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INVESTIGATION OF EXPERT ATTITUDE TOWARD MANAGING KNOWLEDGE AND INFORMATION SYSTEM OF AGRICULTURE IN KHUZESTAN PROVINCE

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ABSTRACT

The aim of this study is to investigate the expert attitude toward knowledge and information management system of agriculture in Khuzestan Province. The present study is an applied research and in terms of the nature of data collection, is a descriptive research and a survey. For sampling, in this study, the sampling method of classification proportional to class size was used. The study population consisted of experts in Agricultural Jihad Organization of Ahvaz County and headquarters' experts in Khuzestan Province that their number was 250. 152 people were determined as the sample. Questionnaire was the data collection tool that the validity of the content was established by the faculty members of the Department of Agricultural Extension and Education of Islamic Azad University- Shushtar Branch, and its reliability was confirmed through Cronbach's alpha coefficient. The results suggested that there is a significant difference at the level of 1% between employees' views who their work at Agricultural Service Center and Agricultural Jihad Management in terms of the status quo relationship between research and promotion, providing appropriate mechanisms to strengthen communication between research and promotion, barriers to manage the knowledge system, agricultural information, and proficiency in using computer. There is a significant difference at the level of 1% between the views of men and women to the status quo relationship between research and promotion, detachment of promotion from the TAT Organization, providing appropriate mechanisms to

strengthen communication between research and promotion, barriers to manage the knowledge system, and proficiency in using computer. There is a significant difference at the level of 1%, between the views of employees based on their years of service to the current situation of the relationship between promotion and research, the detachment of promotion from the TAT Organization, providing appropriate mechanisms to strengthen the relationship between research and promotion, and barriers to manage agricultural information and knowledge system. There is a significant difference at the level of 1%, between the views of employees based on their majors, to the current situation of the relationship between promotion and research, the detachment of promotion from the TAT Organization, providing appropriate mechanisms to strengthen the relationship between research and promotion and proficiency in using computer.

Keywords*:* knowledge and agricultural information system, Information and Communication Technology, management, experts of Agricultural Jihad Organization of Khuzestan Province

INTRODUCTION

Promotion agents in agricultural knowledge and information system are in the position of receiving specialized knowledge and needed information related to agriculture. By enhancing the skills in relation to information technology, these people increase the efficiency of their activities in transferring technologies and developing human resources and management of information resources, and thereby are involved in facilitating agricultural development process. The lack of a coherent link between promotion and research centers has limited this system (Falaki, 2005).

Agricultural information and knowledge system is a systematic network involving production, modification, transfer, application and development of agricultural information and knowledge.Agricultural Information Systemincludes subsystems each of which implements the pre-mentioned functions and following the view of soft systems, the entire agricultural information subsystem are linked together (Shahbazi, 1993). The lack of communication and coordination between research and promotion centers as well as lack of information transmission between agriculture centers and promotion centers, led to problems and difficulties for the systems (Zamani Poor, 2001).

Agricultural information and knowledge system including the core components of research, extension, education and farmer,

has been formed with mutual dependencies and their ties create a system which has the functions of processing, combination and modification of knowledge (Byerlee and Echeverria, 2002).

Promotion as one of factors enhancing the professional knowledge of farmers, facilitates the relationship between the components of agricultural knowledge system. So by recognition of the position and role of the mentioned components in addition to an affective link for reinforcing this network as well as functionalizing the strategies and modifications, its quantitative and qualitative conditions will improve. Therefore, the efficacy of the agricultural information and knowledge system depends on the efficacy of the communication system of human factors and the most important kind of relationship is the relationship between promotion staff and farmers (Moqadas Farimani, 2006).

A research by Mohammadi (2002) indicated that among various ways and methods to acquire information, personal observations and research-promotional magazines and journals are of the most used things for receiving information and being aware. Mohammad Zadeh (2002) concluded that the will of the majority of promotion staff to participate with researchers was positive. In this regard, the participation rate of promotion staff in participatory activities with farmers has a direct and meaningful relationship with the staff's will to take part with researchers.

