Journal Tikrit Univ. For Agri. Sci. Vol. (18) No.(4) – 2018
ISSN-1813-1646

The Level of Applying Some Agricultural Practices by the Planters of the Cucumber Crop Which Keep the Soil Fertility in Kut District / Wasit Governorate.

Hussein Isa khalef[1] and Ali Ahmed Ghedheeb
Department of Economics and Agricultural Guidance/ College of Agriculture / University of Tikrit

Key words:
agricultural, Level of Applying.

Corresponding author:
Hussein I. khalef
E-mail:
hfnamab@gmail.com

Received: 21/1/2018
Accepted: 1/4/2018

ABSTRACT

The research aims at identifying the level of applying some agricultural practices by the planters of the cucumber crop which keep the soil fertility in kut District / wasit Governorate, and identifying the correlation relationship relation among the level of applying of the planter of the cucumber crop and each of the following independent factors (age, agricultural experience in the field of planting cucumber crop, and the membership of agricultural organizations). Kut District in Wasit Governorate was chosen as an area to conduct the research because it is characterized by the presence of the largest number of cucumber planters in the governorate. The data were collected by the questionnaire and the personal interview from a random stratified proportional sample of 30 percent from the research population which is composed of 335 planters which equals 101 planters. The research results showed that the level of applying some agricultural practices which keep the soil fertility by the planters was intermediate category whose percentage is (47) with a rate of application reached to (46,72) degrees. The research concluded that there is a positive morel correlative (associative) relationship between the level of applying of cucumber crop planters and all the following independent variables (age, the agricultural experience in the field of planting the cucumber crop, and the membership of agricultural organizations).

مستوى تطبيق زراع محصول الخيار لبعض الممارسات الزراعية التي تحافظ على خصوبة التربة في قضاء الكوت محافظة واسط

حسين عيسى خلف وعلي احمد غضيب
جامعة تكريت /كلية الزراعة / قسم الاقتصاد والارشاد الزراعي

الخلاصة

استهدف البحث تحديد مستوى تطبيق زراع محصول الخيار لبعض الممارسات الزراعية التي تحافظ على خصوبة التربة في قضاء الكوت محافظة واسط ، وتحديد العلاقة الارتباطية بين مستوى تطبيق زراع محصول الخيار وكل من العوامل المستقلة الآتية (العمر– الخبرة الزراعية في مجال زراعة محصول الخيار – عضوية المنظمات الزراعية).اختير قضاء الكوت مركز محافظة واسط منطقة لإجراء البحث كونه يتميز بوجود اكبر عدد من زراع الخيار في المحافظة ، وجمعت البيانات بواسطة الاستبانة وبطريقة المقابلة الشخصية من عينة عشوائية طبقية تناسبية بنسبة 30% من مجتمع البحث المكون من 335 زارعا وبواقع 101 مزارع . وأظهرت نتائج البحث الى ان مستوى تطبيق الزراع لبعض الممارسات الزراعية ذات الصلة بالمحافظة على خصوبة التربة كان ضمن الفئة المتوسطة والبالغة نسبتها 47% وبمعدل تطبيق (46,72) درجة، كما خلص البحث إلى وجود علاقة إرتباطية معنوية موجبة بين مستوى تطبيق زراع محصول الخيار وكل من العوامل المستقلة الآتية (العمر— الخبرة الزراعية في مجال زراعة محصول الخيار – عضوية المنظمات الزراعية).

الكلمات المفتاحية:
مستوى التطبيق، الممارسات الزراعية، زراع الخيار.

للمراسلة:
حسين عيسى خلف
البريد الالكتروني:
hfnamab@gmail.com

الاستلام : 21 / 1 / 2018
القبول : 1 / 4 / 2018

[1] This article is a part of MSc. Thesis for the first author.

The Introduction of the Research and its Problem:

Paying attention to the agricultural sector helps in building basic and necessary anchors for the agricultural renaissance and for providing what the society needs of food commodities and meeting the needs of necessary services that the transformative industries need and processing the problems resulted from importing the different food and agricultural goods which represent an additional economic burden that obviously affects the economic development tracks in society (Al. Si'eedy, 2012: 20).

