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The role of the website of the agricultural extension and training department on the social network Facebook in the diffusion of agricultural ideas: Analytical study

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Abstract

The research aimed to identify the role of the website of the Agricultural Extension and Training Department, one of the formations of the Iraqi Ministry of Agriculture in agricultural ideas diffusion, As well as know its relationship with the degree of diffusion of ideas through the website. The researcher used the descriptive approach in conducting the research and used the content analysis method for the website of the Agricultural Extension and Training Department on the social network "Facebook". It is one of the formations of the Iraqi Ministry of Agriculture on the link (https://www.facebook.com/iraqirshad). The content of the website was analyzed for one year the period from (1/3/2020 to 2/28/2021), The site data were recorded during the research period using a special form, including the fields of agricultural ideas, the pattern of their diffusion, the time, date and day of each idea. The degree of diffusion of each idea was measured by the extent to which followers of the site interacted with those ideas in terms of (liking or commenting and sharing them) and given numerical values (1, 2, 3), respectively. The data were analyzed by using a number of statistical methods, including the range, category length, Spearman correlation coefficient, and t-test. The results showed that (638) agricultural ideas were diffused, of which (474) ideas were diffused as agricultural information, while (164) ideas were diffused as agricultural activities carried out by Agricultural Extension and Training Department. The idea of (determining dates for planting palm seedlings) came first in the degree of diffusion, followed by second rank (beekeepers' work during the month of October). The results also showed that the most agricultural ideas that were diffused through the website were in the field of animal production, at a rate (28.8%) of the total agricultural ideas, followed by the field of horticulture and landscapes at a rate (12.5%) of the total agricultural ideas. The results showed that the website administrators used a (text and image) as style for diffusion with (67%) of the agricultural ideas on the website, while the less used style was (link). It also turned out that Tuesday and Monday were the days during which agricultural ideas were most diffused, while Friday was the least diffusion day for ideas. Most of the agricultural ideas were diffused during the period from (twelve until six)O'clock in the morning, while the month of November ranked first in the number of agricultural ideas that were circulated through the website, while it was found that the month of April of 2020 did not publish any agricultural idea. The results showed a significant correlation between the degree of diffusion of agricultural ideas on Facebook and the type of diffusion of the agricultural idea and the date of its diffusion, while the results showed none a significant correlation between the degree of diffusion of agricultural ideas through Facebook and the time of its diffused, and the field of those ideas. The researcher recommends that those in charge of managing the websites of agricultural institutions publish agricultural ideas in the form of a picture supported by text, as well as focus on the diffusion of ideas in the form of information and not as agricultural activities.

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1 Introduction and research problem

The development of agriculture depends on the development of agricultural scientific research, which greatly contributed to finding solutions to the problems of the agricultural sector. As well as creating modern agricultural ideas and practices. The Ministry of Agriculture, through the Agricultural Extension Agency, works to spread modern agricultural ideas to farmers and urges them to adopt them so that the results of their use are reflected in their agricultural productivity and thus improve their standard of living [12].

Agricultural extension focuses on the diffusion of modern agricultural ideas, practices and techniques emanating from scientific research centers to farmers. It aims to transfer and communicate ideas to farmers at a time and method that suits them to implement them in their fields, in order to advance and develop the agricultural sector [1].

Agricultural extension workers use many extension methods in order to spread modern agricultural ideas and deliver them to farmers, such as field and home visits, phone calls, extension meetings, seminars and extension trips, as well as radio, television, extension publications, etc. [14].

In spite of the diversity and multiplicity of methods used by agricultural extension in transmitting agricultural ideas, it remains incapable of transmitting this huge and renewable amount of agricultural information and techniques by agricultural guides whose numbers are also not sufficient to meet this rapid development [9].

The agricultural extension, using the current extension methods in the spread of agricultural techniques, stood helpless in the face of the steady development in agricultural science and knowledge, as the gap became wide between the available agricultural techniques in the research centers and the one that farmers reach. The reason for this is attributed to the reluctance of agricultural extension in performing its function in disseminating modern agricultural techniques and its reliance on traditional methods in the dissemination process [13].

This prompts the addition of new communication methods for extension work in addition to the use of traditional means. The agricultural guide must be able to use modern communication techniques such as mobile phone, personal computers. The Internet or e-mail is one of the modern methods that can enhance the work of the agricultural guide and improve his efficiency in performance his extensional work [10].

Electronic agricultural extension is important in keeping pace with the global development in the field of agriculture, overcoming the spatial dimension and delivering timely information to farmers, as well as its importance in retaining agricultural information and referring to it when needed, reducing field work costs and the numerical shortage of agricultural extension workers [5].

The electronic dissemination of agricultural ideas is the appropriate means to confront the problems and obstacles to the diffusion of agricultural ideas through traditional methods, but the electronic agricultural extension faces many challenges. including the need for some websites to continuously develop and modernize to attract the largest number of beneficiaries. In addition, the presence of psychological, linguistic, geographical and technical barriers that prevent the application of electronic publishing. For agricultural ideas, especially in isolated societies [11].

