The Farmers Level of Knowledge About Field Peanut Plant with the Scientific Recommendations Related to Growing and Marketing the Crop in Jalawla Area in Diyala Governorate

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ABSTRACT

Key words: Cognitive level. Field Peanut. Growers, Scientific Recommendations. Corresponding author: Salam M. Zamhar E-mail: Salam.jumaly@gmail.com Received: 26/9/2017 Accepted: 23/1/2018 The research goal was to determine the farmer's knowledge level in growing the peanuts with the scientific recommendations that concerns growing and marketing the crop in Jalawla suburb in Diyala governorate. Determination the knowledge level in each route of research, as well as descending order of routes according to the relative importance of each route, and find the correlation between the level of knowledge and some independent variables, and to identify the regression relationship between the level of knowledge and the overall factors studied.

Jalawla area in Diyala governorate was chosen to carry out the research, project where the research includes all farmers who grow the peanuts in five villages, the number was 235 farmers, and from them we selected a random sample in rate (50%). Thus, the rate of (103) respondents, and selected (6) farmers from each village for the first test and they were (30) farmers then excluded from the final research sample.

A questionnaire form was prepared to collect data and it was from two parts. The first part included a number of questions related to some independent variables related to the respondents. The second part consisted of (58) paragraphs divided into (9) fields. The stability of test was measured by split-half method and used the correlation equation of Pearson (0.81), and its representing the stability of half the scale, then it corrected by using the correction equation of Spearman Brown (0.90). The data were collected from the respondents and analyzed statistically by using SPSS.

The results showed that the knowledge level on peanuts crop was average and tends to rise. It was found that the knowledge level of the farmers in the field of fertilization is low, The results showed that the date and method of agriculture ranked first and found a moral correlation between the knowledge level and the following independent factors (age, number of years of work, cultivated area, average economic return, sources of information, openness.

المستوى المعرفي لزراع فستق الحقل بالتوصيات العلمية المتعلقة بزراعة وتسويق المحصول في ناحية جلولاء بمحافظة ديالي

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الخلاصية

الكلمات المفتاحية:استهدف البحث تحديد المستوى المعرفي لزراع فستق الحقل بالتوصيات العلمية المتعلقة بزراعةالمستوى المعرفي، زراع فستق الحقل،وتسويق المحصول في ناحية جلولاء بمحافظة ديالى بشكل عام، وتحديد المستوى المعرفي في كلفستق المعرفي، زراع فستق الحقل،وتسويق المحصول في ناحية جلولاء بمحافظة ديالى بشكل عام، وتحديد المستوى المعرفي في كلفستق الحقل، التوصيات العلمية.مجال من مجالات البحث، وكذلك الترتيب التنازلي للمجالات حسب الاهمية النسبية لكل مجال، وإيجادفستق الحقل، التوصيات العلمية.مجال من مجالات البحث، وكذلك الترتيب التنازلي للمجالات حسب الاهمية النسبية لكل مجال، وإيجادفستق الحقل، التوصيات العلمية.مجال من مجالات البحث، وكذلك الترتيب التنازلي للمجالات حسب الاهمية النسبية لكل مجال، وإيجادفستق الحقل، التوصيات العلمية.معرفة الارتباط بين المستوى المعرفي وبعض المتغيرات المستقلة، أيجاد الفرق بين متوسطات درجاتسلام محمود زمهارمعرفة المبحوثين في قرى البحث، والتعرف على علاقة الانحدار بين المستوى المعرفي وجملة العواملالبريد الالكتروني:المدروسة. أختيرت ناحية جلولاء بمحافظة ديالى منطقة لاجراء البحث، شمل البحث جميع زراع فستقالبريد الالكتروني:الحقل في(5) قرى ضمن ناحية جلولاء، حيث بلغ عدد الزراع (205) زارعاً، اختيرت منهم عينة

