



THE REALITY OF THE EXTENSION SERVICES PROVIDED TO VEGETABLE GROWERS IN THE FIELD OF AGRICULTURAL PEST CONTROL IN ALQOSH DISTRICT/ NINEVEH GOVERNORATE

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Article info	Abstract
<p>Received: 2024-03-02 Accepted: 2024-04-04 Published: 2024-06-30</p> <p>DOI-Crossref: 10.32649/ajas.2024.183719</p> <p>Cite as: Hameed, T. S., and Abd AlFaraje, D. M. (2024). The reality of the extension services provided to vegetable growers in the field of agricultural pest control in alqosh district/ nineveh governorate. <i>Anbar Journal of Agricultural Sciences</i>, 22(1): 173-181.</p> <p>©Authors, 2024, College of Agriculture, University of Anbar. This is an open-access article under the CC BY 4.0 license (http://creativecommons.org/licenses/by/4.0/).</p>	<p>The research aimed to identify the reality of extension services provided to farmers of vegetable crops in the field of agricultural pest control, and to identify the correlation between the dependent factor and the reality of extension services and some of the independent variables for the respondents, in addition to identifying the most important problems facing farmers in the research area in this field. The research targeted the Al-Qosh region of Nineveh Governorate to conduct the research, which included 160 vegetable farmers, and a simple sample of 50% was taken, so the final research sample was 80 farmers. It was completed Data was collected from respondents using a three-part questionnaire, the first part included the social and personal characteristics of the respondents, the second part included a scale to measure the reality of extension services for the respondents, while the third part included the most important problems facing vegetable crop growers in the field of pest control. The results showed that the level of reality of extension services for farmers in the field of agricultural pest control is weak, and that the correlation between the reality of extension services and the variables (age, educational level, sources of information) was significant. While there was no</p>



significant relationship with the reality of extension services and (the area of cultivated land, and the desire for renewal).

Keywords: Reality of Agricultural Extension, Services of Extension, Vegetable Growers, Pest Control.

واقع الخدمات الإرشادية المقدمة لزراع محاصيل الخضر بمجال مكافحة الآفات الزراعية في ناحية القوش / محافظة نينوى

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الخلاصة

هدف البحث إلى التعرف على واقع الخدمات الإرشادية المقدمة لمزارعي محاصيل الخضر في مجال مكافحة الآفات الزراعية، والتعرف على العلاقة الارتباطية بين العامل التابع وواقع الخدمات الإرشادية وبعض من المتغيرات المستقلة للمبحوثين بالإضافة الى التعرف على أهم المشكلات التي تواجه المزارعين في منطقة البحث في هذا المجال. استهدف البحث منطقة القوش التابعة لمحافظة نينوى لإجراء البحث، والذي شمل 160 مزارعاً من مزارعي الخضار، وتم أخذ عينة بسيطة بنسبة 50%، وبذلك تكون عينة البحث النهائية 80 مزارعاً. تم جمع البيانات من المستجيبين باستخدام استمارة استبيان مكونة من ثلاثة أجزاء الجزء الاول شمل الخصائص الاجتماعية والشخصية للمبحوثين والجزء الثاني شمل مقياس لقياس واقع الخدمات الإرشادية للمبحوثين في حين شمل الجزء الثالث اهم المشاكل التي تواجه زراع محاصيل الخضر بمجال مكافحة الآفات. أظهرت النتائج أن مستوى واقع الخدمات الإرشادية للمزارعين في مجال مكافحة الآفات الزراعية ضعيف، وأن الارتباط بين واقع الخدمات الإرشادية ومتغيرات (السن، المستوى التعليمي، مصادر المعلومات) كان معنوياً. بينما لم تكن هناك علاقة معنوية مع واقع الخدمات الإرشادية و(مساحة الأرض المزروعة، والرغبة في التجديد).

كلمات مفتاحية: واقع الارشاد الزراعي، الخدمات الارشادية، زراع الخضر، مكافحة الآفات.