The determinants of the transformation of electronic agricultural extension are represented by frequent power cuts, poor internet speed and high costs, as well as the unreliability of sources of diffusing agricultural ideas on the Internet, the lack of clarity of some agricultural ideas published through it, the ambiguity of some others and their need for an explanation [5].

The application of electronic agricultural extension requires the ability of agricultural extension workers to use its techniques, programs and to create appropriate conditions to develop their skills in the field of electronic publishing [9].

Facebook can be used for agricultural extension and used to diffusion agricultural ideas and innovations by joining farmers on the websites of groups or pages of official agricultural agencies on Facebook and following up on the ideas that are published in those sites. Farmers see that Facebook is suitable for spreading ideas in all agricultural fields, such as plant and animal production, machinery and agricultural equipment, plant and animal diseases, It is possible to benefit from the ideas that farmers find in these sites [7].

The follow-up of the websites of agricultural institutions by farmers depends on the effectiveness of these sites, the extent of their novelty, and the manner in which they circulate agricultural ideas in terms of form and time of circulation. If these sites are prepared appropriately, they will be adopted as a source of agricultural information, It

is will contribute to the spread of agricultural ideas at high rates of up to (97%) when compared to television, friends and relatives [6].

The Agricultural Extension and Training Department, which is one of the formations of the Iraqi Ministry of Agriculture, it has a website on the social network Facebook. It uses to establish extension activities and diffused agricultural ideas and practices to remedy the shortage in traditional extension activities, especially those that require a direct meeting between extension workers and farmers, which has become difficult due to Coronavirus spread.

In order to evaluate the effectiveness of the website of the Agricultural Extension and Training Department and its contribution to the spread of agricultural ideas, the current research was conducted in order to answer the following questions:

1. What is the role of the website of the Agricultural Extension and Training Department in diffusion of agricultural ideas?
2. What are the patterns followed in diffusion of agricultural ideas by those in charge of managing the website of the Agricultural Extension and Training Department?
3. What are the times when diffusion of agricultural ideas through the website?
4. What are the specializations of agricultural ideas that diffused through the website?
5. What are the days when agricultural ideas were most popular through the website?
6. What months were agricultural ideas most popular through the website?
7. What is the relationship between the degree of diffusion of agricultural ideas on the website and each of (the nature of the diffusion of the idea, the type of spread, the time of the spread, the idea's specialization, the day of the publicity, and the month).

1.1 Objectives

The research aims to achieve the following:

1. Analyzing the website of the Agricultural Extension and Training Department on the social network "Facebook" in terms of:
   (a) The nature of the diffusion of agricultural ideas.
   (b) The patterns used in the diffusion of agricultural ideas.
   (c) Times of the diffusion of agricultural ideas.
   (d) The days of the diffusion of agricultural ideas.
   (e) Month of the diffusion of agricultural ideas.
   (f) Classification of agricultural ideas according to their agricultural specialization.
2. Determining the degree of diffusion of agricultural ideas through the website of the Agricultural Extension Department on the social network "Facebook".
3. Identify the correlational relationship between the degree of diffusion of agricultural ideas on the website and each of (the nature of their diffusion, the patterns of their diffusion, the times of their diffusion, the days of the diffusion, the month, and their specialization).

1.2 Research hypotheses

The study tests the following hypotheses, in their null hypotheses:

1. There is no significant correlation between the degree of agricultural idea diffusion among the followers of the Agricultural Extension and Training Department's website on the social network "Facebook" and the diffusion nature of agricultural idea.
2. There is no significant correlation between the degree of agricultural idea diffusion among the followers of the Agricultural Extension and Training Department's website on the social network "Facebook" and the diffusion pattern of agricultural idea.
3. There is no significant correlation between the degree of agricultural idea diffusion among the followers of the Agricultural Extension and Training Department website on the social network "Facebook" and the diffusion time of agricultural idea.
4. There is no significant correlation between the degree of its diffusion between the followers of the Agricultural Extension and Training Department website on the social network "Facebook" and the specialization of the agricultural idea.

5. There is no significant correlation between the degree of agricultural idea diffusion among the followers of the Agricultural Extension and Training Department website on the social network "Facebook" and the diffusion day of agricultural idea.
6. There is no significant correlation between the degree of agricultural idea diffusion among the followers of the Agricultural Extension and Training Department's website on the social network "Facebook" and the diffusion month of agricultural idea.

