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REVIEW ARTICLE

Trends Strawberry growers Fertilisersvitality in governorate Ismailia

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ABSTRACT

Research aims Determining the attitudes of the surveyed farmers towards fertilizers the Vitality, Was selected The four largest centers in Ismailia governorate in terms of the area planted with strawberries, And This research has been done On a random sample of 291 respondents, representing about 10% of the total number of 2910 strawberry growers in Ismailia Governorate. The most important results: Only 7.8% of the respondents fall in a positive direction56.1% fall into the negative trend category, 36.1% fall into the neutral trend category, and it is clear from the results that the majority of the respondents 56.1% have a negative attitude towards organic fertilizers, and therefore it is possible, with a little effort by the extension apparatus in the region, to change the direction of a large sector Of the respondents to be more receptive to biological fertilizers, which is reflected in the level of their application of these recommendations and thus increase production in quantity and quality, And Fertilizers were arranged according to the average trend of each fertilizer, the first, The two decades averaged 2.13, the second Microbial and Phylogenetic with an average of 2.04 for each, and the third Score, with an average of 2.03, and finally Serialinotropin with an average of 2.01

There is an inverse relationship between the age, the number of years of strawberry cultivation and the degree of strawberry cultivation direction towards bio fertilizers- There is a direct relationship between the degree of education of the respondent, the area of agricultural holding, the number of years of strawberry cultivation, the average production, the degree of innovation, and the degree of opinion leadership.

Thus, the hypothesis can be accepted my research which stipulates me There is relationship associative morale Between the farmers' trend towards bio-fertilizers And each of the variants Indendpendent next: The age, the degree of education of the respondent, the size of the area cultivated with the strawberry crop, the number of years of strawberry cultivation, the average yield of an acre of strawberries, the degree of innovation, and the degree of opinion leadership.

Keywords: *Farmer-the Strawberry- Fertilisers vitality-Agricultural technology-Plant pathogens- Agricultural pests - Field and horticultural crops- Agricultural guidance*

INTRODUCTION:

Agricultural extension is the link between research and farmers, and it is also the link that transfers farmers' problems to the research authorities, and here technology becomes the result of scientific research in solving the existing problems of farmers.

The novelty is a relative matter. A thing or idea is considered novel when it is perceived by a member of society as new, regardless of the date of its appearance in society for the first time. Technology is the result of scientific research in solving the existing problems of agriculture, and agricultural extension is the organ entrusted with spreading the novelty for the purpose of encouraging its adoption. As for the farmers, they received the technology and used it [1].

Therefore, the transfer of agricultural technology to farmers and the evaluation of its implementation by researchers is one of the most important methods on which extension work relies to urge farmers to facilitate its application, which leads to improving their incomes and abundant production, which leads to lowering agricultural products prices for consumers and increasing the efficiency and growth of the national economy. New agricultural technology, adapting and harmonizing it, verifying its feasibility and applying it to farmers is an important part of agricultural economic development strategies in many countries [2].

It is mentioned Qeshta [3] That the indicative novelty is: Innovative, suitable for application, and commensurate with the resources and capabilities available for application, and is consistent with the nature of agriculture prevailing in the region, and does not have any negative effects on the environment or a clear economic impact.

Explains the University of New England website[4]. That the novelty refers to an idea, product, process, or service that adds useful value, or changes existing practices, and explains that there are two generations of innovators, the first generation includes those who create something new or different, and the second generation includes those who take the novelty, modify it, and then re-apply it and use it in a new field (http://www.une.edu.au).
Based on the previously discussed concepts of innovation as the unit of adoption, it is clear that there is a general agreement that innovation is:
A. An idea or practice of something new that the individual realizes.
B.aza FH Useful and serious value.
C. What is new is subjective and relative to each person and may differ from person to person.

Agricultural extension plays an important role in strengthening the link between the technical agencies of agriculture and farmers, as its mission is to simplify information and the results of scientific research and include them in extension programs, and to follow various extension methods and means to convince farmers of modern agricultural methods, by introducing technological means and methods to this. However, these technological methods alone will not lead to development if the preparation and training of the farmer is not taken into account, removing his doubts about new ideas, and persuading him to give up the old ideas that he is firmly attached to, which impedes the spread of new methods in agriculture, despite the efforts made to modernize Farm methods and practices However, there is still a large time gap between the results of agricultural research and actual farm practices, and this is due to the weak attitudes of farmers towards innovations.