Introduction

Paying attention to the agricultural sector helps in building basic and necessary foundations for the agricultural renaissance, in providing the needs of the community in terms of various food commodities, meeting its needs for the necessary services needed by the manufacturing industries (14), and addressing the problems resulting from the import of agricultural and food commodities, which thus represent an additional economic burden that clearly affects In the paths of economic development

in society (3). This led to human development of farming methods to increase production per unit area, by abandoning the old farming system that relies on the mulching system in order for the soil to regain part of its activity (6), and relying on mineral chemical fertilizers added to the soil to preserve its fertility and the use of insecticides, fungicides and bacteria to avoid the harmful effects of these pests. on the quality and quantity of the crop (5). and vegetable crops of all kinds are among the main agricultural crops due to the nutritional and productive importance of most countries of the world, especially Iraq. There is no doubt that various agricultural pests and plant diseases play a negative role in the deterioration of agricultural production, whether in terms of quantity or quality. Therefore, combating these pests and diseases becomes an urgent matter to protect these agricultural crops and achieve food security in addition to improving the farmer's income and the national economy. (8). These inputs cause harmful side effects and still occur in the environment more comprehensively as a result of the expansion of their use, especially the use of chemical pesticides in the control of agricultural pests, which led some of them to say that pesticides increased the size of the problems that were supposed to be finally resolved in favor of man (2).

The problem of chemical pesticides polluting the environment began when long-term organic chlorine compounds were used since 1940 because of their chemical stability and non-dissolution in air, water and soil when moving in the food chain between plants, animals and humans and because of their easy solubility with fats (15). It also led to the emergence of strains of pesticide-resistant insect pests, such as the white fly and aphid, which caused the transmission of dangerous viral diseases on vegetable crops, which caused farmers to refrain from cultivating these crops. Therefore, the use of the pesticide leads to the disappearance of the vital enemies, and then the pest cannot be controlled no matter how large quantities are used. of pesticides, as well as the deterioration of crop productivity. And since agricultural extension is one of the basic development components that participate in the process of developing rural people, it is a continuous learning process carried out by professional people to help rural extension workers understand and apply modern agricultural technologies that are appropriate to their conditions and have a clear economic return through appropriate extension methods and tools. Agricultural extension is concerned with the human element, and helping the beneficiaries in the correct use of chemical fertilizers and the proper use of pesticides to combat pests, diseases and weeds (4). The reality is considered one of the main foundations for the success of business organizations in most countries of the world, especially After the current economic, social, political and environmental transformations and changes, and what these organizations face It faces major challenges in-depth in order to improve the quality of its products and enable it to satisfy its customers, which reflects Its ability to survive and continue in light of global competition (7). Reality are currently needed, including agricultural extension regulation, especially with the application of quality standards Global management refers to a management that understands the impact of these variables on its performance, discovers their features, understands their dimensions, and is good at planning well to bring about change, adapt to it, and resist change (1). The importance of this research comes in clarifying

the role of extension activities in raising vegetable farmers' awareness of the dangers of pesticide residues in the research area, and educating farmers to adhere to safety guidelines and the correct methods for the safe use of pesticides. The results of this research may help the extension authorities in planning and implementing extension programs for farmers, which are related to educating them about the negative effects of pesticides and how to deal with them. This is because agricultural extension is seen in general as a means of transferring information to the target audience and helping them to identify production problems they face and opportunities for improvement. Agricultural extension plays an important role in the field of agricultural development in general and rural development in particular, based on its mission to work to increase production. In addition to its effective role in educating and educating farmers, developing their capabilities and skills, and changing and developing their attitudes (9).

Research Aims:

- 1- Identifying the reality of extension services provided to growers of vegetable crops in the field of agricultural pest control in Al-Qosh district / Nineveh Governorate.
- 2- Identifying the correlation between the reality of extension services provided to growers of vegetable crops and the following independent variables: (age, educational level, cultivated land area, sources of agricultural information, desire for renewal).

Identifying the most important problems facing vegetable growers in the field of agricultural pest control.

