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Developing Individual Performance Working at Planning Extension Programs in the Context of Decentralization in Baghdad Governance

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ABSTRACT
This study aimed to evaluate the individual performance in the field of planning extension programs in the context of decentralization in the Baghdad governorate, and to set suggestions to develop the performance of those workers. A descriptive approach was adopted in the setting of the theoretical framework of the research. The study population consisted of the agricultural centers in Iraq. The researcher followed the intentional sample method, whereby the agricultural centers in the capital, Baghdad, were chosen. Regarding the sampling units, they were chosen according to comprehensive inventory method so that they included all workers (managers - executives) in the agricultural centers in Baghdad with a total number of 150. The questionnaires were distributed overall the sample items personally by the researcher, and then returned to the researcher in the same way. The results of the descriptive analysis showed that the skill development variable related to the educational tasks has a mean of 4.14 and a standard deviation of 0.525. The skill development variable related to the management of extension programs has a mean of 4.12, and a standard deviation of 0.595. For a skill development related to executive tasks, it took a mean of 4.065 and 0.452 standard deviation, which corresponds to "strongly agree" of the adopted scale. The values of the relative importance of the studied dimensions confirmed the proper ranking, as the relative importance of skill development related to executive tasks was 80.4%, followed by skill development related to educational tasks (73.55%), and finally skill development related to extension programs management (73.53%)

Keywords: Educational tasks, extension program management, executive tasks, decentralization.

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INTRODUCTION

Agricultural extension is one of the sustainable agricultural development systems, which consists of a large number of elements such as agricultural research, agricultural extension, agricultural credit, agricultural marketing, transport facilities and agricultural education. These elements combine with each other to improve and develop the agricultural sector in rural areas. As an attempt to increase the knowledge and skills of members of the rural community, agricultural extension aims to develop human wealth by enhancing the skills of the rural community. In this regard, agricultural extension is one of the modern trends in the field of advanced agricultural research which aims to fill the gaps in studies that dealt with the rural community. It represents an important element in any agricultural system through diversifying, renewing and increasing the production of rural society as well as developing and educating farmers and workers in the agricultural sector, and guiding them in frameworks of new technologies and developments in this field. It is well known that agricultural progress is an important indicator in the evaluation of countries that depend on the agricultural economy as one of their economic pillars (Ghadeeb *Et al*., 2014). This bestows the agricultural extension a central role among other agricultural sciences. In order for the agricultural extension policy to be successful, there is a need for a comprehensive policy of decentralization and pluralism for development of extension system (Koyenikan and Omoregbee, 2016). This could be achived through enhancing the performance of workers in the field of planning programs. Three main axes should be involved in this regard in extension units. These are educational skills, extension management-related skills and execution –related skills in the extension units.

RESEARCH PROBLEM

Despite the importance of agricultural extension in transferring modern agricultural technologies to farmers and developing their skills, it still suffers from some shortcomings and weaknesses (Qeshta, 2013). This issue must be studied further due to its vital role in agricultural societies. Agricultural extension workers are facing several work-related problems, the most prominent of which is ambiguity in their tasks (Jamil and Qasim, 2013).

This study aims to

1- Evaluate the individual performance working at planning extension programs in the context of decentralization in Baghdad governorate.

2- Set suggestions to develop the performance of those workers in the field of planning extension.

The study hypotheses

1. There is no fundamental difference between the current and planned situation regarding the performance of workers' educational tasks in the extension units.
2. There is no fundamental difference between the current and planned performance of workers' management for extension programs in the extension units.
3. There is no fundamental difference between the current and planned performance of workers' executive tasks in the extension units.

METHODOLOGY

The descriptive approach was adopted in preparing the theoretical framework for the study. Relevant periodicals and peer-reviewed journals were used to obtain secondary data. As for the practical aspect, it is represented by a practical study through an approved questionnaire in assessing each of the reality of the performance of workers in the field of planning extension programs, t applied extension programs, and applied degree of decentralization in the field of agricultural

extension. In order to obtain the primary data, the questionnaire included three sets of questions that dealt with the dimensions associated with performance of workers in the organizational areas of agricultural extension programs. The five-point Likert scale was adopted in preparing the questionnaire, as shown in the following figure:

Table 1. Questions that dealt with the dimensions associated with performance of workers in the organizational areas of agricultural extension programs.