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عشوائية تناسبية بنسبة(50%) وبذلك بلغ حجمها (103)مبحوث، بعد استبعاد (30) زارعا كعينة استطلاعية. أعدت استمارة استبيان كاداة لجمع البيانات مكونة من جزأين تضمن الجزء الأول عدداً من الأسئلة تتعلق ببعض المتغيرات المستقلة المتلعقة بالمبحوثين، أما الجزء الثاني فقد تضمن(58) فقرة موزعة على (9) مجالات، تم قياس ثبات الاختبار بطريقة التجزئة النصفية وباستخدام معادلة الارتباط بيرسون الذي بلغت قيمته (0.81) وهي ممثلة لثبات نصف المقياس ثم صححت باستخدام معادلة التصحيح سبيرمان براون الذي بلغت قيمته (0.81)، وهي ممثلة لثبات نصف المقياس ثم صححت باستخدام معادلة ما تصحيح سبيرمان براون الذي بلغت قيمته (3.00)، وتم جمع البيانات من المبحوثين وتحليلها احصائيا باستخدام برنامج التحليل الاحصائي (SPSS). اظهرت النتائج بأن المستوى المعرفي لزراع محصول فستق الحقل متوسط يميل الى الارتفاع، ووجد ان المستوى المعرفي لزراع في مجال التسميد منخفض، وبينت النتائج ان مجال موعد وطريقة الزراعة احتل المرتبة الاولى، ووجدت علاقة ارتباط معنوية بين المستوى المعرفي وكل من العوامل المستقلة الاتية (العمر، عدد سنوات العمل، المساحة المزاوعة، متوسط العائد الاقتصادي، مصادر المعلومات، الانفتاح والاستعداد للتغير). واوصى الباحث بضرورة متويد الزراع بالمعارف الخاصة بالتوصيات العلمية المتولة والامرية، معد المعرفي الزراع في مجال التسميد منخفض، متوسط العائد الاقتصادي، مصادر المعلومات، الانفتاح والاستعداد للتغير). وصى الباحث بضرورة متوليد الزراع بالمعارف الخاصة بالتوصيات العلمية المتعلقة بخدمة وتسويق محصول فستق الحقل في متوليد الزراع بالمعارف الخاصة بالتوصيات العلمية المتعلقة بخدمة وتسويق محصول فستق الحقل في منطقة البحث من خلال الدورات التدريبية والحملات الارشادية الهادفة وتنفيذ الرامج الارشادية الملائمة

Introduction:

The agricultural sector is considered one of the most important economic activities in most Arab countries and it contributes to national income and the composition of the gross output. It constitutes of about 32% of the total Arab labor force and plays a key role in raising the standard of living (Al-Khalidi, 2007: 13). As well as a major source of food and livelihood for a large proportion of the rural and agricultural population, which constitute about 5.44% of the total population of the Arab world. Agriculture contributes to many of the main functions of Such as environmental loyalty, economic and social function (FAO, 1999). The main goal of the agriculture sector is to provide raw materials for many manufacturing industries such as food processing and textile industry (the Arab Organization for Agricultural Development,2006). The agricultural development efforts have achieved significant success in the production of agricultural crops. These include the provision of basic production inputs and the use of improved modern technologies. This success will only be achieved through marketing as an important and complementary stage of the agricultural production process (Shaker.2001: 5)

Al-Rimawi et al., 1996, point out that agricultural extension is an essential element in the agricultural system. It works to transfer knowledge and modern technologies applications from research centers to farmers and teach them how to use them, and also as an agricultural extension system to achieve agricultural development as it directs its programs and activities to the rural people in general, Their agricultural production (Rimawi et al., 1996: 37).

Oil crops are grown for the purpose of obtaining the seeds for oil extraction. It is characterized by high oil in the seeds compared with other crops such as grain crops. The most important field crops are flax, sesame, field pistachios, soybeans, sunflower, safflower and beets. (Ansari, 1982: 181). The field is one of the most valuable crops in the world today, especially in the post-World War II period, where it is grown for the purpose of obtaining seeds containing 25% protein, 43% fat and large amounts of vitamin B, niacin and riboflavin, as well as 11% Carbohydrate, and since the economic importance of the first pistachio field is oil extraction, where the seeds contain oil by 40-48% and protein by 25-30% and in modern varieties, the proportion of oil to 54% (Sahuki, 1995), but large quantities of seeds eaten Directly in many countries of the world, and the resulting gain is used after AST. The oil out of the seeds and the different crop residues after the extraction of

pistachio, which includes leaves and roots and a section of pods containing the seeds are used as a feed for farm animals and benefit from the green plant as feed for livestock and the work of dries.

