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KNOWLEDGE LEVEL OF AGRICULTURAL PERSONNEL WORKING IN AGRICULTURAL BRANCHES IN NINEVEH GOVERNORATE AGRICULTURAL DIRECTORATE IN THE FIELD OF RURAL DEVELOPMENT

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ABSTRACT

The research aims at identifying the level of knowledge in the field of rural development of the agricultural personnel in Nineveh governorate in general, and in all fields of the research which included cultural, economic, social, agricultural and health fields, and then to find the correlation between the level of that knowledge of the agricultural personnel and each of the following independent variables (age, gender, educational level, specialty, origin, years of service in the agricultural departments and participation in study courses), and finally, to arrange the fields of research according to the weight percentage of that field. The study included all the agricultural personnel in the agricultural divisions of Nineveh Directorate of Agriculture and their number was (186) employees among which a simple random sample was chosen of 75% (i.e. 100 employees), after excluding (30) employees that were included in the measurement of the stability of the research's criterion. For the purpose of collecting research data, a questionnaire form was prepared consisting of three parts; the first part included a number of independent variables, and the second part included (80) items to measure the knowledge of agricultural personnel distributed over five fields having to do with the rural development process, including each of (cultural, economic, social, agricultural and health fields). After verifying the apparent credibility and content credibility, the questionnaire was subjected to a preliminary test, and stability was measured using split half reliability method; the stability coefficient was (0.93) after correction with Spearman- Brown formula.The results of the study showed that the knowledge level of the said personnel in the rural development process in general was high. The results also showed that the level of knowledge of those personnel in the(cultural, economic, social, agricultural and heath) fields was also high. The results also showed that there is a positive correlation between the level of knowledge of agricultural personnel in the rural development process and each of the following independent variables (educational level, origin, participation in previous study courses). Again the results showed that there is a significant negative correlation in the variables of (age, gender, specialty, service period in agricultural departments).

Keyword: Agricultural, agricultural divisions, rural development.

Introduction

The issue of development is one of the most important contemporary issues of the world; it has become an important trend in various national activities and events, and is considered a necessity in contemporary societies being a prerequisite and a major requirement for developing societies being the basic method or tool by which these countries face the factors of underdevelopment in their economic and social environment, and this is what made numerous scholars headfulof the issue of development; we find that it occupied a wide space in the books of sociologists, anthropologists and economists, but what distinguishes the writings of scholars is their focus on development, each in his field of specialization to identify the possibility of developing their countries (Hajirah, 2007): (Ali, 2013). Development is one of the important phenomena that man seeks to achieve (Makki, 2011); (Ali, 2013); integrated development is a basic goal for any country, especially the developing countries that are still trying hard to catch up with the developed countries in order to advance their various economic, social and living standards, and agricultural development is an important part of the integrated development (Al-Maamouri, 2002; Afana, 2010). Development has become a basic and urgent requirement for all contemporary societies, due to its important social, economic, political and cultural implications (Taim, 2010). Development has different types and forms in which agricultural development is considered one of the basic pillars of developing the economies of the world countries, due to its direct link to their food security on the one hand, and to the important role the agricultural sector plays in their national economy on the other hand, as well as its direct link to developing the rural areas and achieving social, economic and cultural transformations in large areas of those countries (Abdulqadir, 2000). Development studies are distinguished by being inclusive and comprehensive of all possible variables in the fields of development and this is because a big part of them relates to geographical philosophy which is based on description and comprehensive analysis of the spatial relations between the influential and the influenced factors in the designated setting. Agricultural