Agriculture, as it is known, consists of two main fields: the Animal production field in its different activities, plant production field in its activities and various crops represented by cereal crops like wheat, barley, etc., the fruit crops, the feed crops and vegetable crops which all have direct correlation to individuals' life on a daily pasis as they form a resource of their food (al-Fetlawy , 2014:15).

One of the vegetables crops whose rates of consuming by the individuals is increasing is the cucumber crop which belong to pumpkin family, covered seed section, the category of Bifurcation. It is one of the important vegetables crops in the countries of the world. India and Africa are considered as its original home. The evidences refer to the fact that the cucumber crop was planting in west Asia (3000) years ago (Al. Khez'ly, et al. 2005:53)

The cucumber crop is planted in Iraq in the open field in two seasons , spring season and autumn season. It is also planted in the local (protective) environment whether it is planted in tunnels or in plastic or glass houses . In the autumn season, the date of planting is controlled by starting it earlier or later so that the production starts in the times when the demand for crop is growing so it is sold at high prices .

The cucumber is considered as one the vegetable crops that like the moderate heat atmosphere and need a temperature between (25- 30) which is the most suitable for the growing of the cucumber crop as it slows its growth if temperature goes down to less than (15) and hold its fruit if the temperature goes up to more than (38). One of the reasons behind the bitter taste of the cucumber crop is that it is exposed to high temperatures flowed by low temperatures. The cucumber crop is also so sensitive to the low temperature of the soil and immigration water (Al. Samera'y, 2011: 223).

The plating of the cucumber crop is considered as one of the important sources of income in the countries of the world such as Iraq because of its fast economic return as compared with the short duration of the survival of the crop in the soil (Howaydeh, 2003:16).

Wasit governorate is considered as one of the governorates that have agricultural character in its two parts: the animal production represented by the fisheries and livestock and poultry production and the other part is the vegetable production. The governorate is characterized by planting the strategical crops whether they are seed crops like wheat crop or barely crop, yellow and white maize crop or feed crops like the jet and the clover or legume crops like beans and mash or oil crops like sun flower crop and sesame crop or vegetable crops like tomato, pepper, Pamir, and eggplant as well as the cucumber crop (Statistical Brochure, 2016: 49)

The cucumber crop is planted in almost all the districts and areas of wasit governorate and about (2055) planters plant it. Most of them are in Kut district as they from (17%) of the planters of this crop in the governorate.

In order to be able to apply the agricultural practices which keep the soil fortuity in their farms in Kut district /Wasit governorate, the planter of the cucumber crop must be aware of those scientific practices that are recommended by the specialists. Many studies referred to the fact that the use of the modern agricultural techniques by the planters in their farms and their applying of the scientific recommendations are affected by many factors. The most important factor is their awareness of these techniques and recommendations, as if there is no are you study awareness and understanding of the technique, the main goal which is the applying and the adapting of that technique will not be achieved (Al. Rawy, 2008:3).

In the light of the above and because of the economic importance of the cucumber crop for the planters of Kut district/ Wasit governorate and because of the importance of identifying those agricultural practices that keep the soil fertility and its sustainability. This research came to answer the following questions:

1- What is the level of Applying some agricultural practices which keep soil fertility by the planters of the cucumber crop in Kut district / Wasit governorate?
2- What is the moral correlative relationship between the level of applying some agricultural practices which keep soil fertility by the planters of the cucumber crop and all the other following independent factors (age , agricultural experience in planting the cucumber crop, and the membership of the agricultural organizations)?

Research objectives:

1- Identifying the level of Applying some agricultural practices which keep soil fertility by the planters of the cucumber crop in Kut district / Wasit governorate.
2- Identifying the moral correlative relationship between the level of applying some agricultural practices which keep soil fertility by the planters of the cucumber crop and all the other following independent factors (age, agricultural experience in planting the cucumber crop, and the membership of the agricultural organizations).