Materials and Methods

The research was conducted in Al-Qosh district in Nineveh Governorate, on all 160 vegetable growers. A simple sample of 50% was taken, and thus the final research sample is 80 farmers. The farmers were interviewed to learn about the extension services provided to them in the field of pest control through a proactive visit. After that, a questionnaire was designed for the purpose of collecting data from the respondents. It consisted of three parts. Part one: age measured by number of years for respondents. level of education: measured by divided to Six categories are (illiterate, reading and writing, Primary, high school, institute, college) for which numerical values were given 1, 2, 3, 4, 5, 6 respectively, the cultivated land area was measured in dunums owned by the farmer, As for the sources of information, they were measured by identifying 8 sources of information that the farmer takes his information from, and they had three alternatives (often, sometimes, not used), and they were given 3 numeric values 1, 2, 3, respectively. While the variable, the desire for renewal, was measured: this variable was measured through 8 items, half of which are positive and the other half are negative. A gradient has been developed for it that includes levels: (agree, neutral, disagree) and the following weights have been assigned to it: 1, 2, 3 respectively for the positive items and 3, 2, 1 respectively for the negative items, and the total scores indicate the desire for innovation among the respondents, a measure to measure the extension services provided to them in the

field of agricultural pest control, and the most important problems faced by vegetable growers in the research area in the field of Agricultural pests.

As for the second part, it consisted of a scale consisting of 24 items, which included the extension activities provided to farmers in the field of pest control. While the third part included the most important problems facing vegetable growers in the field of combating agricultural pests that attack their fields, which are 7 problems and alternatives were given to them (a large, medium, and small problem). After completing the questionnaire, it was presented to the specialists in the Agricultural Extension Department in order to verify the validity of the tool, The distribution of the research data was tested and it was found that its distribution was normal so after collecting all the data, The researcher used the program (SPSS Version 16) for the social sciences, since the research data is normally distributed, according to testing the nature of the distribution using the (Shapiro) test. different statistical methods were applied to analyze these data including (percentages, repetitive, mean, standard deviations, Pearson correlation coefficient, Jetman equation, Alpha-Cronbach coefficient).

Results and Discussion

1. Identifying the reality of extension services provided to growers of vegetable crops in the field of agricultural pest control in Al-Qosh district/ Nineveh Governorate:

It appears from Table 1 that the respondents, according to the reality of the extension services provided to them in the field of agricultural pest control, were divided into three categories, which are the low 30-38, whose percentage was 56.25%, and the medium category 39-47, whose percentage was 25%. While the percentage of the high category 48-56 was 18.75%. It is clear from this distribution that the reality of the counseling services provided to the respondents is low.

Table 1: shows the distribution of respondents according to the extension services provided to them in the field of agricultural pest control.

Categories	Number	%
low (30-38)	45	56.25
medium (39-47)	20	50.00
high (48-54)	15	18.75
Total	80	100

The reason for this could be due to the weakness of the extension role in the field of agricultural pest control in the research area through the lack of training courses provided to farmers and the lack of extension activities such as setting up a field day and practical experiments, which led to a low level of their knowledge in this field.

2. Identifying the correlation between the reality of extension services provided to growers of vegetable crops and the following independent variables: (age, educational level, cultivated land area, sources of agricultural information, desire for renewal).

Age: It appears from Table 2 that the lowest age of the respondents was 23 and the highest age 37. This variable was divided into three categories: the low 23-27 and its percentage was 51.25%, and the middle category 28-32 with a rate of 31.25%, while

the percentage of the high category 33-37 was 17.50%. It is clear from this that more than half of the respondents are from the young category. It does not find a correlation between the reality of the extension services and the age of the respondents. The Pearson correlation coefficient was used. It was found that there is a significant correlation at the level of 0.05, and this result may be due to the fact that the majority of the respondents are from the young category. Spiritual relationship.

Level of Education: This variable was divided by the educational levels possessed by the respondents, which are six categories of illiterate people and their percentage was 0, those who read and write 25%, primary school graduates 10.5%, high school graduates 28.75%, and graduates of Institutes and colleges, their percentage amounted to 12.5%, 21.25%, respectively, and to find the correlation, the Spearman correlation coefficient was used, whose value was 0.366, which is a significant correlation at the level of 0.01. This agree with (12). This indicates that an increase in the level of education of the respondents leads to an increase in their acceptance of agricultural techniques and correct scientific information, and their follow-up and application in their fields, because it gives them scientific and theoretical concepts in all the scientific facts that confront them in their agricultural work.

Cultivated land area: This variable was divided into three categories: 20-25 with a percentage of 50%, the second category 26-31 with a percentage of 21.25%, and the last category 32-37 with a percentage of 28.75%. It is clear to us from Table 2 that half of the respondents own small farm holdings, and this may be due to the poor financial situation of most of the respondents. To find the correlation between the reality of extension services and the area of farm land, Pearson correlation coefficient was used, whose value amounted to 0.077, which is not significant at the level 0.05. This is dis agree with (13).