development is a process that focuses on increasing agricultural production by using modern means and technologies through agricultural projects planning and development and the efficient use of arable land (Al-Innabi, 2010). The issue of development has become the trend and the biggest concern in all the developed and developing countries of the world nowadays; development seeks to improve the living conditions of the population and to enhance them through the development of economic and social life in society; agricultural and human developments represent the basic pillar of the comprehensive development process in various countries (Qishta, 2013). Agriculture in our time is of great importance due to its securing of future needs of the coming generations, such as food and clothing for the population, providing the necessary resources and transferring them to the beneficiaries (Al-Shammari and Jalil, 2010; Qishta, 2012). The concept of development is no longer limited to achieving economic and social progress only, in fact, the preservation of health aspects of individuals has become one of the important bases within which the development process takes place. Maintaining the health of the rural population has primarily become one of the challenges that developing countries face when planning for comprehensive development, and development considerations are no longer excuse for neglecting to preserve health aspects of the rural community and to take effective measures to fight various diseases in the countryside. It is noticed that rural development included the various agricultural fields of plant and animal, but the health field did not receive a clear attention like the rest of rural development fields (Naji and Alona, 2011: Altalb and AL-Zubaidi 2018). Rural development, including agricultural development, in some countries of the world occupies a distinctive place and an important role in the social and economic life of all peoples of the world. In the developed countries, there is a significant financial, scientific, technical and technological support by governments to the agricultural sector in those countries, despite the modern capabilities that the private sector possesses, whereas for the developing countries and despite the efforts made and the increasing interest in agricultural development issues on the one hand, and the availability of natural, human and financial resources, the agricultural sector in it still suffers from many difficulties and challenges, and this constitutes a great obstacle to its better progress and development (Laz'ar, 2015). Therefore, these countries seek to achieve rural development concomitant to agricultural development, the achievement of which requires attention to the work of many governmental and private heuristic agencies, whose success depends on the participation of farmers and the local community with its various segments in implementing their development programs. Agricultural development aims to optimize the utilization of the unit area of land along with obtaining a high return from its exploitation at the lowest possible costs, and in order to achieve this, it is necessary to develop the appropriate crop composition for the type of land and the surrounding environmental conditions, taking into account the social dimension and the consumer's taste so that there would be a market for the disposal of the products produced from the unit area with the continuity of production and not being exposed to risk especially in the production process and products disposal (Afana, 2010; Resan, 2013). Development experts agree that agricultural development is one of the important means of rural development used, which can be achieved through the preservation of good arable area and future expansion, as well as the preservation of water resources and the development and support of agriculture from the scientific and technical side to achieve self-sufficiency (Baligh, 2004). Agricultural development aims to improve the living conditions of farmers in rural areas, and this is achieved by increasing the arable areas available to them, (Al-'Akf, 2014). Therefore, it became necessary for governments in developing countries in particular to provide all forms of support for the development of the agricultural sector and solving development problems due to the serious obstacles to agricultural development on the one hand, and the weak administrative, financial, technical, technological and informational capabilities of the agricultural sector on the other hand (Ali, 2012). Therefore, agricultural development processes in Iraq require a new approach according to the economic changes that the country is going through, by following a modern scientific method and investing the results of agricultural research in the field of animal and plant production, and this requires directing scientific research to applied research to attain more comprehensive benefits, and through reliance on the agricultural extension agency, which is a link between researchers and farmers (Al-Aqidi, 2006).

In light of the scarcity of researches that explores the level of knowledge possessed by employees in the field of rural development; this research was selected and conducted. The researcher has considered the following two questions:

First: What is the level of knowledge possessed by the agricultural personnel working in the agricultural divisions in the extension role in the field of rural development?

Second: What is the relationship between the knowledge level and a number of personal, social, economic and communicative factors?

The answer to these questions is the subject of the current research.

Materials and Methods

Study area

In terms of location, Nineveh governorate represents the northwestern part of Iraq and it lies between the latitudes (15-30˚) and (30-37˚) in the north, and between the longitudes (25-41) and (15-44) in the east, bounded from the north by Dohuk governorate, from the east by Erbil governorate, from the south by Salah al-Din and Anbar, and from the west by Syria. Agriculturally, the governorate of Nineveh is one of the most important governorates in the country, given the vast cultivated area, and the large quantities produced of agricultural crops of all kinds. The total area of land in the governorate is (13,671,344) dunams, and the arable area is (7,834,358) dunams, while the non-arable area is (58,369,86) dunams, and the area cultivated with secondary crops and winter and summer vegetables in the governorate is (9,241,815) dunams. The agricultural divisions of the Nineveh Agriculture Directorate have been selected and they include (30) agricultural divisions distributed over the different regions of the governorate.

Research community and sample

The research community included all the (186) agricultural personnel working in the agricultural divisions of Nineveh Agriculture Directorate. The simple random sampling method was adopted in selecting the research

sample, whereby 75% of the total research community was picked, distributed over the agricultural divisions of the Nineveh Agricultural Directorate, after excluding (30) personnel included in the measurement of the stability test of the research, and thus the number of personnel in the sample became (100).

Results and Discussion

This chapter deals with the presentation and discussion of research results according to the sequence of research objectives, as follows:

The first objective

To identify the level of knowledge of agricultural employees in the field of rural development in Nineveh Governorate in general.