Research Hypotheses:

1- There is no significant correlative relationship between the level of applying the agricultural practices which keep the soil fertility by the planters of the cucumber crop and the age.
2- There is no significant correlative relationship between the level of applying the agricultural practices which keep the soil fertility by the planters of the cucumber crop and the agricultural experience in planting the cucumber crop .
3- There is no significant correlative relationship between the level of applying the agricultural practices which keep the soil fertility by the planters of the cucumber crop and the membership of the organization.

The Importance of the Research:

1- The importance of this research comes from the fact that it contributes in developing the agricultural sector in our beloved counter especially in Wasit governorate by knowing the results and the recommendations of the research as depending on the effective agricultural extension (Extension) programs are determined.
2- Identifying the agricultural practices that keep soil fertility and focusing on them in the (Extension) activities to protect soil from deterioration.

Research Method:

First: Research Methodology:

This research comes within the diagnostic researches which lies within descriptive method, as this method is considered suitable in reaching to data and detailed facts about the targets in certain time (Al.Asedy, 2008:51).

This method also commensurate with the nature of the phenomenon in study which is identifying the level of applying some agricultural practices which keep soil fertility by the planters of the cucumber crop in Kut district / Wasit governorate.

Second: The Area of Conducting the Research.

Kut district in Wasit governorate was chosen as an area of conducting the research as it occupies a distinguished rank in planting vegetables and within these vegetables is the cucumber crop as well as because of the presence of the sample represented by the planters of cucumber crop and it is also easy to access by the researcher.

Third: The Research population and Sample.

The research population includes all the existing planters of cucumber crops in Kut district whose number is (335) planter. A proportional stratified random sample was chosen in the rate of (30%) which is equal to (101) planters, as it is illustrated in table (1).

Table (1) illustrates the distribution of the planters of the cucumber crop and the individuals of the sample for each sector who are located within the work area of Kut agriculture division

.

No.	Area	Number of Planters	%
1	Al-Shu'la	60	18
2	Al-Khairia	55	17
3	Al-Bedria	70	21
4	Al-Kerama	50	15
5	Al-Ahdaf	100	30
	Total	335	101

Four: Preparing and Developing the Questionnaire.

In order to achieve the aims of the research, the questionnaire form has been prepared which is one of the tools of collecting information from the persons in question by a number of items or clauses that need to be answered by them. The questions are about the information related to some agricultural practices which keep the soil fertility, as they have been developed after reviewing the studies and researches related to the level of a applying some practices which keep the soil fertility by the planters of the cucumber crop.

Depending on the above, a questionnaire form in its first draft has been set to include two parts. The following steps ltems is an illustration of the questionnaire: -

The First Part: -

This part includes the questions related to the characteristics of the planters of the cucumber crop (independent factors) related to the level of their applying of some agricultural practices which keep the soil fertility represented by (age, the agricultural experience in the field of planting the cucumber crop and the membership of agricultural organization).

The second part:

Building a scale for identifying the level of applying some agricultural practices keep the soil fertility by the planters of the cucumber crop in Kut district / Wasit governorate.

Unclear The First stage: preparing the scale in its first form:

A. Preparing the fields, the axes, and the items.

In the light of the previous mentioned resources, the fields, the axes, and the items of the level of applying some agricultural practices which keep the soil fertility by the planters of the cucumber crop in Kut district/ Wasit governorate has been identified. The scale in its first form includes (44) items distributed on (5) fields and (9) axes.

B. A scale for measuring the problems that face the planter of cucumber crop in applying the agricultural practices that keep the soil fertility has been prepared. The scale in its first form includes (18) problems, and the problem has been identified according to three levels (little important, more important, and most important).

Results and discussion:

The First objective: Identifying the level of Applying some agricultural which keep soil fertility by the planters of the cucumber crop in Kut district / Wasit governorate.

