

SOCIO-ECONOMIC CHARACTERISTICS OF FARMERS AND USE OF AGRICULTURAL INFORMATION SOURCES IN FARS PROVINCE, IRAN¹

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ABSTRACT

The present paper concerns itself with determining the important sources of agricultural information used by farmers and comparing high communicators of a particular channel with low communicators on socio-economic characteristics.

Data for this study were collected from a sample of 241 farmers in the Fars province of Iran. The investigations indicated the importance of interpersonal channels in the dissemination of agricultural information. Radio was found to be the most important mass media source of agricultural information. Recommendations are made for improving the extension teaching methods.

تحقیقات کشاورزی ایران

جلد سوم شماره دوم ۱۳۶۳

خصوصیات اجتماعی - اقتصادی زارعین و استفاده از منابع اطلاعات کشاورزی در استان

فارس

عزت اله کرمی

استاد دیا ربخش ترویج کشاورزی دانشکده کشاورزی دانشگاه شیراز

خلاصه

مقاله حاضر بر مبنای نگرش منابع مهم اطلاعاتی کشاورزی است که توسط زارعین بکار گرفته می شود. مقایسه خصوصیات اجتماعی - اقتصادی زارعین با توجه به کاربرد اینگونه منابع نیز در این بررسی ملحوظ نظر واقع شده است. اطلاعات مربوط به این تحقیق که از یک نمونه ۲۴۱ نفری زارعین استان فارس بدست آمده است نشانگر اهمیت کانالهای ارتباطی شخصی در نشر اطلاعات کشاورزی می باشد. نتایج بدست آمده همچنین نشان میدهد که رادیو مهمترین کانال ارتباطی جمعی در انتشار اطلاعات کشاورزی است. توصیه های لازم جهت بهبود روش های آموزشی ترویج کشاورزی ارائه شده است.

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INTRODUCTION

Extension is an instrument for agricultural development. Agricultural extension achieves its impact through communication. Extension educational programs can only change behavior on a voluntary basis. Motivation, knowledge and ability, each or in combination, can provide bottlenecks which cause farmers not to change their behavior voluntarily in the direction desired by extension. Therefore, extension can only be effective if it establishes a communication rapport with the people and if the bottlenecks which keep people from making desired voluntary decisions are removed (9).

Previous research (6) has shown that at awareness stage, mass media were the most frequent sources of information about new farming ideas and practices. Wilkening (12) observed that agencies and mass media tended to be the most important sources of information for those new ideas least associated with existing farm practices and for the initial acceptance of changes in existing practices. Obibuaku and Mustafa (4) reported that there were differences between communities in the Imo State of Nigeria with respect to their access to and use of various communication media for agricultural change. Different media should be used selectively to impart information to farmers. They also found that communication by demonstrations, films, lectures, and through the extension workers appeared more effective than radio and newsletter in bringing about farm improvement among the farmers studied.

Obibuaku (3) in his study in the Abakaliki area of Nigeria showed that radio proved the most effective medium for creating awareness among farmers. Osuj (5) stated that adoption of new farm practices depends on regular extension visits to farmers and the provision of rural infrastructures as well as credit facilities to supplement farmers' access to and use of other communication media.

Savale (10) reported that the mass media have proved to be

of little use either as a source of initial information or even in later stages of adoption process among Indian farmers. He attributed this to the fact that a large percentage of Indian farmers are illiterate, which prevents effective use of literature and even radio broadcasting. Secondly, there was hardly any radio set owned by individuals. He also suggested that in the immediate future, mass media as a source of initial information may prove to be effective as the level of literacy and standard of literature and radio program improves. His investigations also revealed that extension workers and "other farmers" were useful in almost all stages in influencing the cultivators for the adoption of new technology.

Rogers and Shoemaker (7) have generalized that mass media and cosmopolite channels are relatively more important than interpersonal channels for earlier adoptors than for later adoptors. Van den Ban (11) maintained that the radio is probably of particular importance to the less educated conservative farmers, while the modern farmers attach more value to their farming papers.