The results showed that the highest numeric value obtained by respondents in rural development in general was (160) and the lowest value was (127) with a mean of (43.85) numeric value. The respondents were divided into three categories according to the knowledge level of the agricultural personnel in the field of rural development in general, as shown in table (1).

Table (1) indicates that (55%) of the respondents are within the (high) category (151- 162), and that (27%) of the respondents are within the (medium) category (139- 150), whereas (18%) are within the (low) category (127- 138). From the above we find that the majority of the respondents are within the high category which represents (55%) and this means that the knowledge level of the agricultural personnel in the field of rural development in general is high. The reason to this might be that agricultural employees which work in rural areas have knowledge in the fields of rural community with all its categories of farmers, youths and women as well as taking place in the rural development through establishing study courses and attending meetings of extension work.

The second objective: to recognize the knowledge level of agricultural personnel working in the field of rural development in Nineveh governorate in all the fields of the research namely: (cultural, economic, social, and health).

1- Cultural field:

The results showed that the highest numeric value obtained by the respondents on the cultural level was (20), and the lowest was (12) with a mean of (16.0533) numeric value; the respondents were divided into three categories according to the knowledge level in the cultural field.

Table (2) indicates that (69%) of the respondents fall within the (high) category (18-20), and (25%) of the respondents fall within the (medium) category (15-17), while (6%) of them fall within the (low) category (12-14). It is evident from the above that the (high) category constituted the highest percentage (69%) of the total number of respondents, and this means that the level of knowledge of agricultural personnel working in rural development in the field of culture is inclined to high, and the reason for this may be that those agricultural personnel have contact with different educational methods through distance education, working to hold educational workshops and their large participation in seminars and programs that contribute to increasing their level of culture and self development.

2- Economic field:

The result showed that the highest numeric value obtained by the respondents on item of the economic field was (40) and the lowest was (30) with a mean of (34.79) numeric value. The respondents were divided into three categories according to their knowledge level in the economic field.

Table (3) indicates that (77%) of the respondents fall within the (high) category (38-41), and (7%) of them fall within the (low) category (30-33), while (16%) of the respondents fall within the (medium) category (34-37). It is evident from the above that the high category constituted the highest percentage (77%) of the total number of respondents, and this means that the level of knowledge of the agricultural personnel working in the field of rural development is high in the economic field, and this may be due to that the respondents of agricultural personnel are working to encourage farmers to adopt modern technologies by holding field days and establishing agricultural projects through which they can demonstrate the results obtained from the application of modern technologies, which contribute to increasing agricultural production, raising the level of income for farmers and reducing costs, which benefit in preserving the available natural resources and better exploiting the existing areas.

3- Sociological field:

The results showed that the highest numerical value obtained by the respondents on the items of the social field was (30), and the lowest value was (18) with a mean of (23.6133) numeric value. The respondents were divided into three categories according to their level of knowledge in the social field.

Table (4) indicates that (55%) of the respondents fall within the (high) category (27-30), and (30%) of the respondents fall within the (medium) category (23-26), while (15%) of them fall within the low category (18-22). It is evident from the above that the (high) category constituted the highest percentage (55%) of the total number of respondents. This means that the level of knowledge of agricultural employees in the field of rural development I high in the social field, and this may be due to the fact that the respondents who were agricultural personnel working in the agricultural divisions in the field of rural development had aspiration and drive towards establishing agricultural projects in rural areas by trying to involve all categories of the society in these activities and choosing those who have the ability to lead these groups by gaining their confidence in community activities in agricultural institutions and establishing positive values and habits in agricultural work as well as training them to take appropriate decisions in aspects of social activity and this helps to a great degree in raising the morale among the members of the rural society to find channels of cooperation which contribute positively to developing their awareness that rural development is a matter of their common interest.

4- Agricultural field:

The result showed that the highest numeric value obtained by the respondents on the items of agricultural field was (54) and the lowest was (37) with a mean of (45.356) numeric value,; the respondents were divided into three categories according to their knowledge level in agricultural

field.

