education methods for rice farming. The research method employed was correlative-descriptive. The population consisted of rice farmers in Khuzestan Province of Iran. A random sample of farmers (n =155) was selected. The questionnaire was developed to collect data. Content and face validity were established by a panel of experts. Questionnaire reliability was estimated by calculating Cronbach's alpha. Reliability of the overall instrument was estimated at 0.89. Data collected were analyzed using the statistical package for the social sciences (SPSS). Appropriate statistical procedures for description (frequencies, percent, means, and standard deviations) were used. Based on the results, the satisfaction of farmers regarding educational methods was moderate. Based on farmers idea, participatory rural appraisal method (CV=0.278), on farm education (CV=0.288), demonstration farms (CV=0.299) and workshop (CV=0.320) were better than other methods. Liner regression was used to predict changes in farmer's satisfaction with respect to agricultural education methods. Educator's knowledge, using need assessment, education atmosphere, considering learning by doing in education, time of education, inform to farmers about time of programs may well explain for 66.3% changes (R^2 = 0.663) in farmer's satisfaction with respect to agricultural education methods for rice farming.

Keywords: *Satisfaction, Agricultural Extension and Education Methods, Rice Farming*

INTRODUCTION
Agricultural extension and education programs were originally conceived as a service to "extend" research-based knowledge to the rural sector in order to improve the lives of farmers. Extension thus included components of technology transfer, broader rural development goals, management skills, and nonformal education (Davis, 2009). The role of Agricultural extension in national agricultural development is pertinent. It has been established that no nation will have real growth in the agricultural sector without effective extension service. The Agricultural Extension Organization (extension workers and services) have an important role to play in order to actualize the crucial role of agricultural extension in national development (Anaeto *et al.,* 2012).
The traditional view of extension in developing countries was very much focused on increasing production, improving yields, training farmers, and transferring technology. Today's understanding of extension goes beyond technology transfer to facilitation, beyond training to learning, and includes helping farmers form groups, deal with marketing issues, and partner with a broad range of service providers and other agencies. Agricultural extension can thus be defined as the entire set of organizations that support people engaged in agricultural production and facilitate their efforts to solve problems; link to markets and other players in the agricultural value chain; and obtain information, skills, and technologies to improve their livelihoods (Davis, 2009).
Many farmers in rural areas do not have the most up-to-date information on how to grow food efficiently and economically. Improving their knowledge of new techniques and technologies, in addition to providing them with any physical resources necessary for implementation, can dramatically increase the farmer's level of productivity (Rosegrant and Cline, 2003). Agricultural education still plays an important role in the structural support of the agrifood sector (Mulder and Kupper, 2006). Many countries established their agricultural extension systems in order to realize their national food security goals (Swanson, 2009; Hu *et al.,* 2009). The term "agricultural extension" is a professional communication

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intervention deployed by organizations to disseminate agriculture knowledge and technologies to rural communities. Extension has a long history, based on adult education, communication science, community development, rural development and international development and has strong linkages with agriculture research and practice (Karbasioun *et al.,* 2007).

MATERIALS AND METHODS

The research method employed was correlative-descriptive. The population consists of rice farmers in Khuzestan Province of Iran. A random sample of farmers (n = 155) was selected. The questionnaire was developed to collect data. Content and face validity were established by a panel of experts. A pilot test was conducted. Questionnaire reliability was estimated by calculating Cronbach's alpha. Reliability for the overall instrument was estimated at 0.89. Data collected were analyzed using the statistical package for the social sciences (SPSS). Appropriate statistical procedures for description (frequencies, percent, means, and standard deviations) were used.

RESULTS AND DISCUSSION

Table 1 shows the demographic profile and descriptive statistics. The results of descriptive statistics indicated that the majority of farmers were men; the majority of farmers was 40-50 years old (30.32%) and had high school degree status. Information regarding the satisfaction level of farmers regarding agricultural education methods for rice farming is recorded in Table 2. As can be seen from Table 2, the highest rank refers to the level of satisfaction about time of educational programs (M=3.194, sd=0.98, CV = 0.307) and the lowest rank refers to type of educational methods (M=2.535, sd=1.05, CV=0.414). Table 4 shows based on the number of items (n = 6), and minimum and maximum acquisition score (min = 1, max = 5), range perception scores between 6 and 30 will vary. This range was divided into 5 categories. People who score was 6 to 11 in very disagree group, who had scored 11 and 16 in the group disagree, people who 16 to 21 were in the group unsure, who had a score of 21 to 26 in the group agree, and those who score 26 to 30 were in the group very agree.
Table 4 shows the attitude values of the participating those farmers had with extension services. Farmers rated exhibitions, field visits and office visits with the highest attitude values (1.85, 1.63 and 1.67), respectively.