1	2	3	4	5
Strongly Disagree	Not agree	Neutral	Agree	Strongly Agree

Racers: The study of Salman *et al*. (2015) study Habtom (2019) were adopted to measure the dimensions of the study

The Study Population

The study population consists of agricultural centers in Iraq.

Research sample: The researcher followed the intentional sample method from agricultural centers in the capital, Baghdad.

Sampling units: The sampling units were chosen in a comprehensive inventory method, so that they included all workers (managers - executives) in the agricultural centers in Baghdad. The questionnaires were distributed to all workers personally by the researcher and then returned to the researcher in the same way. The following table displays the distribution of the sample according to the centers:

Table 2: Distribution of circuits by sample

Office	Managers	Executive	Total
Baghdad Agriculture Directorate - Al-Karkh	3	6	9
Directorate of Agriculture, Baghdad – Rusafa and its extension centers.	3	7	10
Directorate of Agriculture, Baghdad – Rusafa and its extension centers.	2	10	12
Extension units	17	34	51
Agricultural divisions	17	34	51
Agricultural divisions	2	11	13
The training centres in Abu Ghraib	1	3	4
Training and Rehabilitation Centres	45	95	150

Study Confines

1. Scientific confines: developing the performance of workers represented by each of the following (educational tasks in the field of extension programs, tasks in managing extension programs, executive tasks in extension programs).
2. Spatial confines: Iraq - Baghdad.
3. Time limits: July and August 2019.

Previous studies:

The study of Salman *et al*. (2015) entitled: agricultural extension workers' performance for some extension tasks and their relationship to their satisfaction with the organizational climate. The study population included all the agricultural extension units distributed in 8 governorates in the central region of Iraq. The study included 222 agricultural extension workers, in addition to the people and agricultural departments' projectors, as well as 961 managers. The questionnaire was used as a tool to collect data. The results found that some educational and executive tasks were performed well and acceptable. Moreover, the tasks of managing the extension programs were also performed well. The supervision system ranked first in terms of the level of importance and the respondents' agreement about it.

Habton (2019) study: an overview of the challenges of decentralized agricultural extension practice in developing countries: the case of Eritrea. The study aimed to analyse the challenges of the decentralized agricultural extension system in Eritrea from political and organizational perspectives with regard to the main issues of responsiveness, accountability, efficiency, effectiveness, coordination of the extension system and the capacity of service providers. The study used both survey and case study approaches seeking to answer the following research question: what are the political and organizational factors influencing the provision of extension services in a decentralized system? It was found that institutional, technical and administrative abilities have a significant impact on the provision of decentralized extension services. In Eritrea, there are gaps in the capacities between local government business units to provide effective and efficient extension services that ensure stakeholder participation and service provider accountability. Agricultural extension has not yet developed sufficient capacity to mobilize all stakeholders - research, farmers, input agency, private sector, non-governmental organizations, financial institutions or professional staff to maintain effective and efficient practice. Local institutions responsible for agricultural extension services need to develop their staff, facilities, and management systems because decentralization cannot be created or accelerated by policy decisions alone.

A study of George and Alwang (2019) entitled: changes in agricultural extension and their implications for farmers'

adoption of new practices indicated that agricultural extension programs have changed significantly during the past four decades. A series of questions were raised about the changes that affected the adoption of innovations by farmers, the responsibility of policymakers and extension agencies, especially in developing countries. The results showed that a set of factors, including structural changes in agriculture, new types of agricultural technologies, limited public budgets, efforts to achieve government decentralization, emerging information and communication technology are playing role in disseminating agricultural technology. Agricultural extension services can exploit these networks using the modern information and communication technology methods to improve the reality of extension services to farmers.