Pezeshki Rad et al. (2001) showed that the lack of a proponent bond between extension and other organizations has affected the human resource development in Iranian systems and acted as a barrier to promotion services. According to the study, weakness in promotion employees training, weak ties between research and promotion, lack of appropriate technologies, lack of relevant vehicles for access to farmers, and lack of promotion staff technical training in agricultural development; were respectively included human development, needs assessments, technology supply, increased participation, assessment of a technology supply, networking between professionals, policymakers and farmers, troubleshooting and finally optimizing management inputs.

Nuray (2006) in his study reported that there was not a sufficient link between research institutes' publishing activities and other institutions active in this field. Lack of coordination between these institutions caused that the complete dissemination of agricultural information to farmers not to happen, especially, the problem causes ineffective feedback in the triangle of

research- publication-farmer. Demiryurek (2010) in a study showed that exchange and dissemination of information between producers in rural areas and people, and information resources of the institutions should increase. Ramirez (1997) showed that farmers acquire their needed information through various sources such as other farmers, traders, input dealers, foreign workers, and research institutions. Strong horizontal linkages within the agricultural groups, promotion staff and researchers on the one hand and weak vertical linkages between these groups were of his findings. (Ramirez, 1997)

Garforth (2001) showed that in the study area, farmers are dependent on government agencies and foreign information resources. Farmers' contacts with offices are primarily in terms of service, especially veterinary services, educational services and advice. The results showed that radio and farmers contacts with each other were the least important and the most important one refers to passages of communication in order to receive information and consultations, respectively. (Garforth, 2001)

Reese, Momanyi and Wekundah (2000) showed that agricultural traders, governmental and non-governmental agencies, non-governmental organizations and churches are the main actors play role in agriculture information systems. Links between institutions and foreign organizations, whether governmental or non-governmental, were diagnosed as weakness and incoordination. The main information source of smallholder farmers is mainly local factors including neighbors, family, market and social organizations. Governmental extension, NGOs, agricultural factories and temples were diagnosed as an important source of information dissemination in some areas. (Rees, Momanyi & Wekundah, 2000)

Bharat and colleague's' study (2003) showed that the main communication resource used by promotion staff in India to acquire agricultural technology refers to state's agriculture agencies and the most important communication methods of them refers to acquisition of these technologies, staff meetings, training courses, especial letters, periodicals and subjective specialists.

MATERIALS AND METHODS

The present study is an applied research and in terms of the nature of data collection, this is a descriptive research and a survey. Given that the number of agricultural experts in Ahwaz City (N=165) and headquarters' staff of Khuzestan Province (N = 85), therefore the total number of experts (N=250) was considered as the population. Thereafter,

with regard to the sample size and the sampling tables by Krejcie and Morgan, 152 samples were estimated. For sampling, in this study, the sampling method of classification proportional to class size was used. Collecting information and data required in this research were conducted in two parts of library and survey. A researcher-made questionnaire was applied to collect the data. To assess the face and content validity, the method of panel of experts was used and to determine the reliability, a sample of 30 people was selected outside the main sample and questionnaires were distributed among them and the comments were collected. Using SPSS Software and calculating Cronbach's alpha coefficient, the reliability of the final questionnaire was calculated. According to the results, the reliability of the questionnaire was quite satisfied (0.74).

RESEARCH FINDINGS

-Barriers to agricultural information and knowledge management:In order to assess the weaknesses in the management of agricultural knowledge and information systems, eight items were designed andexperts were asked to represent their responses aboute a chitem in a range of five options (very low, low, medium, high and very high).

The results showed that "the absence of promoters in rural communities", "the absence of a research systems based on the real needs of rural communities", and "lack of a coherent relationship between research and extension centers" were the highest ranks and “lack of managers predominated in agricultural knowledge and information systems “are the lowest rank. The Results are presented in Table 1.

- Compare the attitudes of experts in all aspects of the agricultural information and knowledge system: the results show there is a significant difference at the level of 1% between the views of men and women to the status quo relationship between research and promotion, detachment of promotion from the TAT Organization, providing appropriate mechanisms to strengthen communication between research and promotion, barriers to manage the knowledge system, and proficiency in using computer. The results are given inTable 2.