Table 1: Demographic Characteristics of specialists

Age	***f***	**%**	**Cumulative %**
20-30	17	10.97	10.97
30-40	44	28.39	39.35
40-50	47	30.32	69.68
50-60	25	16.13	85.81
60-70	14	9.03	94.84
70-80	8	5.16	100.00
Total	155	100	
Level of Education (year)			
0	20	12.90	12.90
1-5	31	20.00	32.90
6-9	32	20.65	53.55
9-12	45	29.03	82.58
12<	27	17.42	100.00
Total	155	100	

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Table 2: Satisfaction level of farmers regarding agricultural extension education characteristics for rice farming

Education methods characteristics	Very disagree		Disagree		Unsure		Agree		Very agree		Mean	SD	CV	Rank
	f	%	*f*	%	*f*	%	*f*	%	*f*	%				
Time of educational programs	26	16.77	23	14.84	36	23.23	35	22.58	35	22.58	3.194	0.98	0.307	1
Content of educational programs	33	21.29	25	16.13	39	25.16	33	21.29	25	16.13	2.948	0.99	0.336	2
Educators	36	23.23	33	21.29	43	27.74	23	14.84	20	12.90	2.729	1.01	0.370	3
Goal of educational programs	39	25.16	35	22.58	44	28.39	19	12.26	18	11.61	2.626	0.98	0.373	4
Educational equipments	38	24.52	39	25.16	45	29.03	24	15.48	9	5.81	2.529	1.03	0.407	5
Type of educational methods	39	25.16	41	26.45	44	28.39	15	9.68	16	10.32	2.535	1.05	0.414	6

Table 3: Frequency of farmers based on satisfaction regarding agricultural extension education methods for rice farming

Groups	*f*	%	Cumulative %
Very Agree	44.00	28.39	28.39
Agree	32.00	20.65	49.03
Unsure	33.00	21.29	70.32
Disagree	26.00	16.77	87.10
Very Disagree	20.00	12.90	100.00
Total	155	100.00	

Table 4: Satisfaction level of farmers regarding agricultural extension education methods for rice farming

Groups	*Mean*	SD	CV	Rank
participatory rural appraisal method	3.89	1.08	0.278	1
Field visits (on farm education)	3.65	1.05	0.288	2
demonstration farms	3.45	1.03	0.299	3
Workshops	3.09	0.99	0.320	4
Agricultural exhibitions	2.98	1.01	0.339	5
Seminars, lectures, discussions	3.12	1.08	0.346	6
Leaflets	3.09	1.11	0.359	7
Mass media	3.33	1.24	0.372	8
Office visits	2.88	1.12	0.389	9

Spearman coefficient was employed for measurement of relationships between independent variables and dependent variable. Table 5 displays the results which show that there is a relationship between satisfaction level of farmers as dependent variable and independent variables. Based on the results there was correlation between educators's knowledge, using need assessment, education atmosphere,

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considering learning by doing in education, time of education, inform to farmers about time of programs and satisfaction level of farmers in 0.01 level.

Table 5: Relationship between satisfaction level of farmers and independent variables

Independent variable	Dependent variable	r	p
Educator's knowledge	Satisfaction level of farmers	0.545	0.000
Using need assessment		0.553	0.000
Education atmosphere		0.654	0.000
Considering learning by doing in education,		0.576	0.000
Time of education		0.845	0.000
Inform to farmers about time of programs		0.754	0.000

Table 6: Multivariate regression analysis

Independent variable	B	Beta	T	Sig
Educator's knowledge	0.733	0.378	2.767	0.000
Using need assessment	0.545	0.486	3.977	0.000
Education atmosphere	1.365	0.665	3.568	0.000
Considering learning by doing in education,	0.476	0.745	2.867	0.000
Time of education	0.765	0.676	2.765	0.000
Inform to farmers about time of programs	1.565	0.765	1.567	0.000
Constant	2.980	----	3.907	0.000

R^2=0.663 F=11.653 Sig= 0.000

Table 6 shows the result for regression analysis by stepwise method. Liner regression was used to predict changes in farmer's satisfaction with respect to agricultural education methods for rice farming. Educator's knowledge, using need assessment, education atmosphere, considering learning by doing in education, time of education, inform to farmers about time of programs may well explain for 66.3% changes (R^2 = 0.663) in farmer's satisfaction with respect to agricultural education methods for rice farming.

Conclusion

The results of this study revealed that the satisfaction of farmers regarding educational methods was moderate. This attitude means that the farmers were not satisfied with these services. Based on farmers idea, participatory rural appraisal method (CV=0.278), on farm education (CV=0.288), demonstration farms (CV=0.299) and workshop (CV=0.320) were better than other methods. Liner regression was used to predict changes in farmer's satisfaction with respect to agricultural education methods for rice farming. Educator's knowledge, using need assessment, education atmosphere, considering learning by doing in education, time of education, inform to farmers about time of programs may well explain for 66.3% changes (R^2 = 0.663) in farmer's satisfaction with respect to agricultural education methods for rice farming. In light of the findings from the study, the following recommendations, among others, were made:

• Extension activities should be planned with the full involvement of farmers to increase their level of participation
• Qualified extension staff should be provided
• Training of the present extension staff should be addressed
• Agencies that can be involved and participate in providing extension services should be identified

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