The difference of current study from the previous studies:

What distinguishes this study is that it focused on developing the performance of workers in the agricultural extension field within the framework of decentralization. It firstly aimed at evaluating the worker performance to know the availability of the skills required in the field of agricultural extension. This study did not take the relationship of the performance of workers with other variables. It is an evaluation of the skills possessed by workers and therefore submitting suggestions to develop workers performance in the field of agricultural extension within the context of decentralization.

RESEARCH LITERATURE

First: Agricultural Extension

The agricultural sector is one of the most important strategic sectors, which is directly related to the economic and social changes of countries. Recently, the world witnesses' rapid steps in the field of developing and modernizing of the agricultural sector (Mahmoud, Youssef, 2019; Al-Shorfat, 2010). Agricultural extension services (also known as agricultural advisory services) indicate to a set of information, advice, training and knowledge related to agriculture or animal production, its processing and marketing. These information are provided by governments, non-governmental organizations and other sources that increase farmers' ability to improve productivity and income (Ragasa, 2014).

The successful extension organization is the outcome of a successful extension system that combines modern management and educational abilities for extension process (Khader, Al-Ajili, 2019). Many governments and experts recognize agricultural extension as a critical component of increasing agricultural productivity (Feder *et al*. 2010; Davis *et al*. 2010). Extension systems have contributed to the rapid diffusion and adoption of Green Revolution technologies, especially in irrigated areas. Various meta-analyzes have shown that investments in extension have large short-term payments and high returns (Swanson and Rajalahti 2010). Saafan *et al*. (2018) have illustrated the important role of agricultural extension in developing irrigation operations. However, literature has emphasized many shortcomings of earlier methods, including weak links between extension, research and farmers; weak inquest of farmers, lacking incentives for extension workers, financial sustainability problems, elite capture, and a limited impact on remote areas, (Feder *et al*. 2010; Davis *et al*. 2010). Also (Muhammad, 2017) pointed out some of the factors that negatively affect the development of agricultural extension, which are the personal and functional factors of the extension units, such as age, gender, academic achievement, experience, workplace, job satisfaction, and a tendency towards extension work. On the other hand, Juwaid (2012) and Othman (2010) explained that the participation of extension agents in training courses on e-learning is necessary to enhance and develop their level of performance. In the same context, Jasim (2011) stated that the indicative means in the transfer of agricultural technologies such as the internet computer, wall stickers, data slides, photographs and samples are all techniques that increase the effectiveness of the extension process and the skills that it performs for workers in the extension units.

Agricultural extension aims at transferring knowledge from researchers to farmers (El-Shennawi, 2012), providing advice to farmers in decision-making, teaching farmers how to make better decisions, enabling farmers to clarify their decisions within the goals and available capabilities, and motivating farmers to move towards desired agricultural developments (Habtom, 2019). Sadawi and Mahdi (2019) explained that agricultural extension is one of the prominent mechanisms that can be relied upon in advancing economic development, as it contributes to guiding the farmer on how to increase agricultural productivity by providing farmers with cultivation and seeding techniques, using agricultural technology, modern agricultural methods, fertilizers and pesticides. This will increase the pace of agricultural growth, which contributes to the diversification of the national economy, in addition to the role of agricultural extension in spreading organic farming technology (Al-Nuaimi, 2017).

According to Habtom (2019), agricultural extension includes stakeholders from research and commercial institutions (input distributors, food processors, retailers) and public service organizations, in addition to providing support to farmers through the specialized organizations. With regard to agriculture, these organizations provide advisory services such as consultation, loans / credit, input distribution, training and marketing (Tiwari, 2018).

Second: decentralization of agricultural extension:

Several countries (such as the Philippines, Nepal, Uganda, and Colombia) have begun to decentralize government services, including public agricultural extension service. Under decentralization, specific administrative functions are transferred from central to local governments (ie, state and municipal governments), which increases their independence from the centre, but this requires reorganizing public services such as extension units. Extension units move from national and regional offices to local communities and introduce their report to local public officials rather than high-ranking officials in the ministry or extension agencies. Decentralization also facilitates the production and delivery of site-specific information (Norton and Alwang, 2020).