Karami and McCormick (2) conducted a study in appraisal of the extension service in Iran as perceived by extension specialists and extension agents. One dimension of that study was to analyze the appraisal by respondents regarding the effectiveness of educational techniques that were used by the extension service. The results revealed that respondents appraised home and business visits, demonstrations, short period courses, and educational movies as being the most effective techniques. The ranking also showed that publications, tours and radio programs were appraised by respondents as being the least effective.

A special form of combining media is the radio, print media, or cassette forum, which seeks to combine the advantages of mass media with those of interpersonal communication. In this respect, attempts have been made to copy the amazingly

successful mass approaches used in such countries as the People's Republic of China (8).

The rapid improvement in agricultural development requires improvement in the application of human intelligence as well as improvement in machinery materials and technical methods. In the light of this fact, and with the objective of enhancing the effect of agricultural extension service, this paper aims to determine the important sources of agricultural information used by farmers in Fars province, Iran and to compare high communicators of a particular channel with low communicators on socio-economic characteristics.

MATERIALS AND METHODS

Population and Sample

The target population of this study consists of all the farmers in Fassa, Mamassani, Eqlid and Kavar in Fars province. The data for this paper were taken from a project designed to study different aspects of farm innovations in sugarbeet (*Beta vulgaris* L.) growing areas in the Fars province.

A multi-stage stratified random sample was taken which included 241 farmers from 13 villages. The selected farmers were interviewed during the summer and fall of 1982.

Measurements

The following sources of agricultural information were presented to farmers: radio, television, other farmers, extension publications, extension agents and dealers. The farmers were asked to use the following ratings to evaluate the importance of these sources of information.

()	()	()	()
not important at all	of little importance	important	very important

The "forced-choice" method of rating was used to overcome

the problem of lack of objectivity in evaluation of sources of information. This method forced the respondent to choose only one source of information as "very important", one as "important", one as "of little importance", and the rest of the source as "not important at all". Information about the measurement of other variables has been reported elsewhere (1).

RESULTS AND DISCUSSION

For extension to be effective in conveying the benefit of science and technology to the farmers, the most appropriate channel should be used in terms of the goal of the source, the context of the message, and the characteristics of the receiver. Researchers categorize communication channels as either interpersonal or as mass media in nature.

Interpersonal Channels

Other farmers. It is evident from Fig. 1, that 17.4% of farmers evaluated "other farmers" as a "very important" source of information and 14.1% of farmers evaluated this source as "important". Fig. 1, also shows that "other farmers" are the most important interpersonal source of agricultural information among farmers. This is in line with Savale's (10) report on the importance of this channel among Indian farmers for the adoption of new technology.

There is no significant difference between farmers who evaluated "other farmers" as "very important" or "important" and farmers who evaluated this source as "not important at all" or "of little importance" with regard to age, education and innovativeness.

These results on the innovativeness of the farmers support the generalizations made by Rogers and Shoemaker (7) about the channel usage by different adoptor categories. Table 1 shows that farmers who evaluated "other farmers" as a "very important" or "important" source of agricultural