From the foregoing, the importance of studying trends in various fields of social sciences, including agricultural extension, emerges, as trends are considered one of the most important behavioral components affecting and guiding the behavior of the individual and the extent of his participation in extension activities. Whenever the new situation, with its different stimuli, is strongly linked to the individual's direction, this leads to the transfer of the effect of training and learning to this new situation. NawalAttia [5].

The importance of identifying trends is due to the functions they play in human life, as trends have four basic functions, namely:
Adaptation: through the desire of individuals to obtain the greatest possible amount of social reward and minimize punishment whenever possible, and self-defense: which is the mechanism by which a person protects himself from his unacceptable motives, and the expression of values: where some trends work on the positive expression of core values. Yusuf [6] quoted from As mentioned by Abdullah [7], quoting Zaidan and Al-Issawy, the trend goes through four stages, namely:

The perceptual-cognitive stage: It is the first stage of attitude formation, where the individual perceives the stimuli of the environment, and recognizes them, so he has information and experience forming the cognitive framework for this stimulus.

The evaluation stage: It follows the stage of the individual's cognitive realization, in which the individual tries to judge the stimuli of the environment with which he interacts. It is the stage in which the individual issues his judgment regarding the quality of his relationship with the stimuli and the elements of the environment. The individual tries to generalize it in the same similar situations.

Some studies indicate that attitudes are the attitude of the current person towards the issues of concern to him based on experiences gained by learning from different life situations in the environment in which he lives, and this attitude takes the form of approval or rejection "Al-Saeed" [8] quoting Zahran, Al-Ahmar [9] defines the attitude, quoting Mansi and others, as "a group of acceptance or rejection responses that relate to a specific topic or situation that accepts competition." And Sukar [10] defines the attitude, quoting Soueif, as a psychological readiness Or an educated nervous mental preparation for the positive or negative response towards people, things, subjects, situations, or symbols in the environment that provokes the response." As Al-Rafi'i [11]. Change in attitudes and values.

From the previous definitions, it can be said that attitudes express an individual's response, whether with approval or rejection, towards the surrounding situations, according to previous experiences.

Darwish et al. [12] believes that the attitude consists of three main components: the cognitive component, which refers to the individual's thoughts and beliefs about the subject of the attitude, the affective or affective component, which refers to the individual's feelings and emotions towards the subject of the attitude, and the behavioral or dispositional component, which is Refers to a person's inclination or willingness to respond towards the object of direction i.e. his or her behavioral intentions or intentions or what the person decides he or she is going to do or do towards the object of direction.

Whereas, Al-Saeed [8] indicated that there are several ways to change direction, including: providing the individual with new information, introducing anxiety or fear, positive reinforcement, persuasion, the presence of an example or role model, and the individual's practice of certain situations and his experiences. What, certain factors change associated with the trend. As Nefisa Al-Hawari [13] mentioned, quoting Nashawati, that the process of changing attitudes is affected by a group of factors, some of which are related to the individual himself. The subject of the trend itself, the more the subject is attached to the same individual, the less the trend is subject to change or modification.

Trend components:-

Darwish and others [12] see that the trend consists of three main components, namely:

The cognitive component Cognitive Component It refers to an individual's thoughts and beliefs about the subject matter.

2- The affective or emotional component Affective Component It refers to the individual's feelings and emotions towards the object of direction.

3- The behavioral or dispositional component Component Behavioral It refers to a person's tendency or willingness to respond to the object of the attitude, that is, his or her behavioral intentions or intentions, or what the person decides to do or do with the object of the attitude.

It can be said that measuring the attitudes of an individual is limited to topics of a controversial nature, where the feelings of the individual here are the determinants of his attitudes, so the attitudes measure the extent to which a person accepts or rejects opinions on a subject.