Decentralization is defined as the transfer of effective power from central administrations to regional or provincial offices or other offices at the field level (Rivera, 2011). This is achieved in agricultural extension by transferring to departments in agricultural areas so that agricultural extension workers in these offices are shared with managers forming work teams that develop the

annual plan for the local administration and its extension and training programs. This team consists of the director, assistant and agricultural extension workers in the region (Okorley *et al*, 2010), as this encourages the participation of lower administrative levels of agricultural extension in decision-making and budgeting (Habtom, 2019). Furthermore, it allows greater transparency in actual decision-making in agricultural extension programs. This creates an open environment for agricultural extension workers in which they feel comfortable in exchanging information. Also, it provides support in decision-making and encourages teamwork among them and ensures their timely information on policies and other related issues (Okorley *et al*, 2010).

The requirements for decentralization include delegating powers to managers in regions and teams, independence in making routine decisions, independent budgeting for operational expenditures, adoption of technologies and solving problems facing agricultural extension in the region. It is very important to consider the diversity of organizations that provide different agricultural and extension services and to improve relations between them and agricultural extension (Norton and Alwang, 2020). Habtom (2019) considered that the participation of stakeholder and inquest them are important components of a successful decentralized for practicing decentralized extension. The participation is centred around the inclusion of influence and control in setting priorities, setting policies, allocating resources and ensuring access to public goods and services. These represent the basic elements of a decentralized extension system. In a report issued by the World Bank (2004), the presence of an adequate inquisitional system in decentralized extension is important to ensure that there is an appropriate allocation of resources. Rivera (2011) stated that the inquisition mechanism will support decision-making at the local level because it equips stakeholders with a good knowledge of the program as well as inquisition and participation. It has been observed that extension services in most developing countries suffer from a serious shortage of trained managerial and technical personnel to carry out extension responsibilities. The World Bank (2000) highlighted the fact that the institutional capacity is the most important aspect of effectively providing extension services in developing countries.

الموضوع منقصل

Agricultural extension is one of the sustainable agricultural development systems, which consists of a large number of elements such as agricultural research, agricultural extension, agricultural credit, agricultural marketing, transport facilities and agricultural education. These elements combine with each other in order to improve and develop the agricultural and rural sector in agricultural areas.

As an attempt to increase the knowledge and skills of members of the rural community, agricultural extension aims to develop human wealth by enhancing the skills of the rural community. In this regard, agricultural extension is one of the modern trends in the field of modern agricultural research which aims to fill the gaps in studies that dealt with the rural community. It represents an important element in any agricultural system through diversifying, renewing and increasing the production of rural society as well as developing and educating farmers and workers in the agricultural sector and guiding them in frameworks of new technologies and developments in this field. Furthermore, agricultural progress is an important indicator in the evaluation of countries that depend on the agricultural economy as one of their economic pillars (Ghadeeb *Et al*., 2014). This gives the agricultural extension a central role among other agricultural sciences. In order for the agricultural extension policy to be successful, there is a need for a comprehensive policy of decentralization and pluralism for development of extension system (Koyenikan and Omoregbee, 2016), through enhancing the performance of workers in the field of planning programs. Three main axes should be involved which are educational skills, extension management-related skills and execution – related skills in the extension units.

RESULTS AND DISCUSSION

1- Stability of study variables:

Table (1) shows the stability of the study variables by Cronbach's Alpha scale. The scale value for all study variables was 83.6%, which is greater than 60% and therefore the value is acceptable, and the degree of stability of the variables is considered good.

Table 1. Cronbach alpha scale

Cronbach's Alpha	N of Items
836	16

2- Descriptive statistics:

Table 2: displays the descriptive statistics related to the dimensions of workers performance development.