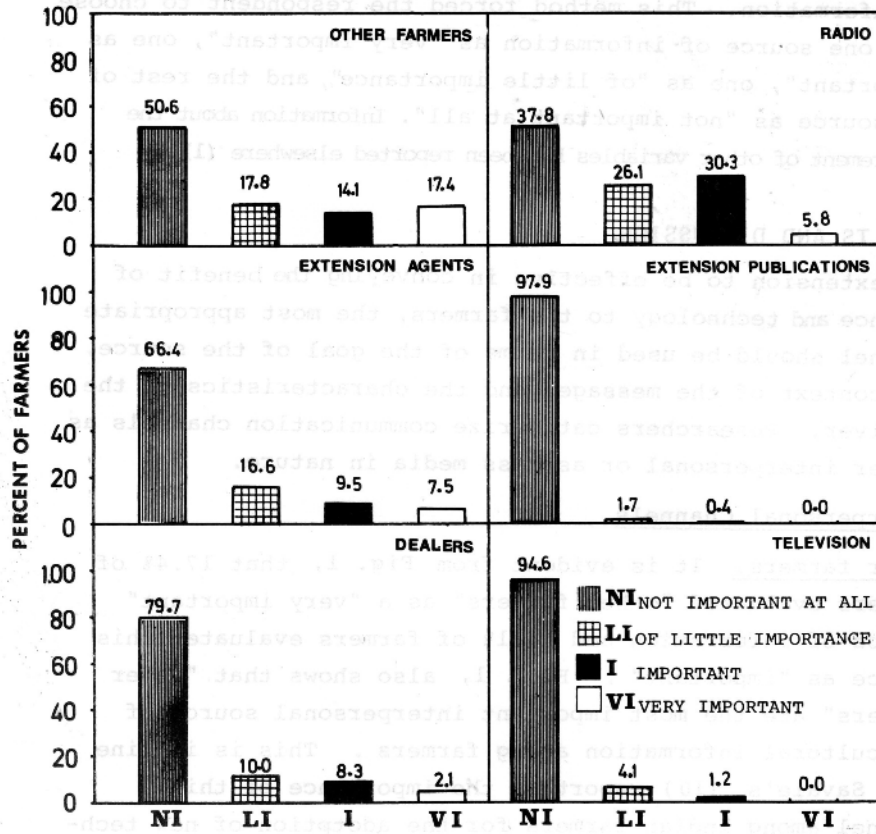


Fig. 1. Appraisal of 'other farmers', 'extension agents', 'dealers', 'radio', 'extension publications', and 'television' as sources of agricultural information.

Table 1. Comparisons of socio-economic characteristics of farmers regarding use of different sources of agricultural information.

Variables	Other farmers			Extension agents			Dealers			Radio		
	N	Mean	F [†]	N	Mean	F	N	Mean	F	N	Mean	P
Farmers age (year)												
Group 1	164	48.9		199	47.4		215	47.6		153	48.3	
Group 2	76	46.9	0.62	41	48.2	0.73	25	46.5	0.68	87	46.2	0.26
Farmer education [‡]												
Group 1	164	0.79		199	0.71		215	0.87		153	0.46	
Group 2	76	0.71	0.74	41	1.00	0.36	25	0.36	0.06	87	0.97	0.17
Family education												
Group 1	164	2.10		197	1.87		213	2.00		153	1.97	
Group 2	74	1.70	0.04	41	2.48	0.03	25	1.76	0.43	85	1.99	0.93
Farm size (ha)												
Group 1	162	4.06		194	4.41		209	4.47		151	4.70	
Group 2	72	5.42	0.01	40	4.79	0.53	25	4.49	0.98	83	5.16	0.05
Productivity (wheat ton ha ⁻¹)												
Group 1	157	1.97		193	2.00		193	2.00		149	2.05	
Group 2	75	2.28	0.01	39	2.47	0.01	39	2.47	0.01	83	2.09	0.75
No. of contacts with agent year ⁻¹												
Group 1	143	3.54		163	1.97		186	2.35		134	3.23	
Group 2	63	2.07	0.05	38	8.05	0.01	25	1.68	0.01	72	2.83	0.59
Innovativeness [¶]												
Group 1	165	9.25		200	8.67		216	8.88		154	8.88	
Group 2	74	9.53	0.85	41	12.9	0.01	25	13.3	0.04	87	10.2	0.36

[†]Probability of two-tailed t-test.

[‡]Group 1 are farmers who evaluated a source of agricultural information as "not important at all" or "of little importance".

[§]Group 2 are farmers who evaluated a source of agricultural information as "important" or "very important". Education is measured by an index ranging from 0 (illiterate) to 15 (College graduate).

[¶]Innovativeness is measured by the number of years prior to the interview at which the farmer reported having used an innovation and then it was weighted.

information have larger farms, are more productive, have less contact with agricultural extension agents and have a lower family education level.