The crop of peanut (*Arachis hypogaea* L.) enters an agricultural cycle where it is exchanged with winter crops, especially barley, clover, and buckwheat. It is grown in sandy soil when irrigation and fertilization are available and it is replanted several years until its natural and chemical properties improve and become suitable for growing other crops. (1990, 1982: 127). It is also interacted with soil as a green fertilizer to restore soil nutrients. Since the field pistachio is a legume crop, the nitrogen left after fertilization increases soil fertility.

The countries of the world are famous for growing the crop; are India, China and Nigeria are at the top production. These countries account for 70% of the world's production, followed by the cultivated areas and the production of the United States, Indonesia, Brazil, Mexico and the West African coasts from Senegal to the Sierra Leone. Mozambique, Sicily, Spain and others. In 1974, the field planted with field pistachios amounted to 96.75 dunums, world production was 6.17 million tons and the yield rate was 75.232 kg / dunum. In Iraq, the cultivated area was 1040 dunums. 220 kg / dunum (Karakji, 1971). The experiments have proved successful in the good soft soil soils in the country and come with a good ratio with a high percentage of oil which is more than 50%, and is currently grown in the provinces of Anbar and Babylon, Iraq has a large quantity of this crop more than 40 thousand tons per year and the total quantity imported (49056) tons in 1967 brought from abroad for use in the oil of It. It is hoped that the area cultivated in Iraq will grow from this crop due to the increased demand for its various food and industrial benefits Accordingly, the current research idea came to answer the following research questions:

Accordingly, the current research idea came to answer the following research questions.

1-What is the farmers level of knowledge of peanut with the scientific recommendations related to

the cultivation and marketing of field pistachio in the Jalawla area of Diyala governorate?

- 2-What is the level of knowledge of peanut in each of the following crop cultivation areas (category selection, appropriate soil preparation, date and method of planting, irrigation, fertilization, crop service operations, pest control, maturity and harvest, storage and marketing?
- 3-What is the relation between the level of knowledge of peanut crop and each of the variables related to agriculture (age, educational level, number of years of crop cultivation, crop area, importance of crop in annual agricultural income of farmers, average economic yield of crop, sources of relevant information, Participation in extension activities, openness and willingness to change?
- 4-What is the relationship between the regression between the level of knowledge of the peanut crop and the range of scientific variables?

Research Goals:

The first objective: To determine the level of knowledge of the peanut by the scientific recommendations related to the cultivation and marketing of field pistachio crop in Jalawla area in Diyala province in general

The second objective is to determine the level of knowledge of peanut in each field of study (species selection, soil preparation, date and method of planting, irrigation, fertilization, crop service operations, pest control, maturity and harvest, storage and marketing).

The third objective: descending order of domains according to the relative importance of each field

The fourth objective is to find the correlation between the level of knowledge of the peanut seed and the following variables (age, educational level, number of years of crop cultivation, crop area, importance of crop in annual income of farms, average economic yield of crop, sources of relevant information, Extension activities, openness and willingness to change)

Objective 5: Determine the regression relationship between the cognitive level and the total quantitative variables studied

Statistical Hypotheses:

- 1- There is no significant correlation between the levels of knowledge of peanut and age.
- 2- There is no significant correlation between the level of knowledge of peanut and the educational level.
- 3- There is no significant correlation between the level of knowledge of the peanut and the number of years of crop cultivation
- 4- There is no significant correlation between the level of knowledge of the peanut and the area cultivated with the crop.
- 5-There is no significant correlation between the level of knowledge of peanut seed and the average economic yield of the crop.
- 6- There is no significant correlation between the level of knowledge of the peanut and the information sources related to the crop?
- 7-There is no significant correlation between the level of knowledge of peanut and participation in extension activities
- 8-There is no significant correlation between the level of knowledge of peanut and openness and willingness to change.