Number						
1	Work is being done to deliver the updated agricultural information to farmers in a timely manner	150	4.53	75.33	0.373	23.47
2	Promote new agricultural ideas for agriculture by contacting them	150	4.27	80	0.446	22.57
3	Developing farmers' positive trends towards agricultural innovations	150	3.96	70.8	0.373	23.67
4	Enlightening the farmer of imperceptible problems.	150	4.11	68.6	.988	29.06
5	Development and awareness of the capacities of rural women	150	3.85	75.8	0.519	29.92
6	Introducing rural youth to their role in community development and develop their capabilities	150	4.14	70.8	0.453	14.25
			4.14	73.55	0.525	23.47

Second: The development of skills related to the management of extension programs						
1	Participation in planning extension programs	150	4.85	75	0.991	14.25
2	Organization and management of extension activities	150	4.05	73.6	0.558	22.50
3	Participation in the evaluation of extension programs	150	3.66	67.3	0.419	23.48
4	Coordination with the relevant agricultural organizations	150	3.94	78.2	0.412	22.25
			4.12	73.52	0.595	
Third: Developing skills related to executive tasks						
1	Invite the farmer to attend the extension activities	150	3.89	78.6	0.484	19.49
2	The use of local leaders and specialists and for implementing extension programs	150	4.47	82.8	0.628	19.39
3	Training the farmers on basic skills in applying new ideas, especially through in-situ training.	150	3.88	65	0.512	18.8
4	Diagnose and solve problems that arise during the implementation of extension programs	150	4.55	75.8	0.288	25.25
5	Supervising farmers as they apply the skills to be taught to them.	150	4.12	86.4	0.327	16.73
6	Preparing the educational requirements to implement the process of communicating with farmers	150	4.30	73.8	0.476	18.33
			4.20	80.4	0.452	

According to the table, the skill development variable related to the educational tasks was evaluated with an arithmetic mean of 4.14 which corresponds to "agree" in the adopted scale, and with a standard deviation of 0.525. We also note that the skills development variable related to the management of extension programs was evaluated with an arithmetic mean of 4.12, which corresponds to "agree" in the approved scale, and with a standard deviation of 0.595. This implies a homology in the individuals' answers regarding the development of skills related to the management of extension programs. Therefore, there is a clarity of vision about the application of skill developing program related to managing extension in the studied extension units.

As for the variable of developing skills related to executive tasks, it was evaluated with an arithmetic mean of 4.065, which corresponds to a "strongly agree" on the adopted scale, with a standard deviation of 0.452. That means the individuals' response to developing skills related to executive tasks were limited between "strongly agree" and "agree". Considering the small value of the standard deviation, there is a consensus in individuals' answers regarding the development of skills related to executive tasks.

dimensions of performance developing of the employees in the extension units can be arranged according to the values of the arithmetic mean as follows: In the first place, developing skills related to executive tasks, then developing skills related to educational skills, and then developing skills related to managing extension programs. The values of the relative importance of the studied dimensions confirmed the correctness of the arrangement, as the relative importance of developing skills related to executive tasks was 80.4%, and developing skills related to educational tasks was 73.55%, while the importance of developing skills related to the management of extension programs was 73.53%.

Discussion of hypotheses:

Based on the descriptive analysis tables of the sample, and on the aforementioned analysis, the hypotheses can be discussed as follows:

1. The first hypothesis: We accept the first hypothesis: There is no fundamental difference between the current reality of performance development of workers related to educational tasks in the extension units and the planned situation for the same workers. The arithmetic means and the relative importance have indicated the presence of actual application of educational programs in the extension units. Therefore, there was a clear endeavor to develop the performance of workers in relation to the educational tasks within the framework of the decentralized planning of the studied extension units.

2. The second hypothesis: We reject the second hypothesis: There is no fundamental difference between the current reality of performance development of workers with regard to developing skills related to the management of extension programs in the extension units and the planned situation for the same workers. The arithmetic mean and the relative importance indicated the actual application of programs aimed at developing the performance of employees in the studied extension units,

3. The third hypothesis: We reject the third hypothesis: There is no fundamental difference between the current reality of performance development of workers with regard to developing skills related to the executive tasks in the extension units and the planned situation for same workers. The arithmetic mean and the relative importance indicated the actual application of programs aimed at developing the performance of employees in the studied extension units in relation to the executive tasks of extension programs within the decentralization of the studied units.

FINDINGS AND RECOMMENDATIONS

Based on the aforementioned analysis, it can be concluded the following:

1. The performance of workers in the field of agricultural extension was well evaluated in studied extension units, where the results of the descriptive analyses of the performance dimensions indicated that all the respondents' answers ranged between agree and strongly agree with regard to the performance dimensions.

