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An Examination of Extension Programs Regarding Ranchers of Twoiserkan Township, Iran

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Abstract: Evaluation is on of the important steps in program developing and has different kinds. It should be done throughout the program implementing. One of the most important dimensions of extension and educational program's evaluation is "evaluation of effectiveness". Hence, the major purpose of this study was to assess the effectiveness of the extension and educational programs offered to ranchers and implemented by the ministry of Jahad-e-Agriculture. The research design used was a static-group comparison method. The population of this study included two statistical groups. The test group was consisted of all participants in educational programs in Twoiserkan township (N=130). A sample obtained through systematic sampling (n=100). Eighty numbers of this sample answered to the mailed questionnaires. In addition a simple randomized sample was drown from the control group, non-participants in educational programs (n=80). The questionnaires were completed by interview. Face validity and content validity of the questionnaire were established using a panel of experts consisting of agricultural extension and education specialists and natural resource experts. The questionnaire was field-tested. To analyze the reliability of the questionnaire Cronbach's alfa coefficient was employed. Results obtained from t-test indicated that there is significant difference between technical knowledge and awareness of groups. Also, educational traits of these programs have approximately been evaluated appropriate. There is strong relationship between the extent of farmer participation in argument about educational programs with their satisfaction. Moreover, according to ranking means the most useful teaching method was practical method.

Key words: Effectiveness · Extension and Educational Programs · Range Management

INTRODUCTION

Natural resources have high value of in environmental and socio-economic development they are being gradually destroyed due to population growth, over exploitation, lake of people's knowledge, insufficient educational programs and low level of environmental conservation practices in developing countries. Agricultural education and extension organizations are not always structured to deal with the complexity of this issue [1].

According to the published statistics, in Iran, in every year there is 1/5 million tons of soil erosion. Also, according to the results of a study implemented by FAO, in terms of soil degradation in eight countries in the middle Asia, Iran has the worst situation in soil depredating among the middle Asia countries [2].

Rangelands cover ninety million hectares (55%) of the area of Iran. Statistics indicates that in every year 130 thousands hectares of rangelands in Iran are destroyed. Also, in Hamedan province in every year, there is 855 thousands tons of soil erosion (yearly 8000 to 10000 kg in each hectare) and 900 million m3 waste of water. Rangelands cover 88263 hectares(60. 36%) of the area of Twoiserkan township [3]. Increasing concern with environmental protection and the preservation of natural resources makes research and teaching on subjects such as crop protection and integrated pest management, rational use of fertilizers and soil and water conservation more pressing. In addition, farmers need to have the knowledge, skills and attitudes required for sustainable agricultural and rural development [4].

Regarding the direct relation of natural resources to sustainable agricultural development, Hence, environmental educations must be dominated in extension

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and education programs [5]. Moreover, importance and roles of natural resources should be educated to all people using various teaching methods [6].

Educations in terms of natural resource subjects are more considered in many of countries through out the world. Raising the level of people's knowledge and improving their activities is among the most effective ways of sustainable development of natural resources [7]. Extension services is responsible for offering educational programs to ranchers and foresters of Iran, relating to protection, conservation, restoration and sustainable exploitation of rangelands so that they adopt and use the new introduced technology and range management plans.

Studies have indicated that one of the problems in degradation of rangelands is that: the number of domesticated animals grazing in the rangelands is more than the capacity of rangelands available. Obviously extension has an important role in protection of rangelands by offering educational programs to ranchers so that ranchers adopt and use the new introduced technology and range management plans and equilibrate their sheep and goats with region's rangelands [8].

In order to determine the usefulness and the effects of educational programs and to make needed improvements, they should be evaluated [9]. One of the most important dimensions of extension and educational program's evaluation is "evaluation of effectiveness" [10].

Therefore, the primary purpose of this study was to assess effectiveness of the extension and educational programs offered to ranchers to protection of rangelands in Twoiserkan township, Iran. Specific objectives of the study were to: (1) describe the demographic profile of participant farmers and users of Twoiserkan township, (2) assess quality of educational programs being offered to ranchers, (3) determine rancher's preference of extension teaching methods, (4) investigate the relationships between the extent of participant' satisfaction and the characteristics of the extension and education programs in terms of rangelands management and (5) compare participants and non- participants' technical knowledge and awareness relating to rangelands management.

MATERIALS AND METHODS

This study was conducted in the township of Toiserkan, located in the west part of Iran. The population of this study included two statistical groups. The test group was consisted of all participants in educational programs in Twoiserkan township (N=130). According to the table for determining sample size for research activities [11], a sample obtained through systematic sampling (n=100). Eighty numbers of this sample answered to the mailed questionnaires. In addition a simple randomized sample was drown from the control group, non-participants in educational programs (n=80). Considering investigation on the relations between variables, this research is a descriptive-correlation research [12].

The research design used was a static-group comparison method. From a review of the literature, the researchers developed an instrument to collect data. The instrument was divided into two sections. The first section was designed to gather data on personal characteristics of farmers, included gender, age, years of work experience, level of education and so on. The second section was designed to gather data about farmers perceptions with respect to educational traits of implemented extension programs in terms of natural resource management and the extent of farmers' knowledge and awareness, attitude, social participation. Respondents were asked to rate their viewpoints concerning these concepts on a five point Likert-type scale:(5 = very much, 4 = much, 3 = moderate, 2 = low and 1 = very low).