Procedural definitions:

- 1-Cognitive level: A indicator of the extent to which the peanut possess the necessary information and expertise for growing and marketing the crop in Jalawla area of Diyala Governorate
- 2 peanut Growers: They are all farmers who grow peanut in Jalawla area and depend on it as a source of income and consumption
- 3- peanut: It is an important industrial and economic oil crop in the world and has high nutritional value because it has high protein content
- 4-Scientific Recommendations: The scientific information package issued by the General Authority for Extension and Agricultural Cooperation in the form of a package of scientific recommendations issued by scientific research centers that relate to the cultivation and marketing of field pistachio crop.

Search area:

All the villages in the Jalawla area within Diyala Governorate were tested for research because they are famous for the cultivation of field pistachio (Umm al-Hatta, known support, Shaykh Baba al-Kabeer, Amin Habib, al-Islah). The area of the southern section of the area is Saadia, east of Khanaqin district and north of the east of Qara Tabah area. The cultivated area of the pistachio crop was the area cultivated before the displacement (15,000) dunums and was currently limited to 6000 dunums.

Complex and sample search:

The research included all peanut in all the villages in the village of Jalawla (5 villages) located within one area, including the northern and north-east sections. The number of farmers was 235 and 50% (30) were selected and then excluded from the final research sample, as in Table

	I able (1) I	Prepare field pist	achios in th	e study area	
No	The name of the village	Total number after explortary Sample	Sample	Explortary Sample	Total number
1	Um Alhunta	50	25	6	56
2	Faddm maaroof	45	23	6	51
3	Sheikh Baba Alkabeer	40	20	6	46
4	Ameen Habeeb	42	21	6	48
5	Al-eslah	28	14	6	34
	Total	205	103	30	235

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Numbers and Building Data Collection Too:

For the purpose of achieving the objectives of the research, a questionnaire form was prepared as a means of collecting data from the respondents. It consists of two main parts.

Part 1: Independent variables

A number of questions related to the independent variables related to field (peanut) are: age, educational level, years of field pistachio cultivation, area cultivated with field pistachio, average economic yield, relevant sources of information, participation in extension activities, openness and readiness for change.

Part 2: Cognitive Testing

For the purpose of identifying the main areas related to the scientific recommendations of peanut crop, the researcher studied literature, previous studies, research and guidance publications relevant to the subject of research and consulting experts in the crop department, Faculty of Agriculture, Tikrit University.

And then presented the nine areas on the specialists (Appendix A) to give the relative weight of each area and the importance of agriculture by dividing the 100 degrees on the areas identified by the researcher, which represents the desired situation, and after calculating the relative weighting rates became the results as in Table (2).

No	Fields of field weight	Wieght aspest
1	The relative weight of the category selection field	12
2	The relative weight of the field of ground formation	11.5
3	The velative weight of the date and method of cultivation	11
4	Relative weight of irrigation area	14
5	Relative weight of fertilization area	15
6	The relative weight of crop service operations	10
7	Relative weight of bush, disease and insects	10.5
8	Relative weight of the field of maturity and harvest	8
9	The relative weight of storage and marketing	8
	Total	100

Table (2) shows the relative weight of each field

Tool Validation:

The veracity of the questionnaire was achieved by presenting the questionnaire to a group of professors in charge of agricultural extension and psychology (Appendix C) to identify the extent to which the questionnaire was completed for the objectives for which it was prepared, the clarity of the questions, the accuracy of its formulation and the time it takes to answer the questions. Expert opinions through addition, deletion or modification. 12 paragraphs of the cognitive test paragraphs have been modified and the total number of test paragraphs has not changed. The content was validated by presenting the questionnaire to the Field Crops Professors Appendix).

Measurement of independent variables:

The independent variables included in the research were as follows:

Age: Measured by the number of years of research until data collection1-

- 2-Educational level: The educational level was measured according to the following levels: illiterate, elementary, middle, preparatory, college, college, higher degree on numerical values (1,2,3,4,5,6,7), respectively.
- 3-Number of years of crop cultivation: Measured by the number of years of field pistachio cultivation.

4-Area cultivated with crop: were measured by the number of dunums planted with field pistachio crop.