Agricultural extension has a clear philosophy, as it helps people to help themselves in changing their thinking, feeling and executive behavior in facing the problems of their lives in order to bring about the required changes economically and socially as a result of this behavioral change, that is, agricultural extension has its main goal is to change people's behavior, while other social economic goals are subordinate to this. Behavioral Change, "Omar" [1]. Hence, the importance of trends in conveying these ideas to the largest number of beneficiaries from them until they are applied and thus the benefit from them spreads and returns to the homeland with the desired fruit, which constituted a strong motive for conducting this study to identify Farmers' attitude towards biological control of strawberry pests in the new lands in Nubaria.

Research problem: -

The area of vegetables in Egypt at the present time is about 1.4 million acres, and it produces more than 14 million tons allocated for local consumption, export, manufacturing, and seed production. And after harvesting, during transportation, and storage, which causes great losses, especially in the event that refrigerators are not available for storage, and the producer is usually forced to sell his crop for fear of mold in conditions that may be unfavorable in terms of price [14].

It is known that plant pathogens cause pathological injuries to field and horticultural crops, causing damage and significant losses in productivity and quality, which affects farm income, and thus the national economy and export. Therefore, plant disease resistance must be supported by modern methods, far from the use of chemicals and pesticides as much as possible, which leave Harmful effect on human and animal health, in addition to harming the environment, and causing pollution of all kinds (air - water - soil), [15].

Experiments and studies have shown that reducingThe use of pesticides and chemical fertilizers is an inevitable necessity that must be implemented to preserve human health and maintain the environmental balance. Clean farming systems and integrated control have become one of the best ways to obtain abundant crops and safe food production.

Strawberries are perennial plants with a very short stem. It is grown for its fruitsWhich is used as a solution or as a drink or in the manufacture of jam and pies. The cultivated area of strawberries in Egypt has reached about 4,000 acres, of which about 1,700 acres are in the Ismailia governorate, or nearly half of the cultivated area, and the rest is distributed to other governorates. About 150 tons of fresh fruits and about 100 tons of strawberry plants are exported to Arab and European countries.

Given the importance of introducing and spreading vital fertilizers in A Ismailia lands Where the desired economic return can be achieved, and since the farmers in this region are simple people who find it difficult to accept organic fertilizers easily, and from that, the research problem crystallized in answering the following questions:

- What are their attitudes toward biofertilizers?
- What are the personal, social and economic factors that influence these trends?

Research aims:-

Through the research problem previously presented, the following research objectives were formulated:

1- Determine the personal characteristics of the respondents.
2- Determining the attitudes of the surveyed farmers towards biological fertilizers
3- Determine the relationship between the studied independent variables and the attitudes of the surveyed farmers towards organic fertilizers.

1- Research hypotheses:

There is a significant relationship between farmers' attitudes towards Biofertilizers And the following variables: Age, And The degree of education of the respondent, And The area of the agricultural holding, And The cultivated area is strawberry, And Number of years of strawberry cultivation, And Average production per feddan:, And Regenerative degree, And degree of opinion leadership.

Research method :-

Search area:-

Was selected The four largest centers in Ismailia governorate in terms of the area planted with strawberries, and the largest village was chosen from each center As follows : Serapeum village, Fayed Center station, and the village Al-Rawdah in Al-Qantara West Center, and the old village of Al-Mahsama in Al-Qassasin Center, and finally the new Al-Mahsama village in Abu Sweir Center..**(Directorate of Agriculture in Ismailia - unpublished official data 2021).**

Research sample: - (Directorate of Agriculture in Ismailia):-

This research has been done On a random sample of 291 respondents, representing about 10% of the total strawberry growers in Ismailia Governorate, who numbered 2910respondents.The respondents were identified from each village in a systematic random manner, using the records of agricultural tenure located in the agricultural association in each village. The sample was taken from the four villages equally, with 73 respondents from three villages, and 72 respondents from the fourth village.

Data collection:-

To achieve the objectives of the research, a questionnaire was designed that includes a set of questions related to the variables of the study. Its design has taken into account its relevance to the general framework of the study problem, its objectives, and the simplicity of its method, in accordance with the circumstances and conditions of the respondents.