Table (5) indicates that (73%) of the respondents fall within the (high) category (49-54), and (22%) of the respondents fall within the (medium) category (43-48), while (5%) of them fall within the (low) category (37-42). It is evident from the above that the (high) category constituted the highest percentage (73%) of the total number of respondents. This means that the knowledge of agricultural employees working in the process of rural development is high in the agricultural field, and the reason for this might be that the respondents are agricultural employees working in the agricultural divisions in the field of rural development with scientific and practical capabilities to apply modern agricultural ideas that help in solving agricultural problems and preserving soil fertility by cultivating soil-fertilizing crops and teaching farmers modern methods that contribute to raising the productivity of the land, teaching farmers to use modern agricultural machinery and reducing the use of chemical pesticides and using modern irrigation methods that help promoting the productivity of the unit area of land.

5- Health field:

The results showed that the highest numeric value obtained by the respondents on the items of health field was (18) and the lowest was (9) with a mean of (33.333) numeric value; the respondents were divided into three categories according to their knowledge level in the health field.

Table (6) indicates that (59%) of the respondents fall within the (high) category (17-20), and (34%) of the respondents fall within the (medium) category (13-16), while (7%) of them fall within the low class (9-12). It is evident from the above that the high category constituted (59%) of the total number of respondents. This means that the knowledge of agricultural employees working in the field of rural development is high in the field of health,and the reason for this may be that the respondents working in the agricultural divisions in the field of rural development contribute to instructing farmers on the need to follow the correct customs and traditions in the agricultural fields such as using agricultural pesticides with preservation, teaching rural women methods of child care, following health guidelines to prevent diseases, raising health awareness of farmers, clarifying the importance and necessity of conducting sterilizations against diseases and epidemics, and acquiring knowledge in the field of first aids.

The third objective:

Order of the fields of study according to their percentage weight:

It was found from the forthcoming table (7) that the agricultural field has gained the highest weight (49.9), and this may be due to that the respondents and agricultural institutions concerned with rural development consider the agricultural field as one of the most important fields in the development process, since agriculture in its two folds; plants and animals, and increasing productivity, would financially benefit the farmers, and this may lead to increasing their standard of living and improving their living conditions. The health field had the lowest percentage (16.39), and this may be due to that workers in the field of development see the health field falling within the specialization of health units situated in villages and they may not have any experience in the field of health because the health guidelines are related to human health and should not be approached except by specialists.

Table 1 : Division of respondents into categories based on their knowledge level in the field of rural development in Nineveh governorate in general.

Category (numeric value)	Number	Percentage	Level mean of each category
Low (127-138)	18	18	32
Medium (139- 150)	27	27	43.57
High (151- 162)	55	55	56
Total	100	100%	

$\overline{X}$ = 43.85 S.d = 148.98

Table 2 : Division of the respondents into categories based on their cultural knowledge level.

Category (numeric value)	Number	Percentage	Level mean of each category
Low (12-14)	6	6	13.66
Medium (115-17)	25	25	16.2
High (18-20)	69	69	18.3
Total	100	100 %	

$\overline{X}$ = 16.0533 S.d = 16

Table 3 : Division of respondents into categories based on their economic knowledge level.

Category (numeric value)	Number	Percentage	Level mean of each category
Low (30-33)	7	7	31.14
Medium (34-37)	16	16	35.68
High (38-41)	77	77	37.55
Total	100	100%	

$\overline{X}$ = 34.79 S.d = 35.68

Table 4 : Division of respondents into groups based on their level of knowledge in the sociological field.

Category (numeric value)	Number	Percentage	Level mean of each category
Low (18-22)	15	15	20.21
Medium (23-26)	30	30	23.43
High (27-30)	55	55	27.2
Total	100	100%	

$\overline{X}$ = 23.6133 S.d = 24

Table 5 : Division of respondents based on their knowledge level in the agricultural field.

Category (numeric value)	Number	Percentage	Level mean of each category
Low (37-42)	5	5	39.6
Medium (43-48)	22	22	46.81
High (49-54)	73	73	49.66
Total	100	100 %	

$\overline{X}$ = 45.356 S.d = 45

Table 6 : Division of respondent to categories based on their knowledge level in the health field.

Category (numeric value)	Number	Percentage	Level mean of each category
Low (9-12)	7	7	16.36
Medium (13-16)	34	34	
High (17-20)	59	59	
Total	100	100 %	

$\overline{X}$ = 33.333 S.d = 15

Table 7 : The order of the fields of research according to the percentage weight of the field.

N	Field	Percentage weight
1	Agriculture	49.9
2	Economy	38.25
3	Society	26.32
4	Culture	18.12
5	Health	16.39

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