The average economic yield of the crop: It was measured (JD / dunum5-

- 6-Sources of relevant information: Sources of information were measured through (7) sources of agricultural information related to field pistachio crop according to levels (always, sometimes, rarely, do not get). These levels were given the following values (3, 2, 1, 0) Thus, the values of the variable range from (0-21).
- 7- Participating in the extension activities: measuring the variable through (4) sources of the extension activities according to the participations (no participant, participant once, participant twice, participant three times, participant four times). Values were given (0.4,3,2,1).
- 8-openness and readiness for change: It was measured by (8) paragraphs placed a tripartite standard (OK, neutral, disagree) and given the following weights (3.2, 1) and thus the theoretical values of the variable. (24–8)

Statistical Means: The following statistical methods were used:

Arithmetic mean, Pearson simple correlation coefficient, Spearman correlation coefficient, multi-stage regression model.

Results and discussion:

The first objective: To determine the level of knowledge of the field pistachio plant with the scientific recommendations related to the cultivation and marketing of the crop in Jalawla area in Diyala Governorate in general.

The results showed that the highest score (80.90) and the lowest score (34.70) with an average of (55.52) and a standard deviation (9.88) on a knowledge scale with a maximum grade of 100 and a score of 0. Of the respondents in the middle category, as shown in Table (3).

1	abic (3). Distribution (n respondente	according	to knowledge level.	
No	age Categories	Number	Precent	Knowledge average	
1	Lower (34.70- 50.0)	15	14.6	42.63	
2	Middle (50.1- 65.4)	63	61.2	65.91	
3	High (65.5-80.90)	25	24.2	71.16	
	total	103	100%	S.D = 9.88	

 Table (3): Distribution of respondents according to knowledge level.

Table (3) shows that more than half of the respondents are in the middle category, followed by the top category (24.2%). Therefore, the level of knowledge of the respondents is defined as an average tendency to rise. This is due to the fact that the respondents have good experiences and information and are interested in obtaining information in As for the field pistachio crop cultivated in their fields in order to improve production in quantity and quality.

The second objective: descending order of fields according to the relative importance of each field.

The relative importance of the fields ranged between (46.28 - 61.81). The results showed that the field of planting date and method was ranked first as shown in Table (4)..(

Table (4) shows the descending order of the fields according to the relative importance of each
field

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aspects	The precent importance of aspect	High degree of aspeet	Knowledge average	rank			
The time and manner of cultirate	61.81	11	6.80	1			
Growing and harvesting	61.62	8	4.93	2			
Crop service process	60.6	10	6.06	3			
Choosing the kind	57.33	12	6.55	4			
irrigation	57.21	14	8.01	5			
Storing and marketing	53	8	4.24	6			
Preparing the ground	52.17	11.5	6	7			
Fertilization	51.06	15	7.66	8			
Combating	46.28	10.5	4.86	9			

Table (4) shows that the date and method of agriculture ranked first, and this may be due to the

fact that the respondents are practicing this process annually, which made them know the best date and method for growing the crop. The fields of fertilization and control came in the last stage. The quality of the soil and the quality and quantity of appropriate fertilizer, in addition to the area of control requires the ability of farmers to diagnose the pest and know the quality and quantity of the appropriate pesticide in addition to the date of control.

3rd Objective: Determine the relationship between the cognitive level and each of the following independent variables:

1- Age:

The results showed that the oldes of respondents (65) years and the youngest age (24) years with an average of 43.56 years and a standard deviation of 6.88, the respondents were divided into three categories using the range as shown in Table (5).

141	Tuble (5) Distribution of Respondents decording to variable rige of oups.						
No	age Categories	Number	Precent	Knowledge	R-value	moral	
				average			
1	Lower (24-37)years	30	29.1	48.32	0.21	0.01	
2	Middle(38-51) years	53	51.5	54.81			
3	High (52-65) years	20	19.4	59.20			
	total	103	100%				

Table (5) Distribution of Re	spondents according to	Variable Age Groups
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Table (5) shows that the highest percentage of respondents in the middle category, and to find the correlation between the level of knowledge and age, used Pearson correlation coefficient (0.21) and to test the significance of the relationship used the law (t) and was found to be significant at level (0.01) Therefore, the statistical hypothesis is rejected and the alternative hypothesis is accepted, which states that there is a significant correlation between the two variables. This may be due to the fact that the older the subjects progress, the greater the information about the scientific applications related to the crop.