An initial test has been carried out pre-test of the questionnaire on a sample of 20 farmers from the village of Al-Sabaa Abar Al-Sharqiya, where the researcher made sure that the questions and phrases are clear and easy to understand by the respondents, and that the questions achieve the objectives of the research, and data was collected during the months of October and November 2022 in a personal interview with the respondents using the questionnaire form aforementioned.

Quantitative Data Processing:-

First, the independent variables:-

After completing the data collection, the researcher emptied it and processed some of it quantitatively by giving it value grades according to the scale used with each variable, as follows:

First: Data related to the studied independent variables:-

1-Age

It means the number of years that have elapsed since the birth of the individual until the time of conducting the research, and this variable was measured by using the raw numbers of the farmer's age to the nearest calendar year.

2- The degree of education of the respondent (educational level):-

In this research, it means the number of years of formal education that the farmer spent until the time of data collection, and this variable was measured by asking the respondent about the educational level through the number of years of his formal education that he spent successfully, where the following grades were given: (1 degree for illiterate), (4 degrees For those who read and write or completed the fourth grade of primary school), (6 degrees for the primary certificate), (9 degrees for the preparatory certificate), (12 degrees for the secondary certificate), (14 degrees for the upper intermediate), (16 degrees are given for the university certificate), (20 degrees for the certificate above university), and thus it was possible to obtain a degree indicating the education of the respondent.

3- The area of the agricultural holding:-

It means the respondent's possession of an area of cultivated land in the village, calculated in carats

4- The area cultivated with the strawberry crop:-

It means the area cultivated with the strawberry crop among the respondents, calculated in carats.

5- The number of years of strawberry cultivation.

It means the number of years in which the researched farmer cultivated the strawberry crop, and this variable was calculated through the raw numbers in the Gregorian year.

6- Average production.

It means the amount of strawberry yield per acre, and this variable has been calculated through raw numbers.

7- The degree of renewal.

Meant Application and use of the respondent to new technologies, This variable was measured on a scale consisting of six statements, each of which was considered a gradient of response patterns, consisting of three responses as follows: agree, agree, and disagree. These responses were given degrees of 3-2-1, respectively, in the case of positive statements, and vice versa in the case of negative statements, and by adding the degrees obtained by the respondent, it was possible to obtain a degree that reflects the degree of innovation.

8- The degree of opinion leadership.

It means the degree of self-esteem of the respondent in terms of being a source of agricultural information and guidance compared to other farmers, and it consists of four indicators that indicate the degree of opinion leadership of the respondents. By collecting the scores obtained by each farmer surveyed for the items, it was possible to obtain the degree of opinion leadership for each farmer surveyed.

Second: - The dependent variable: - The degree of trend towards biological control of tomato pests:-

It means the respondents' supportive, oppositional, or neutral response to what is offered to them of agricultural innovations, and their tendency to adopt or refuse to adopt these agricultural innovations.

Likert method was used Likert Method for Measuring Trends:-

This scale includes a large number of sentences that are related to the direction to be measured. These sentences are given to a sample of individuals who represent those who will give the questionnaire to them. The sample members put a mark in front of the category that shows their agreement or disagreement with it. That the highest scores are for positive trends and the lowest are for negativity, then delete the sentences for which the correlation coefficient between the scores and the total score is low. The attitude towards biological control of strawberry pests was measured through a three-point scale, according to their response to (34 phrases). The expression of the cognitive component, the affective or emotional component, the behavioral or dispositional component) for each novelty on a scale consisting of three categories: agree (3

degrees), negative (2 degrees), and disagree (1 degree) for positive statements, and vice versa for negative statements. From this, it is possible to identify the extent of respondents' supportive, oppositional, or neutral response to agricultural innovations presented to them.

The biological control of strawberry pests has been identified as pathogenic bacteria, and **Pathogenic nematodes, growth regulators and moulting hormones, and sterilization of male insects**

Stability coefficient of biological control trend scale in strawberry pests:

It was completed-The alpha coefficient was used to choose the stability coefficient of the trend measure towards biological control of strawberry pests. Cronbach's coefficient was used to measure the alpha coefficient as follows:-

Number of phrases (n)

(n-1) (1- The sum of the variance of the scale units (x and) / the variance of the total scale scores)

The value of the alpha coefficient was 0.68, which is a value that reflects a good degree of stability.