The results suggested that there is a significant difference at the level of 1% between employees’ views who their work at Agricultural Service Center and Agricultural Jihad Management in terms of the status quo relationship between research and promotion, providing appropriate mechanisms to strengthen communication between research

and promotion, barriers to manage the knowledge system, agricultural information, and proficiency in using computer. These show that workplace affects the view of employees. The results are presented in Table 3.

The results indicate that There is a significant difference at the level of 1%, between the views of employees based on their years of service to the current situation of the relationship between promotion and research, the detachment of promotion from the TAT Organization, providing appropriate mechanisms to strengthen the relationship between research and promotion, and barriers to manage agricultural information and knowledge system. There is a significant difference at the level of 1%, between the views of employees based on their majors, to the current situation of the relationship between promotion and research, the detachment of promotion from the TAT Organization, providing appropriate mechanisms to strengthen the relationship between research and promotion and proficiency in using computer. The results are presented in Table 4.

The analytic findings suggest there is a significant difference at the level of 1%, between the views of employees based on their majors, to the current situation of the relationship between promotion and research, the detachment of promotion from the TAT Organization, providing appropriate mechanisms to strengthen the relationship between research and promotion and proficiency in using computer.

This suggests that people's majors have been affected their views and based on the results of Tukey Test, this difference is clearly reported between all the different majors in the table. In addition, the results show that academic disciplines have failed to create a significant difference in the views in terms of the barriers to management of agricultural information and knowledge system. The results are given in Table 5.

The relationship between dimensions of knowledge system and agricultural information: the Pearson correlation coefficient was used in order to evaluate people's opinions in terms of the status quo relationship between research and promotion, detachment of promotion from the TAT Organization, providing appropriate mechanisms to strengthen communication between research and promotion, barriers to manage the knowledge system, and proficiency in using computer. The results are provided in table 6.

Table 1: the respondent's views in terms of barriers toagriculturalinformation and knowledge management

Items	Mean	Rank
The absence of promoters in rural communities	3.71	1
The absence of a research system based on the real needs of the rural community	3.57	2
No coherent relationship between research and promotion centers	3.36	3
The lack of a cohesive information network	3.19	4
Lack of promoters predominated in IT	2.96	5
The lack of hardware services required for the exchange of information	2.69	6
Lack of sufficient specialized knowledge among promoters	2.53	7
Lack of managers predominated in agricultural knowledge and information systems	2.48	8

Table2. Comparison of the averages ofmen and womenviewsin terms of themain variables of study

Variables	Mean		t	sig
	men(81)	women (71)		
Views in terms of the status quo relationship between research and promotion	2.41	2.50	2.97	**0.00
Views in terms of detachment of promotion from the TAT Organization	30.71	26.42	5.40	**0.00
Views in terms of providing appropriate mechanisms to strengthen communication between research and promotion	28.85	27.29	2.72	**0.00
Views in terms of barriers to manage the knowledge system	33.82	31.21	2.65	**0.00
Views in terms of proficiency in using computer	46.14	48.88	2.50	**0.01

Table3. Comparison of the averages ofrespondentsviews with regard to their workplace in terms of themain variables of study

Variables	Mean		t	sig
	Crevice center (77)	Agricultural Jihad organization Management (75)		
Views in terms of the status quo relationship between research and promotion	2.396	2.517	4.29	**0.00
Views in terms of detachment of promotion from the TAT Organization	29.662	27.733	2.26	**0.02
Views in terms of providing appropriate mechanisms to strengthen communication between research and promotion	28.896	27.733	2.74	**0.00
Views in terms of barriers to manage the knowledge system	34.207	30.966	3.34	**0.00
Views in terms of proficiency in using computer	46.155	48.733	2.35	**0.00

Table4. Comparison of the averages ofrespondentsviews with regard to their working experience in terms of themain variables of study

Variables	Working years as Agricultural Jihad Organization' expert			F	sig
	Lower than 10	10-15	Over 15		
Views in terms of the status quo relationship between research and promotion	a2.664	b2.332	c2.507	42.595	**0.00
Views in terms of detachment of promotion from the TAT Organization	a24.529	b29.866	b28.733	7.19	**0.00
Views in terms of providing appropriate mechanisms to strengthen communication between research and promotion	a27.235	b29.816	c26.973	12.774	**0.00
Views in terms of barriers to manage the knowledge system	a36.832	b31.416	b32.6	5.342	**0.00
Views in terms of proficiency in using computer	a46.705	a46.666	ab49.8	10.7	**0.00