Agricultural extension agents. The Iran Agricultural Extension Organization has about 1000 extension agents who are scattered over 50,000 villages around the country. The farmers attitudes toward the extension agents as a source of agricultural information are presented in Fig. 1. Seventeen % of farmers have evaluated this channel as either "important" or "very important". The results indicate that the agricultural extension agents are the second most important interpersonal source of information for farmers. The importance of this source of information to farmer has also been reported in other developing countries. (4, 10).

Table 1 shows that there is no significant difference between farmers who considered the extension agents as an "important" or "very important" source of information and those who appraised this channel as "not important at all" or "of little importance" with regard to characteristics such as age, education, and farm size. However, the results indicate that farmers who attached some degree of importance to this channel of information have higher family education, are more productive, have more contact with agents, and are more innovative. According to these results, agricultural extension agents are very effective in their communication with farmers. Farmers who have made more use of this channel are relatively more innovative and productive. But one difficulty is the fact that farmers who make the least use of the extension agent are those who are most in need of him.

Dealers.

Dealers of agricultural inputs and equipments are often a source of information on the adoption of new farm practices. Figure 1 gives an idea about the importance of this source. Only 10% of farmers appraised this source as "important"

or "very important". Although, it is the least important interpersonal channel, it is much more important than certain mass media channels such as extension publications and television.

Farmers who considered "dealers" as an "important" or "very important" source of information are more productive and have less contact with extension agents. As far as other characteristics are concerned there is no significant difference between farmers with regard to their evaluation of this channel for communication of agricultural information.

Mass Media Channels

Radio. As can be seen from Fig. 1, radio is the most important source of agricultural information among farmers. About 30% of farmers ranked this source as "important" or "very important". These results are in line with those of Obibuaku (3) in Nigeria. It also corroborates a suggestion by Van den Ban (11) about importance of radio among less educated farmers. However, it contradicts the findings of Savale (10) and Karami and McCormick (2).

Table 1 shows the comparisons of characteristics of farmers with regard to their perceived importance of radio as a source of agricultural information. There was no significant difference between farmers in age, education, family education, productivity, contact with extension agents, and innovativeness. These findings contradict the generalization made by Rogers and Shoemaker (7) for earlier adoptors. One reason for this contradiction can be the high illiteracy rate of farmers which makes them unable to put the ideas they receive through radio into practice

Extension publications. In recent years there has been a growing interest among agricultural experts to write extension bulletins. However, as shown in Fig. 1, 97% of farmers evaluated this source as "not important at all". Taking into account the high illiteracy rate among farmers,

this finding seems to be logical.

Television. As illustrated in Fig. 1, television is not an important source of information among farmers. One possible reason for this is unavailability of this source.

CONCLUSION AND RECOMMENDATIONS

This study has clearly indicated the importance of inter-personal channels in the dissemination of agricultural information. Extension agents should indentify the influential farmers and make better use of them in order to increase the effectiveness and efficiency of their work. Considering the importance and impact of extension agents as a source of agricultural information, there is a need to increase the number of extension agents and their mobility by providing the necessary inputs.

Dealers were found to be important sources of information for farmers. Therefore, the extension service should increase the effectiveness of this source by providing educational programs for local agricultural dealers and passing laws and regulations to require a minimum level of agricultural education for local dealers.

Radio was found to be the most important mass media source of agricultural information. Therefore, extension service should pay more attention to this source by increasing the quality and quantity of agricultural radio programs. Farmers who appraised this source as "very important" or "important" were not significantly more productive or innovative. It may be possible to increase the impact of radio through radio forum. In relation to this matter, further research is needed to find out the pros and cons of radio forums in the agricultural development of Iran.

Extension publications were found not to be an effective means of communication. Future studies are necessary to

illustrate the factors which influence the effectiveness of this source among farmers. One area which needs investigation is the effect of a rather difficult style of many of these articles on their use.

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