Table 2: shows the correlation between the reality of extension services and the personal variables of the respondents.

The variables	Categories	Frequency	%	person	Spearman
Age	(Low (23-27	41	51.25	0.206*	-----
	(Medium (28-32	25	31.25		
	(High (33-37	14	17.50		
Level of education	illiterate	0	0	-----	0.366**
	Read and write	20	25		
	Primary	10	12.5		
	Secondary	23	28.75		
	institute	10	12.5		
	Collage	17	21.25		
Cultivated land area	(25-20)dunm	40	50	0.077 n .s	-----
	(31-26)dunm	17	21.25		
	(32-37)dunm	23	28.75		
Sources of agricultural information	Low (10-14)	10	12.5	0.338*	-----
	Medium(15-19)	45	56.25		
	High (20-24)	25	31.25		
desire for renewal	Low (8-12)	35	43.75	0.066 n .s	-----
	Medium (13-17)	40	50		
	High (18-22)	5	6.25		

Sources of Agricultural Information: The lowest value was 10 and the highest value was 24. This variable was divided into three categories, which are the low 10-

14 with a percentage of 12.5%, and the medium category 15-19 with a percentage of 56.25%. As for the high category 20-24, its percentage was 31.25%. In order to find the correlation between the reality of extension services and sources of agricultural information, the Pearson correlation coefficient was used, whose value was 0.338**, which is significant. This agree with (10). Perhaps the reason for this is due to the fact that most of the information sources from which the respondents derive their information were in the specialty that farmers need, which is agricultural pest control, or in the specialty of agriculture in general.

desire for renewal: The lowest value was 8 and the highest value was 22. The variable was divided into three categories: the low 8-12 and its percentage was 43.75%, while the average category 13-17 was 50%. and the high category 18-22 amounted to 6.25%, and the correlation between the reality of extension services and the desire for renewal was not found. Use the Pearson correlation coefficient, whose value was 0.066, and it is not significant at the level 0.05. this agree with (11).

3. Identifying the most important problems facing vegetable growers in the field of agricultural pest control.

It is clear to us from Table 3 that the problem (high prices of pesticides) and (lack of government support for farmers) came in the first and second place, with an arithmetic mean of 2.88 and 2.56, respectively. Perhaps the reason for this is that the economic level of farmers in general is weak. Than they put their problems related to the material level above all problems.

Table 3: Problems facing vegetable growers in field of agricultural pest control.

Problems	weighted arithmetic mean	Rank
High prices of pesticides	2.88	1
Lack of government support for farmers	2.56	2
Many pesticides expire	2.44	3
Farmers' lack of knowledge in control methods	2.11	4
Weakness of the role of agricultural extension	1.87	5
Lack of awareness among farmers of the seriousness of its toxicity	1.79	6
The ineffectiveness of many pesticides due to their poor quality	1.55	7

While the problem (the ineffectiveness of many pesticides due to their poor quality) ranked last, and this is evidence of its insignificance. Perhaps this is due to the farmers' lack of knowledge of this matter, despite its importance.

Conclusions

We conclude that the reality of extension services for farmers in the field of agricultural pest control is low, and we conclude from this that the extension role in the research area may have been weak or non-existent in the field of agricultural pest control through the lack of training courses and workshops that explain to farmers the importance of this matter. Also, age had a significant impact on the reality of extension services. We conclude from that because most of the farmers were of the young age group. The sources of agricultural information also had a significant impact because of their increased knowledge of the respondents on agricultural

matters in general and the control of agricultural pests in particular. Based on the conclusions, we recommend the following: activating and increasing the role of agricultural extension in the research area through the establishment of many training courses, workshops and field clarifications in the field of agricultural pest control. The researcher also recommends the need to increase government support for farmers by the Ministry of Agriculture or the Directorate of Agriculture. It will raise farmers' awareness of how to use pesticides.

Supplementary Materials:

No Supplementary Materials.

Author Contributions:

T. S. Hameed; methodology, writing—original draft preparation, T. S. Hameed and D. M. Abd AlFaraje writing—review and editing. All authors have read and agreed to the published version of the manuscript.

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