Face and content validity of the questionnaire were established using a panel of experts consisting of agricultural extension and education specialists and natural resource experts. Questionnaire reliability was estimated by calculating Cronbach's alpha coefficient. Reliability for the instrument was estimated at 0.81. After gathering and encoding information from the questionnaires, data was obtained for analysis. Data collected were analyzed using the statistical package for the social sciences (SPSS, 14). Beside descriptive statistics, analytical statistics (t -test) were employed for detailed analysis.

RESULTS

Descriptive Statistics: The first objective was to describe the demographic profile of the participant farmers and users of Twoiserkan township, Iran. The average age of participants was 42 years. The minimum age of participant respondents was 20 and the maximum age was 80. Majority of respondents were men (88%). Ninety-three percent of ranchers were married. Regarding respondents' education levels, a greater proportion of participants (40/9%) were illiterate. Only 2/3% of participants had high school education. Forty-eight percent of ranchers had less than 20 years of work experience. Their average work experience was 21 years. Median of participants domesticated animals was 21 head of sheep and goats. 70.7 % of the participants had less than 65$ income monthly.

Table 1: Frequencies of participant respondents' satisfaction regarding extension programs

Satisfaction	Frequency	Percent (%)	Cumulative percent
Low	9	19.6	19.6
Moderate	21	45.7	65.2
Much	12	26.1	91.3
Very much	4	8.7	100.0

Mean= 3/23 St. d = 0.87 (5 = very much, 4 = much, 3 = moderate, 2 = low and 1 = very low)

Source: Results of research

Table 2: Ranking means of the educational methods

Educational methods	n	St.d	Mean	Rank
Practical methods	56	0.88	4.26	1
Extension films	66	1.12	3.39	2
Farm visits	80	1.31	3.28	3
TV. agricultural programs	76	1.44	3.10	4
Extension publication	46	1.04	3.08	5
Radio agricultural programs	76	1.25	2.93	6
Lectures	80	1.17	2.73	7

(5 = very much, 4 = much, 3 = moderate, 2 = low and 1 = very low)

Source: Results of research

Table 3: Results of correlation analysis for the characteristics of the educational programs and participants' satisfaction

Educational traits of extension programs	r	Sig.
Encouragement of learner Participation to argue on the educational material	0.76	0.000**
Expression ability of educator	0.77	0.000**
Facilities	0.69	0.000**
Establishment of friendly relationship	0.64	0.000**
Clearness of educational material	0.61	0.000**
Being applied and usefulness of educational material	0.59	0.000**
Time of delivering educations	0.53	0.000**
Newness of educational material	0.39	0.007**

P<0.01** (r)=Spearman's correlation coefficient source: results of research

Table 3: Results of t - test for participants and Non-Participants' knowledge and awareness

Variable	Groups	n	Mean	t-test	Sig.
Technical knowledge and awareness	1	46	4.41	5.02	0.000*
	2	66	3.84		

P< 0.05 * (1) Participants group (2) Non-Participants group source: results of research

The second objective was to assess quality of educational programs being offered to ranchers. Participant ranchers were asked to indicate on a five-point scale the quality (5 = very much, 4 = much, 3 = moderate, 2 = low and 1 = very low) of educational programs traits they received from extension. Based on the participants perception, extension agents received the highest rating (mean=3) followed by educational materials content (mean= 2/2), time, location and facilities (mean=2) and the teaching methods received the lowest rating (mean=1/66). Also, results of the assessment of participants' satisfaction regarding extension programs concerning their educational traits have been shown in Table 1.

The third objective was to determine rancher's preference of extension teaching methods. Findings have been shown in Table 2. Preferred method in agricultural education was practical method (mean=4/26) and the lecture received the lowest rating for desirability (mean=2/73). Ranchers also stated that farm visit is an important method in extension and education (mean=3/28).

The fourth objective was to investigate the relationships between the characteristics of the educational programs and the participants' satisfaction. The results obtained from calculating correlations between variables showed positive and statistically significant relations between variables. Results from correlation analysis are shown in Table 3.

According to the results of the table, there is strong relationship between the extent of farmer participation in argument about educational programs with their satisfaction.

Analytical Statistics: The fifth objective was to compare participants and non- participants' technical knowledge and awareness relating to rangelands. Technical knowledge and awareness of the respondents of each group was assessed and calculated through a test consisting thirteen technical question in terms of range management. Results obtained from t-test indicated that there is statistically significant difference between technical knowledge and awareness of groups. Results from t-test are shown in Table 3.

According to the results of the table, with regard to the means, the technical knowledge and awareness of participants regarding range management is more than the technical knowledge and awareness of non-participants. Hence, it was resulted that, implemented and offered extension and educational programs to ranchers, have been effective to increase and enhance farmers' technical knowledge and awareness related to range management.

CONCLUSION AND DISCUSSION

The educational importance of this study is focused on the program development. The results of this study will provide extension workers with better understanding with respect to teaching methods, timing and location. Of particular, interest was the desire of ranchers to be more actively involved in extension and education programs towards a participatory approach. Therefore, managers, extension specialists and agents should use and apply participatory methods and approaches such as participatory rural assessment, rapid rural appraisal for planning and delivering natural resource extension programs.

Based on the findings of the present study, it is recommended that, the government and extension services must apply mass media (such as TV) regarding range management educations. Very few farmers benefit from educational programs. It is the opinion of this paper that the extension and educational programs should be delivered and implemented for young rural people and children with respect to conservation and proper using of natural resources for future generation.

Also, extension services must continue to deliver such educational programs to various farmers to benefit from these programs. Because, according to the result of this study, implemented and offered extension and educational programs to ranchers, have been effective to increase and enhance farmers' technical knowledge and awareness related to range management.

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