2- The number of years of work in field pistachio cultivation:

The number of years of work in the field of pistachio cultivation ranged between (4 - 35) years with anaverage of 18.23 years and a standard deviation of 6.88. The respondents were divided into three categories using the range, as shown in Table (6).

Table (6) Distribution of respondents according to categories of years of work in field pistachio cultivation.

No	The years of	Number	Precent	Knowledge	R-value	moral
	working catigories			average		
1	Lower (4- 13)	27	26.2	52.92	0.02	0.05
2	Middle (14-23)	51	49.5	54.05		
3	High (24- and more)	25	24.3	59.06		
	total	103	100%			

Table (6) shows that the highest percentage of respondents in the intermediate category, and to find the relationship between the level of knowledge and the number of years of work in agriculture, used Pearson correlation coefficient (0.21) (0.05). Therefore, the statistical hypothesis is rejected and the alternative hypothesis is accepted that provides for a significant correlation between the two variables. This may be due to the fact that the higher the number of years of work in agriculture, the higher the pistachio yield. Cognitive accumulation of respondents S this result with the findings of (Mahmoud, 2008) This result is not consistent with its findings (Gdab).

3-Average economic return per acre:

The highest value of the average economic return of JD (950) thousand dinars and the lowest value (400) thousand dinars, an average of 664.66 thousand dinars and a standard deviation 159.56, the respondents were divided into three categories using the range, as shown in Table (7).

No	thousnds Dinnar/ Categories	Number	Precent	Knowledg e average	R-value	moral
1	Lower (400- 582)	35	34	48.59	0.215	0.05
2	Middle (583-765)	40	38.8	53.51		
3	High (766- and more)	28	27.2	58.66	S.D =159.56	
	total	103	100%			

Table (7) Distribution of respondents according to the categories of average economic return

Table (7) shows that the highest percentage of respondents in the middle category, and to find the relationship between the knowledge level and the economic mean, used Pearson correlation coefficient (0.215)). Therefore, the statistical hypothesis is rejected and the alternative hypothesis is accepted that provides a significant correlation between the two variables. This may be due to the fact that the higher the income, the greater the experience and the information of the respondents about the importance of the crop. This result is consistent with the findings of the mechanism (Jubouri, 2006). This result is inconsistent with the findings of Khalaf (2010).

4- Sources of relevant information:

The results showed that the highest value of the sources of information was the highest value (16) and the lowest value (1), with an average of 6.60 and a standard deviation of 2.42. The respondents were divided according to this variable into three categories using the theoretical range, as shown in Table (8).

Table	(8)	Distribu	tion of	responder	nts accordin	g to cate	egories o	f sources	of informatio	on
	~ ~					_	0			

No	Information sources	Number	Percent	Knowledge	R-value	moral
	categories			average		
1	Lower (3- 8)	30	29.1	48.62	0.48	0.01
2	Middle (9-14)	66	64.1	52.66		
3	High (15-21)	7	6.8	58.10	S.D	=2.42
	total	103	100%			

Table (8) shows that the highest percentage of respondents in the intermediate category, and to find the relationship between the level of knowledge and information sources, used Pearson correlation coefficient (0.48) It therefore rejects the statistical hypothesis and accepts the alternative hypothesis that states the existence of p.

There is a significant correlation between the two variables. This may be due to the fact that the multiplicity of sources of information and their multiplicity increase the knowledge of farmers in the manner of serving the crop. This result is in line with the findings of Mahmoud (2008) and does not agree with what he reached (Khalaf, 2010).

5- Openness and willingness to change:

The results showed that the highest value of the preparation (24) and the lowest value (14) with an average of 19.46 and a standard deviation of 4.95, and the respondents were divided into three categories using the theoretical range, as shown in Table (9).

	Table (9): Distribution of Respondents									
No	Ready categories	Number	Percent	Knowledge	R-value	moral				
				average						
1	Negative (8-12)	5	4.8	47.60	0.24	0.01				
2	Neutral 913- 17)	52	58.2	54.32						
3	Positive (18- and more)	46	44.7	58.22	S.D =4.59					
	total	103	100%							

Table (9) shows that the highest percentage of respondents is in a neutral trend category. In order to find the correlation between the level of knowledge and the readiness for change, Pearson correlation coefficient (0.24) was used. Therefore, the statistical hypothesis is rejected and the alternative hypothesis is accepted, which states that there is a significant correlation between the two variables. This may be due to the fact that the respondents have sufficient interest in the information and experience towards openness. For increasing Alanteg.otaatvq this result with the findings of the (al-Jubouri, 2006) is not consistent with its findings (Mahmoud, 2008).