2. There is an interest in developing the educational skills of the individuals. Thus, the first hypothesis is accepted, "there is no fundamental difference between the current reality of performance development of workers with regard to the educational tasks in the extension units and the planned situation of the same workers."

3. There is an interest in developing the skills related to the management of extension programs for the sample

members. Therefore, the second hypothesis is accepted "There is no fundamental difference between the current reality of performance development of workers in relation to developing skills related to the management of extension programs in the extension units and the planned situation for the same workers.

4. There is an interest in developing skills related to the execution of extension programs for studied individuals. Accordingly, the third hypothesis is accepted "there is no substantial difference between the current reality for performance development of workers with regard to the development of skills in executive functions in the extension units and the planned situation for the same workers "

Study recommendations:

1. In order to develop agricultural extension systems, it is necessary to provide and develop a mechanism for accessing the Center for Information and Communication Technology. For example, the National Center for Agricultural Research should facilitate the work of specialists in accessing information through the internet, in addition to provide technical and marketing information, including centers of the Consultative Group for International Agricultural Research.

2. In addition to the need for an effective center for information and communication technology, there is an equal importance to create an information technology infrastructure that would connect extension staff to information and communication technology centers, and more broadly to technical and marketing information, and information management systems.

3. The necessity of securing the workers in the Internet extension to communicate with the Center for Information and Communication Technology and provide a strong infrastructure.

4. The institutions responsible for pre- and in-service training of the extension cadre must be identified. First, it must be ensured that agricultural extension organizations specialized in marketing and training affairs provide adequate and appropriate training programs to develop the skills of workers in this field.

5. Determining the content of training courses, especially the training materials, and the bodies organizing these courses, and to determine the duration of the programs and who excited them.

6. To strengthen the role of the applied extension and the extent of its participation in the advisory information system at the national level, it is necessary to determine the ability of the current extension system to operate in a comprehensive manner. The decentralization of the extension units should be adopted by enabling these units to take sub-decisions related to training in a manner consistent with the reality of the extension units in every province. However, this trend should be in line with the extension plan of the main extension center.

REFRENCES

1. Abdullah Jweid, A. (). Assessing the level of e-learning in the extension institution in Iraq. J of the College of Basic Education 18(76):363-378.
2. Al-Nuaimi A, Al-Ajili S, Al-Badri (2017): The role of agricultural extension in disseminating organic farming technology among protected vegetable growers in Wasit Governorate. Tikrit J Agri. Sci. 17(2):295-305
3. Al-Shurufat A. (2010). Economic development in the Arab world, the reality, obstacles and ways of advancement. House of compassionate time for publishing and distribution, Jordan.
4. Davis K, Nkonya E, Kato E, Ayalew Mekonnen D, Odendo M, Miiro R, Nkuba J (2010) Impact of farmer fi eld schools on agricultural productivity and poverty in East Africa. IFPRI discussion paper 00992. International Food Policy Research Institute, Washington, DC.
5. El-Shenawy, LH (2012). Establishing farmer groups as an entry point for updating the extension service. The tenth conference of the Scientific Association for Agricultural Extension, Mechanisms for Modernizing Agricultural Extension in Egypt.
6. Feder G, Anderson JR, Birner R, Deininger K (2010) Promises and realities of community-based agricultural extension. IFPRI discussion paper 959. International Food Policy Research Institute, Washington, DC.
7. Ghadib A, Ali M, Sharif M. (2014). The role of agricultural extension, research centers and agricultural services in transferring, adapting and providing agricultural technologies for farmers in Salah al-Din Governorate, Tikrit University J Agri. Sci. 14. Issue of the Third Specialized Conference / Plant Production. pp: 461-468.
8. Habtom, G. K. (2019). An Overview of the Challenges of Decentralized Agricultural Extension Practice in Developing Countries: The Case of Eritrea. International Journal of Public Administration, 4(3) Norton, G. W., & Alwang, J. (2020). Changes in Agricultural Extension and Implications for Farmer Adoption of New Practices. *Applied Economic Perspectives and Policy*, *42*(1), 8-20, 045-066.
9. Jamil M, Qasim M. (2013). Description of the tasks of agricultural extension workers in Nineveh Governorate. Iraqi J. Agri. Al-Rafidain. 41(4).
10. Jasim, A (2011). Using extension tools in the process of disseminating agricultural technologies from the point of view of extension agents and their relationship to some factors. Iraqi J Agr Sci 42(5):28-97-88
11. Khadr K, Al-Ajili S. (2019). Study the relationship of communication between agricultural extension workers and agricultural organizations in Salah al-Din Governorate. Kirkuk University J Agr Sci 18. The Third International Agricultural Conference Issue: Special Issue Pages: 55-64
12. Koyenikan, M. J., & Omoregbee, F. E. (2016). Practitioners' perception of challenges and effectiveness of Nigerian research-extensionfarmer-input linkage systems. Journal of Development and Communication Studies, 4(2), 416-427.
13. Mahmoud S, Yousef S. (2019). Study the current reality of organizing agricultural extension in Iraq using SWOT analysis, Kirkuk University J. Agri. Sci. 18. The Third International Agricultural Conference Issue: Special Issue Pages. 45-5.
14. Muhammad K. (2017). The magnitude of the problems facing the work of agricultural extension workers in the center of Kirkuk Governorate and their relationship to some variables. Tikrit J. Agri. Sci. 17(4):299-309.