Self honesty Intrinsic validity:-

To calculate the subjective validity coefficient, the following equation was used:

eigenvalue factor = root of stability coefficient

The self-honesty coefficient $= 0.82\sqrt{0.68}$

It is a value that expresses a good degree of honesty.

Statistical analysis:-

To analyze the data of this study, the tabular presentation was used with frequencies, percentages, the arithmetic mean, and the standard deviation, and the weighted average was calculated for each novelty separately, then the novelties were arranged based on this average, and the simple correlation coefficient using the computer through a programspss.

Research results:-

First: - the independent variables: -

The results of the study recorded in Table (1) are shown as well follows**:-**

1- Age: It was found that 23.7% of the respondents were less than forty years old, while 57.4% of the respondents fell in the middle-aged category, while 18.9% of the respondents were over fifty-five years old.

2- The degree of education of the respondent:-

The results showed that 24.05% of the farmers surveyed were illiterate, while 16.83% of them could read and write, while 9.64% of them had basic education, 35.05% of them had intermediate education, 13.40% of them had university qualifications, and 1 03% of them have postgraduate education

3- The area of the agricultural holding:-It was clear from the results that 72.5% of the farmers surveyed had an agricultural area of less than three feddans, while 20.3% of them had an average agricultural area, while 7.2% of the farmers surveyed had more than six feddans.

4- The area cultivated with strawberries:-The results showed that 65% of the farmers surveyed cultivated areas of less than 2 feddans of strawberries, while 19.4% of them had an average agricultural area, while 15.6% of the farmers surveyed cultivated areas of more than 3.5 feddans.

5- The number of years of strawberry cultivation- The results indicated that 41.6% of the farmers surveyed They have been planting strawberries for less than 10 years, while 52.2% of them have been cultivating strawberries for 10 to 15 years, while 6.2% of the respondents have been cultivating strawberries for more than 15 years.

6- Average feddan production:-

The results indicated that 27.1% of the farmers surveyed had an average production of strawberries less than 15 tons, while 60.5% of them fell into the category of less than **19-15 tons, and that 12.4% of the farmers surveyed had an average production of 19 tons or more.**

7- The degree of renewal :-

It was found that 13.8% of the farmers studied had a low degree of renewal, while 33% of them had a degree of Medium regenerative, while 53.2% of the surveyed farmers had a high regenerative degree.

8- The degree of opinion leadership:-

It was found that 35% of the farmers surveyed had a low degree of leadership, while 34.7% of them had a medium degree of leadership, while 30.3% of the farmers surveyed had a high degree of leadership.

Table No. (1)Show Distribution of the farmers surveyed according to the characteristics that distinguish them

Properties	The total number of farmers surveyed		Properties	The total number of farmers surveyed	
	the number	%		the number	%
1-tooth			5- The number of years of strawberry cultivation		
Young people (up to less than 40 years old)	69	23.7	*Less than 10 years*	121	41.6
Middle-aged (less than 55 years old)	167	57.4	From 10 to less than 15 years	152	52.2
- The elderly (55 years and over)	55	18.9	- More than 15 years.	18	6.2
2- The degree of education of the respondent			6-Average acre production		
My mom	70	24.05	Less than 15 tons	79	27.1
Reads and writes	49	16.83	From 15 to less than 19 tons	176	60.5
Basic education	28	9.64	More than 19 tons	36	12.4
Middle Certification	102	35.05			
collegiate	39	13.40			
over collectors	3	1.03			
3- The area of the agricultural holding			7- The degree of renewal		
Less than 3 acres	211	72.5	low (less than 10 degrees).at)	40	13.8
From 3-less than 6 acres	59	20.3	medium (less than 13 degrees)	96	33.0
More than 6 acres	21	7.2	High score (from 13 degrees or more)	155	53.2
4- The area cultivated with strawberries			8- The degree of opinion leadership		
- spacesmall (less than 2 acres)	189	65.0	Low (less than 7 degrees)	102	35
Medium area (less than 3.5 acres)	57	19.4	- Medium (from 7 to less than 10). Staircaseat)	101	34.7
-large area (from 3.5 acres or more)	45	15.6	- High (from 10 drawersatand more)	88	30.3

Second: the dependent variable:-

The degree of orientation towards vital fertilizers:-

It means the respondents' positive, negative, or neutral response towards what is offered to them of organic fertilizers and their tendencies to adopt or refuse to adopt these organic fertilizers.