The results of the research show that the highest numerical value of the level of application of the planters of the cucumber crop is (91) degrees, and the lowest numerical value is (14) degrees on a cognitive level scale whose degrees (scores) were between (0-96) degrees with an average application of (46.72) degrees with standard deviation of (10.68). The planters of cucumber crop are distributed on three categories according to the degrees of their applications into (low, middle, high), as illustrated in table (2)

Table (2) The distribution of respondents according to the level of their application of some agricultural practices which keep the soil fertility.

categories	The Degrees of the Level of Application	Frequency	%	The Average of the Level of Application	$\overline{X}$	S.D
Low	14-39	37	36.63	30.43	46.72	16.87
Middle	40-65	47	46.53	49.17		
High	66-91	17	16.84	74.70		
Total		101	100			

The above table (2) refers to the fact that the highest rate of the planters of the cucumber crop lies within the middle category with a rate of (46.53%) and with an average of application (49.17) degrees, and the lowest rate of the planters of the respondent cucumber crop lies within the high category with a rate of (16.84%) and with an average of application (74.70). This means that the application of the processes of planting the cucumber crop in questions lie between the low and the middle. This may be due to several reasons among them the lack of the guidance awareness of the planters of the cucumber crop and as they do not keep up with the modern techniques, as well as, they keep following the traditional methods (ways) in planting .

The Second Aim: Identifying the relationship between the level of application of the planters of the cucumber crop and some independent factors represented by the following:

First: Age

The research results show that the ages of the persons in question are between (20- 67) years with a standard deviation of (9.79), and the persons in question are distributed into three age categories as shown in table (3).

Table (3) The distribution of the persons in question according to age categories and their relations with the level of application.

Age categories / Year	Frequency	%	The average of the Level of application	Coefficient of Correlation	Calculated T	Table T	
						0.05	0.01
20-35	26	25.74	57.19	0.41	4.55	1.66	2.36
36-51	55	54.45	45.49	X=36.10 S.D=9.79 N=101			
52-67	20	19.80	36.5				
Total	101	100					

The table (3) above refers to the fact that the highest rate of respondent in questions lies within the age category (36- 51) with a rate (54:45%) with a medium of application (45.49) degrees, and the lowest rate persons in questions lies within the age category (52.67) with a rate of (19.80%) and with an average of application (36.5). And to know if there is a correlative relationship between the level of the application of planters of the cucumber crop and the age, simple coefficient of correlation (Pearson) has been used whose value reached to (0.41). This refers to the fact that there is a positive relationship between the two variables. To make sure of the morality of this relation T. test whose calculated value reached to (4.55) which means it is moral on the level (0.05) and (0.01) so it refuses the research hypothesis which states that there is no moral correlative relationship between the level of application of the planters of the cucumber crop and age. The reason may be due to the fact that the persons in question acquire a lot of knowledge and information as they grew

up because of the many agricultural experiences they pass through, this creates a cognitive accumulation that they can benefit from in planting the cucumber crop.

Second: The agricultural experience in the field of planting the cucumber crop.

The results of the research show that the agricultural experience in the field of planting the cucumber crop is between (2-31) years, the persons in question are distrusted into three categories as illustrated in table (4).

Table (4) the distribution of the persons in questions according to the categories of agricultural experience in the field of planting the cucumber crop and its relation with the application level.

Categories of Agricultural Experience	Frequency	% The Percentage	The average of the Level of application	Coefficient of Correlation
2-11	71	70.30	40.15	0.54
12-21	23	22.77	61.69	X=9.66
22-31	7	6.93	58.14	S.D=6.06
Total	101	100		N=101

The table above shows that the highest of persons in question lies within the category (2−11) years with a rate of (70. 30%) and an average of application (40.15) degrees, and the lowest rate of persons in question lies within the agricultural experience (22−31) years with a rate of (6.93%) and an average of application (58−14) degrees. And to know if there is a correlative relationship between the level of application of the planters of the cucumber crop and the agricultural experience, the simple correlation equation (Pearson) has been used, its value reached to (0.54) which means that there is a positive relationship between the two variables. And to make sure of the moral of the relationship, T. Test has been used whose calculated value reached to (6.75) which means it is moral on the level (0.01) and (0.05). So it refuses the research hypothesis which states that there is no moral correlative relationship between the level of application of the planter of the cucumber crop and the agricultural experience in the field of planting cucumber. This means that the level of application increases as the years which the planters spent in practicing planting the cucumber increase. This result may be explained as that the years which the planters spent in planting the cucumber create in them accumulated knowledge as a result of the many experiences they pass through and make them acquire information about planting this crop.