15. Norton, G. W., & Alwang, J. (2020). Changes in Agricultural Extension and Implications for Farmer Adoption of New Practices. Applied Economic Perspectives and Policy, 42(1), 8-20
16. Okorley, E. L., Gray, D., & Reid, J. (2010). Towards a cross-sector pluralistic agricultural extension system in a decentralized policy context: A Ghanaian case study. J. Sustain. Dev. in Africa, 12, 1-10.
17. Othman D. (2010). The scarcity of translation deprives the Arab farmer of agricultural guidance via the Internet, Arab Internet Writers Union, Cairo. Qishta AA. (2014). The Philosophy of Successful Agricultural Extension. Green Line for Printing, Cairo, Arab Republic of Egypt
18. Qishta AA. (2014). The Philosophy of Successful Agricultural Extension. Green Line for Printing, Cairo, Arab Republic of Egypt
19. Ragasa, C. (2014). Improving gender responsiveness of agricultural extension. In Gender in agriculture pp. 411- 436.
20. Rivera, W. M. (2011). Public sector agricultural extension system reform and the challenges ahead. Journal of Agricultural Education and Extension, 17(2), 165-180. 430). Springer, Dordrecht.
21. Sadawi M, Saadawi N. (2019). The role of agricultural extension in achieving economic development in Algeria. Res J Academic Studies 6(1):634-652
22. Saffan I, Ramadan A, Shata A. (2018) The role of agricultural extension in developing field irrigation in some villages in Kafr El Sheikh Governorate. Kirkuk University J Agri Sci 18 The Third International Agricultural Conference Issue: Special Issue Pages: 65-84
23. Salman M, Kazem A, Abdul-Jabbar B (2015). Agricultural extension workers' performance of some extension tasks and their relationship to their satisfaction with the organizational climate - Field study in the central region of Iraq. Iraqi J. Agri. Sci. 64 (1): 87-94.
24. Salman M, Kazem A, Abdul-Jabbar. (2015). Agricultural extension workers' performance of some extension tasks and their relationship to their satisfaction with the organizational climate - Field study in the central region of Iraq. Iraqi J. Al-Shurufat A. (2010). Economic development in the Arab world, the reality, obstacles and ways of advancement. House of compassionate time for publishing and distribution, Jordan.
25. Swanson B, Rajalahti R (2010) Strengthening agriculture extension and advisory systems: procedures for assessing, transforming, and evaluating extension systems. Agricultural and rural development discussion paper 45. World Bank, Washington, DC.
26. Tiwari, R. K. (2018). Empowering women through agricultural extension: a global perspective. Indian Rural Market: Opportunity and Challenges in the Global Context, 1(1), 68-75.