

# Educational and Support Needs of the Agricultural Extension Agents in Isfahan Province, Islamic Republic of Iran

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## ABSTRACT

The purpose of the study was to identify and prioritize the educational needs and support needed by agricultural extension agents in Isfahan, Islamic Republic of Iran. The target population for the study consisted of 53 agricultural extension agents in Isfahan province. Census population were used therefore, sampling procedures were not utilized and generalizability of the results was limited to study population. Results indicate the five most highly ranked items on educational needs of extension agents were: extension philosophy, instructional technology, innovation and adoption process, adult education, and extension methods. Respondents indicated that the major support needed were availability of subject matter specialists to help them with their technical and communication methods.

Keywords: Extension agent, Subject matter specialist, Educational need , Field trip.

## INTRODUCTION

If agricultural extension agents are to improve in their on-the-job effectiveness, they must receive continuous in-service training according to their educational needs. Accordingly, an educational needs assessment is essential. Once the relative needs are determined and an appropriate listing of priorities are established, the available resources could be better utilized and made more productive. Onazi (1984), states: "One of the main factors limiting the development of effective training programs for extension workers in developing countries is the total lack of information on the training needs of extension workers". Onazi identified seven areas of

training for extension workers as: technical knowledge in agriculture, agricultural extension philosophy, organization and administration, communications in extension, program planning, the use of research methods, evaluation in extension, program planning, evaluation in extension programs, and human development.

Mount (1949), Mathews (1950), Cook (1957) and McCormick (1959), in a systematic analysis of the training needs of extension workers in the United States and Canada, found seven main areas of professional needs. These were: the cooperative, extension service, human development, communication, technology, research and evaluation. Singh and Mohammad (1982), in a study of the training needs of extension workers on northern Iraq found

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that the main areas of training were extension methods, communication, program planning, technical knowledge in soil fertility, crop production and irrigation. Findings from the study by Menon and Annunilai (1979) indicated that among the most significant training needs of village level workers in Tamil Nadu are: subject matter in agriculture, organization and administration of extension program, program planning and development, farmers training, understanding social systems, educational **process**, and human development. Gamon, Mohamed, and Trede (1993) found that orientation for new extension professionals in Iowa should emphasize on: meeting county, area, and state staff; time and resource management; motivation of clientele; and teaching methods.

The purpose of this study was to identify and prioritize the educational and support needs of agricultural agents in Isfahan province. Specifically the objectives were to:

1. Identify the educational needs of village extension agents.
2. Determine support needed in reaching extension goals as perceived by extension agents.
3. Determine the relationships among selected variables and educational needs of extension agents.

## MATERIALS AND METHODS

The population for this descriptive correlational study consisted of all agricultural extension agents in Isfahan province in Iran (N=83).

The researcher developed a questionnaire which was consisted of two sections: a) educational needs and b) demographic data. A likert type scale was used to assess respondents, levels of agreement on the list of items dealing with educational needs and support needed. Respondents rated their levels of agreement using the following scale:

1=very low agreement; 2=low agreement; 3=medium level agreement; 4=high agreement; 5=very high agreement. To establish the content validity of the instrument, a panel of faculty at Tarbiat Modarres University, who had professional experience in extension, reviewed the instrument. To establish reliability, the instrument was sent to a sample of 17 extension agents randomly selected from the population of all extension agents in Tehran province who were not included in the study. An internal consistency analysis concluded from the pilot test produced Cronbach's alpha coefficient of 0.84. The instrument was administered by the researchers to all respondents (N =83) at a professional meeting. The data were analyzed using the computer program called SPSS/PC<sup>+</sup>. Descriptive statistics were used to determine the frequencies, percentages, means, and standard deviations of item responses.

## RESULTS

Among the 83 respondents, 30 percent were over 40 years of age, while 28.9 percent were between 20 and 29. Eighty two percent had an agricultural background and the remaining 18 percent did not have one. Of the 83 respondents, 65 percent had a high school diploma and 32.5 percent had some college training. Thirty five percent of respondents were born in villages while others in cities in Isfahan province. A total of 68.7 percent of the respondents had more than 10 years of tenure.

Data in Table 1 indicate that majority of respondents (60.2 percent) had a major program area assignment in crop production, 14.5 percent in horticulture, 1.2 percent in forage production and 24.1 percent in other related fields.

As indicated in Table 2, the majority of the extension agents (45.8 percent) preferred the training for a period of two weeks. 32.5

Table 1. Distribution of extension agents by area of assignment.

Program area	Frequency	%	Cumulative percent
Crop production	50	60.2	60.2
Horticulture	12	14.5	74.7
Forage production	1	1.2	75.9
Others	20	24.1	100

**Table 2.** Distribution of in-service training as expressed by extension agents.

Duration	Frequency	%	Cumulative percent
one week	27	32.5	32.5
two weeks	38	45.8	78.3
one month	18	21.7	100

Table 3. Methods through which extension agents preferred to receive training.

Methods	Percentage of response
Field trips	47
Demonstrations	22
Group discussion	15
Workshop	10
Lecture	4
Film	2

**Table 4.** Means, standard deviations, and mean ranks of extension agents regarding the most important educational programs (N=83).

	Mean	S.D.	Rank Means
Extension philosophy	4.54	0.66	1
Instructional technology	4.5	0.76	2
Innovation and adoption process	4.31	0.63	3
Adult education	4.21	0.43	4
Extension methods	4.14	0.53	5
Rural sociology	4.1	0.66	6
Technical training	4.03	0.64	7
Program planning	3.6	0.55	H

Need level: 1=very low level need; 2= low level need  
3=medium level need; 4=high level need; 5=very high level need

percent expressed to have training for a

period of one week and only about 21.7 percent of the respondents preferred to have the training for one month.