Table5. Comparison of the averages ofrespondentsviews with regard to their academic disciplines in terms of themain variables of study

Variables	Major						F	sig
	Agriculture	Promotion	Gardening	Animal Science	Water and soil	Mechanization		
Views in terms of the status quo relationship between research and promotion	a2.528	b2.364	b2.421	a2.575	a2.54	b2.383	5.694	**0.00
Views in terms of detachment of promotion from the TAT Organization	a25.705	b30.193	d32.175	cd34.5	b30.00	cd22.333	24.665	**0.00
Views in terms of providing appropriate mechanisms to strengthen communication between research and promotion	a28.019	a29.193	a28.6	b24.2	a28.6	a27.466	3.742	**0.00
Views in terms of barriers to manage the knowledge system	a32.039	b35	a31.32	ab33.2	ab31.4	ab33	1.44	0.2
Views in terms of proficiency in using computer	a28.019	a29.193	a28.6	b24.2	b28.6	b27.644	7.86	**0.00

Table 6: the Pearson correlation coefficient for themain

Variables	Pearson correlation coefficient					
	Status quo	Significance	Detachment	Mechanism	Barrier	Computer
The status quo relationship between research and promotion	–	0.309**	-0.266**	-0.252**	0.052	0.211**
The significance of relationship between research and promotion	0.309**	–	0.36	0.260**	0.049	0.445**
detachment of promotion from the TAT Organization	-0.226**	0.36	–	0.109	0.024	0.041
providing appropriate mechanisms to strengthen communication between research and promotion	-0.252**	0.206**	0.109	–	0.19**	0.398**
barriers to manage the knowledge system	0.052	0.049	0.024	0.19**	–	0.011
proficiency in using computer	0.211**	0.206**	0.041	0.0398**	0.011	–

The results suggest that there is a significant difference at the level of 1%, between the status quo relationship between research and promotion and its significance rate. There is a significant difference at the level of 1%, between the status quo relationship between research and promotion and providing proper mechanism to enhance the status quo relationship between research and promotion. There is a significant difference at the level of 1%, between the status quo relationship between research and promotion and staff and experts' proficiency in using computer. There is a significant difference at the level of 1%, between the barriers to manage the architectural knowledge system and providing proper mechanism to enhance the relationship between research and promotion. There is a significant difference at the level of 1%, between staff and experts' proficiency in using computer and providing proper mechanism to enhance the relationship between research and promotion.

RECOMMENDATIONS

The following items are presented based on the obtained results:

-Strengthen the educational, research and promotional bonds between the employees of the management of Agricultural Jihad Organization and service centers with the main actors and of the agricultural information management system such as Agricultural Jihad Organization, natural resources, farmers' organizations and unions, and rural women and Agricultural Research Center;

-Grouping people based on administrative experience and selection of a representative for each of the groups for dissemination of information and experiences between different groups of actors of the agricultural information management system;

-Strengthen the outer-organizational relationships between staff of the management of Agricultural Jihad Organization and service centers with other related organizations such as TAT

organization, Research Center, universities and colleges of agriculture and so on;

-All of promotion, research, education factors and farmers to be aware with participatory approaches in a practical way during well-organized programs and in each area, in accordance with the economic, social conditions and farmer situation, to implement participatory approaches in the region.

-To avoid the incompatibility of technologies provided by the research, it is recommended to in addition promote demand-orientation in technological aspects, research results, after the farm day and week of data transmission, in the form of research – promoting plans, the compatibility of technologies with farmers conditions and the studied farm to be measured.

-Lack of a systemic approach to activities and programs of agricultural information system of agricultural knowledge is one of the failure factors of success of the agricultural information and knowledge system, In this connection, the comprehensive study of farmer agricultural knowledge in different dimensions and applying specific strategies and providing scientific-practical solutions, and familiarity of managers and other system agents with systemic approach and strategic planning system, can be effective in this case.

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