Third: The Membership of the Agricultural Organizations.

The results of the research show that the highest rate of the persons in question (62.37%) is the category of those who didn't participate in the agricultural organization with an average of (38.73) degrees, and the lowest rate (37.62%) is the category of those who attended the membership of the agricultural organization with an average of application (60.07) degrees as illustrated in table (5).

Table (5): The distribution of the persons in questions into categories according to the membership of agricultural organizations and its relationship with the level of application.

Categories of Participation				The Number	% The Percentage	The average of the Level of application	Coefficient of Correlation
Participated				38	37.62	60.07	0.61
Not participated	63	62.38	38.73	X=1.37 S.D=0.48 N=101			
Total	101	100					

And to Know if there is a correlative relationship between the level of application of the planters of the cucumber crop and the membership of agricultural organizations, the equation of rank correlation (Spearman) has been use, and its value reached to (0. 61) which refers to the fact that there is a positive correlative relationship between the two variables. To make sure of the morality of the relationship, T. Test has been used whose calculated value was (8.71) which means that it is moral at the level (0.01)and (0.05) so it refuses the research hypothesis which states that there is a moral correlative relationship between the two variables and it may be explained due to the role that the agricultural organizations in its different formations play in participating to provide the planters with what they need such as developing their cognitive abilities that reflects in improving their agricultural performance.

Conclusions and Recommendations:

1. It is obvious from the results of the research that the level of applying some agricultural practices which keep the soil fertility by the planters of the cucumber crop in kut district /Wasit governorate is middle as the level of application of (46.53%) of the individuals of the research sample is described as being middle and the leveled of application of (63.36%) of the individuals of the research sample is described as being week. This leads us to conclude that the knowledge and the information of the planters of the cucumber crop in Kut district in the field of the application of the practices that keep the soil fertility are less than the desired level.
2. As the general character of the level of applying some agricultural practices by the planters of the cucumber crop which keep the soil fertility in Kut district /Wasit governorate is described as being middle, so the researcher recommends to intensify the guidance efforts presented by the Iraqi Ministry of Agriculture in all its formations and also recommends that more attention should be paid to guide the planters and urge them to apply all the studied practices and also focusing on the practices whose application was weak or middle by the persons in question up to other practices. The research also recommends that it is necessary to benefit from the planters whose application was high and benefit from their experiences .

References:

Al- Khez'ly et al. Felah Hassan Al-Khez'ly, (2005) the Production of Cucumber by Using Sand Means and Artificial Feeding , the Academy of Sciences36(3):53-56.

Al- Si'eedy, Jassim Sekheel Chiyad (2012) Cognitive Training Needs of Beekeepers in Babil Governorate and its Relationship with some Factors,Unpublished High Diploma Thesis, College of Agriculture/ university of Baghdad.

Al-Asedy, saeed Jassim,(2008) The Ethics of the Scientific Research in social, Educational, and human Sciences, Warth Cultural Institution/ Department of Researches / Iraq.

Al-Fetlawy, Reheem Mansoor,(2014) The knowledge of Rice Planters of the Agricultural Practices of the Category Foral in Al-Mishkhab District, the Holy Governorate of Najef, Unpublished High Diploma Thesis, College of Agriculture/ university of Baghdad.

Al-Rawy, Sennaa Thabit Nejeeb(2008) The Reality of Guidance Service of the Planters of Protected vegetables in the holy governorates of Najaf and Kerbela, unpublished Master Thesis, college of Agriculture, University of Baghdad.

Al-Samera'y ,Hassan Thamir Zenzel (2011), the Perfect Area of the Planters of the Plastic Houses of Cucumber Crop in Salah Addeen of the Productive Season2010. The Academy of Diyala of Agricultural Sciences,3(2),223-230.

Howaydeh, Abdulrazaq Mehmmood (2003), Organic Agriculture of Vegetables crops, General Directorate of Agricultural culture, Egyptian Ministry of Agriculture.

Iraqi Ministry of Agriculture, the Department of the Researches of Agricultural Economy/ Directorate of Agricultural Researches, statistical Brochure of the Data of Agricultural Crops(Second Edition), 2016.