In the following vital fertilizers:-

Pylogen, Microbin, Phosphorine, Serialinontropin, Alqadain, and Escorio, according to their response to (17 phrases) on a scale consisting of three categories: agree (3 degrees), negative (2 degrees), and disagree (1 degree) for the positive statements, and vice versa Correct for the negative statements, the upper limit was reached in the six vital fertilizers - (Plogen, Microbin, Phosphorine, Serialinontropin, Alaqadeen, and Escorio), according to the theoretical range (306 degrees), the minimum (103 degrees), and the range (203 degrees), and it is divided into three Categories as follows: negative trend (less than 171 degrees), neutral trend (171-239 degrees), and positive trend (more than 239 degrees).

The results shown in Table No. (2) that only 7.8% of the respondents fall in a positive direction, and56.1% fall into the negative trend category, 36.1% fall into the neutral trend category, and it is clear from the results that the majority of the respondents 56.1% have a negative attitude towards organic fertilizers, and therefore it is possible, with a little effort by the extension apparatus in the region, to change the direction of a large sector Of the respondents to be more receptive to biological fertilizers, which is reflected in the level of their application of these recommendations and thus increase production quantity and quality.

Table NO. (2) Distribution of the surveyed farmers according to the categories of trend towards organic fertilizers

Orientation Categories Bio fertilizer	**number**	**%**
Negative trend (less than171 degrees)	**163**	**56.1**
Neutral direction(171-239 degrees)	**105**	**36,1**
Positive trend (greater than239 degrees)	**23**	**7,8**
Total	**291**	**100**

In the following, we discuss in some detail the degree of attitude of the surveyed farmers to each of the organic fertilizers, where the fertilizers were arranged according to the average orientation of each fertilizer as follows (Table No.3): the first The two decades averaged **2.13**the second Microbial and Phylogenetic with an average of 2.04 for each, and the third Score, with an average of 2.03, and finally Serialinotropin with an average of 2.01

TableNO. (3)Distribution of the respondents according to the respondents' attitude towards organic fertilizers, and relativity Centennialfor average, and the average scores of respondents' attitude towards each fertilizer.

M	**Fertilizer is vital**	**Average percentage**	**Average**	**Arrangement**
1	**Femicrobin**	**198**	**2.04**	**3**
2	**Phosphorine**	**202**	**2.08**	**2**
3	**Phplogen**	**198**	**2.04**	**3**
4	**Escure and it**	**197**	**2.03**	**4**
5	**the two decades**	**207**	**2.13**	**1**
6	**Serialin on etropin**	**195**	**2.01**	**5**

The number of respondents is 291, the maximum score is 3 degrees

Third: The relationship between the independent variables and the dependent variable:-

The results of Table No. (4) indicate that:

1 -Age :-

To test the significance of the relationship between the total degree of strawberry growers orientation and age, the simple correlation coefficient value was calculated**-0**.442, which is a negative value greater than its tabular counterpart at a significant level of 0.01, and this indicates that there is an inverse relationship between the strawberry growers' attitude and the age of the respondent, that is, the increase in age decreases with it the farmers' awareness of the strawberry growers' attitude toward biofertilizers.

2- The degree of education of the respondent:-

To test the significant relationship between the degree of agricultural orientation towards biofertilizers, and the degree of education of the respondent, the value of the simple correlation coefficient was calculated, which amounted to**0**.654, which is a positive value greater than its tabular counterpart at a significant level of 0.01, and this indicates that there is a direct relationship between the degree of farmers' attitude towards biofertilizers and the degree of education of the respondent, that is, with the increase in the degree of education of the respondents, the attitude of farmers towards biofertilizers increases.