To identify the most effective educational techniques through which extension agents preferred the training to be conducted, information was obtained the data of which is presented in Table 3.

As indicated in Table 3, the methods preferred by the extension agents were found in the order of field trips, demonstrations, group discussion, workshop, lecture, and film.

The extension agents were asked to indicate their preference regarding the place at which they would like to have their in-service training conducted. It was found that the majority of the extension agents preferred an agricultural college for their training and 59 percent preferred to be trained by a college faculty member.

The first objective of this study was to determine the perceptions of extension agents regarding the educational programs in agriculture. As indicated in Table 4, the respondents rated 7 items as being in the "high level need" category. One item was in the "medium level need" category. The two highest rated items were "agricultural extension philosophy" and "instructional technology", whereas the two lowest rated items were "technical training" and "program planning".

The second objective in this study was to determine types of support needed as perceived by extension agents. As indicated in Table 5, the respondents rated 5 items as being in "high importance" and 7 items as "average importance" category. The two highest rated items were "access to subject specialists to enhance knowledge of extension agents" and "more administrative support" whereas the two lowest rated items were "extension newsletters" and "radio programs".

The third objective was to determine the relationships among selected variables and

Table 5. Mean, standard deviations, and mean ranks of support needed (N=83)

Item	Mean	S.D.	Ranks Mean
Access to specialists to enhance technical knowledge of extension agents	4.85	0.38	1
4.85	4.69	0.86	2
Administrative support	4.54	0.66	3
Availability of research findings within the province	4.36	0.63	4
Appropriate place to conduct extension classes	4.07	0.74	5
Availability of teaching aids	3.93	0.62	6
The mandate of reduction of duties so that adequate time could be devoted to teaching farmers	3.86	0.62	7
Adequate resources in extension education	3.64	0.66	8
Visit experiment stations on a continuous basis	3.57	0.74	9
Subscription to extension publications	3.5	0.76	10
Attending seminars and workshops in extension education	3.47	0.52	11
Publishing local newsletters	3.3	0.75	12
Broadcast of radio programs for extension agents			

Need level: 1=very low level need; 2=low level need; 3<sup>TM</sup>medium level need; 4—high level need; 5=very high level need

educational needs of extension agents. Spearman rho (rs) was used to determine the relationship between length of tenure of extension agents and educational needs. The results indicated that there was a negative correlation (-0.22) between work tenure and educational needs. This shows a significant relationship because as the job tenure increases, educational needs of extension agents decrease. Variables of the personal factors like participation in training courses, education level, and being native or non-native of Isfahan province as related to the educational needs revealed the results presented in Table 6.

Table 6. Relationship between selected personal factors and educational needs

Selected variables	Z	P
Agents participation in training courses	0.0366	0.97
Educational level	0.0826	0.93
Native or non-native	1.99	0.04

The results from U-test indicated that there was no statistically significant difference between agents' participation in training courses and their educational needs (P=0.97).

As regards the educational level of extension agents and their educational needs, there was no statistically significant relationship observed (P=0.93). Educational needs were different for native as compared to non-native agents (P=0.04).

Finally an analysis of variance test showed no difference between extension agents' area of assignment and their educational needs.

## DISCUSSION

The following conclusions were drawn from the findings of the study:

1. Extension agents indicated that there was a greater need for educational programs centered around "extension philosophy", "instructional technology" and "innovation and adoption process".

2. Agents' access to specialist to enhance their technical knowledge was the highest ranking support needed.

3. Field trips, demonstrations, and lectures were the most effective methods and means as perceived by the extension agents.

4. Native extension agents had a different educational need than the non-native ones.

5. There was a negative correlation between job tenure and educational needs.

Based on the findings and conclusions of this study, the following recommendations are made:

1. The specific in-service need of the highest ranking should be given priority when planning and developing in-service training programs for extension agents.

2. Several training programs based upon the demographic variables of educational level, and previous class participation of extension agents are not necessary.

3. Native extension agents should receive different training from their non-native colleagues.

4. Agricultural extension specialist should place more emphasis on helping extension agents to improve their technical knowledge.

5. The current study should be replicated in other provinces to determine if the educational needs and support of extension agents are consistent across provinces.

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## بررسی نیازهای آموزشی و حمایتی مروجان کشاورزی استان اصفهان

### چکیده

این بررسی به منظور تعیین و الویت بندی نیازهای آموزشی و پشتیبانیهای مورد نیاز مروجان کشاورزی شاغل در استان اصفهان (جمهوری اسلامی ایران) انجام شد. جامعه آماری مورد نظر تحقیق شامل ۸۳ نفر بود که به دلیل محدود بودن این تعداد اطلاعات مورد نیاز از کلیه افراد جامعه جمع آوری شد، به عبارتی از روش سرشماری استفاده گردید. براساس نتایج حاصل از تجزیه و تحلیل داده‌ها، اولویت دارترین نیازهای آموزشی مروجان کشاورزی عبارت بودند از: فلسفه ترویج، تکنولوژی آموزشی، نوآوری و فرآیند پذیرش، آموزش بزرگسالان و روشهای ترویجی. پاسخگویان عمده ترین حمایت و پشتیبانی مورد نیاز خود را دسترسی به متخصصان موضوعی جهت رفع مسایل فنی خود ابراز داشتند.