4th Objective: Determine the relationship of regression between the level of knowledge of the field pistachio plant and the total factors studied:

The purpose of interpreting the regression relationship between the level of knowledge of the field pistachio culture and the sum of the independent factors involved in the analysis is to determine the effect of each factor on the presence of other factors at the knowledge level, using the input method, as well as to determine the total variance in the knowledge level. The results of the analysis, (10).

Variables	R	\mathbb{R}^2	Adj R ²	M.S.E	В	F	Sig
constant information Sonrces x1	0.541	0.304	0.927	15.102	30.891 0.448**	42.507	**
constant information Sonrces x1 working years number x2	0.619	0.385	0.384	14.339	30.703 0.319** 0.424**	33.932	**
constant information Sonrces x1 working years number x2 The economic returning x3	0.646	0.428	0.428	13.302	30.00 0.417** 0.442** 0.563*	27.214	**
Constant information Sonrces x1 working years number x2 The economic returning x3 PREPAIRING FOR SHIFTING x4	0.675	0.483	0.438	12.455	28.733 0.375** 0.483** 0.339* 0.154*	24.502	**

 Table (10) Relational relationship between the cognitive level and the total factors studied

 Variables explain more.

Table (10) shows that the most influential factor in the variation in knowledge is the sources of information. All the factors included in the analysis (48.3) have been explained by the differences in the cognitive.

First: Conclusions:

1-The results showed that the level of knowledge of the field pistachio crop by scientific recommendations was an average tendency to rise and this is a clear indication that the respondents in the research area have good knowledge and experience in most fields of cultivation and marketing of field pistachio crop and since the highest proportion of

respondents in the middle category, There is a cognitive weakness in some areas of crop cultivation, indicating the need for pilot activities in the research area

- 2- The results showed that the level of knowledge of the respondents in the field of fertilization average tends to decline and we conclude that there is a weakness in the level of knowledge of farmers in this area, indicating the need for farmers to the activities of guidance on the importance of compost for the crop and quantities and times of addition.
- 3- The results of the descending order showed a knowledge weakness in a field in the field of control. This is an indication of the need of farmers for the activities of guidance on the operations of control of agricultural pests from the jungles, insects and diseases that affect the fields of pistachio crop. The extension material should include the diagnosis of the pest and the appropriate pesticides and the timing of adding it.
- 4-There was a significant correlation between the level of knowledge and each of the following variables (age, number of years of work in crop cultivation, economic return, sources of information, openness and willingness to change).
- 5- The results showed that the sources of information are the most influential variables on the cognitive level. Therefore, it is necessary to provide the farmers in the research area with publications and magazines that include topics related to cultivation, service and marketing of field pistachio crop.

6- The factors studied have accounted for 48.3% of changes in the level of knowledge of field pistachios, indicating the importance of studying other factors in the research area.

Second: Recommendations:

- 1-The necessity of activating the role of agricultural extension in the research area in order to increase farmers information and experiences on how to apply scientific recommendations through targeted activities, especially with regard to the cognitive weaknesses of farmers in the search area.
- 2- The importance of taking into consideration the areas where the weakness of knowledge in the preparation of programs and activities guidance, especially those areas that occupied the last three ranks.
- 3- the need to consider the independent variables that showed significant correlation with the level of knowledge in the number of programs and activities indicative of pistachios.
- 4-The need to pay attention to the provision of guidance publications of publications and magazines, including topics of guidance on the cultivation and service of the field pistachio crop, because of the importance of sources of information in improving the level of knowledge. For the farmer.
- 5- the need to provide agricultural inputs of fertilizers and pesticides and subsidized prices by the state as a catalyst for agriculture in order to expand the agricultural areas to grow the crop for its importance as a food source and economic.
- 6- The need for other studies in the search area include other independent variables to know the variables that explain the highest percentage of changes in the level of knowledge for adoption in the programs and activities guidance guidance coming.

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