3- The area of the agricultural holding:-

To test the significance of the relationship between the total degree of farmers' attitude towards biofertilizers, and the agricultural holding area of the respondents, the value of the simple correlation coefficient was calculated, which amounted to 0.576, which is a positive value greater than its tabular counterpart at a significant level of 0.01, and this indicates the existence of a direct relationship between the farmers' attitude towards biofertilizers And between the area of agricultural holding, that is, by increasing the agricultural holding of the respondents, the farmers' tendency towards biofertilizers increases

4- The area cultivated with the strawberry crop:-

To test the significance of the relationship between the total degree of the farmer's attitude towards biofertilizers, and the area cultivated with the strawberry crop, the value of the simple correlation coefficient was calculated, which amounted to 0.498, which is positive, greater than its tabular counterpart at a significant level of 0.01, and this indicates the existence of a significant direct relationship between the farmers' attitude towards Biofertilizers and between the area cultivated with the strawberry crop, that is, with an increase in the area cultivated with the strawberry crop, the farmers' tendency towards biofertilizers increases.

5 - The number of years of strawberry cultivation :-

To test the significance of the relationship between the total degree of farmers' attitude towards biofertilizers, and the number of years of strawberry cultivation, the value of the simple correlation coefficient was calculated, which amounted to -0.455, which is a negative value greater than its tabular counterpart at a significant level of 0.01, and this indicates the existence of an inverse relationship between the farmers' attitude towards fertilizers And between the number of years of strawberry cultivation, that is, the increase in the number of years of strawberry cultivation decreases with it the farmers' tendency towards biofertilizers.

6 -Average output:-

To test the significant relationship between the degree of farmers' attitude towards biofertilizers and the average production, the value of the simple correlation coefficient was calculated, which amounted to 0.346, which is a positive value greater than its tabular counterpart at a significant level of 0.05. That is, the increase in the average production per feddan is followed by an increase in farmers' attitude towards biofertilizers.

7-Degree of renewal:-

To test the significant relationship between the degree of farmers' attitude towards biofertilizers and the degree of regeneration, the value of the simple correlation coefficient was calculated, which amounted to 0.799, which is a positive value greater than its tabular counterpart at a significant level of 0.01. That is, the increase in the degree of regeneration is followed by an increase in farmers' attitude towards biofertilizers.

8-The degree of opinion leadership:-

To test the significant relationship between the degree of farmers' attitude toward biofertilizers and the degree of opinion leadership, the value of the simple correlation coefficient was calculated, which amounted to 0.866, which is positive and greater than its tabular counterpart 0 at a significant level of 0.01. The degree of opinion leadership, that is, the increase in the degree of opinion leadership is followed by an increase in the farmers' attitude towards biofertilizers.

This can be explained by the higher the degree of opinion leadership, the greater the chances of persuading the respondent to adopt new ideas, and the greater his acceptance of these ideas, including biological fertilizers, which leads to an increase in this field.

From the previous presentation of the relationship between the studied personal variables and the orientation of strawberry growers, the following can be concluded:

- There is an inverse relationship between the age, the number of years of strawberry cultivation and the degree of strawberry cultivation direction towards biofertilizers- There is a direct relationship between the degree of education of the

respondent, the area of agricultural holding, the number of years of strawberry cultivation, the average production, the degree of innovation, and the degree of opinion leadership.

Thus, the hypothesis can be accepted my research which stipulates me There is relationship associative morale Between the farmers' trend towards bio-fertilizers And each of the variants Independent next: The age, the degree of education of the respondent, the size of the area cultivated with the strawberry crop, the number of years of strawberry cultivation, the average yield of an acre of strawberries, the degree of innovation, and the degree of opinion leadership.

Table No. (4) Countries values of correlation coefficients between degrees of strawberry growers trend and the studied independent variables .

M	studied independent variables	correlation coefficient values
1	Age	-0.442**
2	The degree of education of the respondent	0.654**
3	The area of the agricultural holding	0.576**
4	The area cultivated with strawberry crop	0.498**
5	Number of years of strawberry cultivation	-0.455**
6	roduction average	0.346*
7	Regenerative degree	0.799**
8	Degree of opinion leadership	0.866**

- **Correlation coefficient is significant at the level (01,) ** Significant correlation coefficient at the level (0.05)**

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