1.3 Procedural definitions

1. The website of the Agricultural Extension and Training Department on the social network Facebook: is a website that publishes agricultural ideas, innovations and extension activities implemented by the Agricultural Extension Authority in the Iraqi governorates at the link (https://www.facebook.com/iraqirshad) and is managed by specialized staff.
2. Diffusion of agricultural ideas: It means the degree that expresses the extent of the diffusion of agricultural ideas among the followers of the website of the Agricultural Extension and Training Department and among their friends and followers on the social network "Facebook" after they interacted with this ideas by liking, commenting on or sharing them. In a way that leads to its spread more among the members of the social system.
3. The nature of agricultural ideas diffusion: It means the method which agricultural ideas are expressed on the website in terms of publishing them in the form of abstract agricultural information or carrying out agricultural activities and activities in reality, and then publishing their content on the website.
4. The pattern of agricultural ideas diffusion: It is the mechanism by which the agricultural ideas are published and which includes either the use of texts, images, videos, or links, or the use of a combination of two or more methods from the above.
5. Specialization of agricultural ideas: It means the scientific disciplines of agricultural ideas, which include horticulture, animal production, field crops, soil science, agricultural machinery and others.

2 Materials and Methods

2.1 First: Study Metrology

The researcher followed the descriptive approach in conducting the research and adopted the content analysis method for the website of the Agricultural Extension and Training Department. It is not necessary for the researcher to go to the field for collecting data from the respondents. Rather, it is possible to rely on the official records in compiling the data required to achieve the purposes of the research. [3]. All the data that you request to conduct the research were available on the website of the Agricultural Extension and Training Department on Facebook.

2.1.1 The Search Area

The researcher reviewed the official website of the Agricultural Extension and Training Department on the social network "Facebook", which is one of the formations of the Iraqi Ministry of Agriculture under the name (Department of Agricultural Extension and Training / Iraqi Ministry of Agriculture) and on the link (https://www.facebook.com/iraqirshad). It was established on (3/4/2012). It is being followed up by (23,621) followers and (22,831) fans until the date of the start of the current study with different specializations and orientations.

2.1.2 The Time of the Study

The website was studied over a full year for the period from (1/3/2020) to (28/2/2021).

2.2 Second: Measurement of variables

1. **The Nature of The Diffusion of Agricultural ideas:** The variable was measured by classifying agricultural ideas according to the method in which the agricultural ideas were expressed on the website of the Agricultural Extension and Training Department into:
   Agricultural ideas that were circulated after agricultural activities were established and them statistically by giving them a value (1), and agricultural ideas that were propagated in the way of abstract agricultural information, and they were given a numerical value (2).

2. **The pattern of Agricultural Ideas Diffusion:** This variable was measured by determining the mechanism that was used in the dissemination of the agricultural idea, which includes (texts, images, video, links, text with pictures, text with video, text with a link) and the numerical values were given to it (1 , 2, 3, 4, 5, 6, 7) for each of them respectively.
3. **Times of diffusion of agricultural ideas:** The diffusion of agricultural ideas on the website was monitored over a period of (24) hours, according to the timing of publication in hours and minutes.
4. **The Month of Diffusion of Agricultural Ideas:** The agricultural ideas that were published on the website were distributed for (12) months during the period from March 2020 to February 2021.
5. **Specialization of Agricultural Ideas:** Agricultural ideas were classified into: (agricultural economics and extension, animal production, mechanization and agricultural equipment, soil science and water resources, horticulture, field crops, plant protection, food industries, environment and community health, Forestry), The numerical values were assigned to them (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) respectively.

2.3 Third: Measuring the Degree of Agricultural Ideas diffusion

A special form was prepared to collect research data from the website of the Agricultural Extension and Training Department on Facebook about all the agricultural ideas that were diffused on the website and the data were as follows:

1. The number of likes or interactions that the idea received, and one numerical value was diffused to each liking or interaction with the agricultural idea.
2. The number of comments the idea received, and two numerical values were given for each comment on the agricultural idea.
3. The number of participations obtained by the idea, and three numerical values were given for each share of the agricultural idea.

The degree of popularity of the agricultural idea = (Number of Likes x1) + (Number of Comments x 2) + (Number of share x 3)

Some of those that were circulated through the website that were not related to agricultural work were excluded, such as congratulations, blessings and condolences.

2.4 Fourth: Statistical Methods

For the purpose of classifying and analyzing data and accessing research results, the researcher has adopted the following statistical methods:

1. **Range:** used to divide the variables into categories according to the following law: [8].
   Range = highest value - lowest value
   Class length = (Range) / (number classes)
   (Note that the results are rounded to the nearest whole number).
2. **The Arithmetic Mean:** used to describe the numerical values of each variable and his law as follows: [2].

$$\overline{x} = xn$$

   $\overline{x}$ = the arithmetic mean
   n = number of respondents
   $\sum x$ = Sum of numeric values.
3. **Spearman's Hierarchical Correlation Equation:** It was used to find the relationship between the independent descriptive variables and the degree of prevalence of agricultural ideas, according to the following law:[4].

$$r_s = 1 - \frac{6\sum d^2}{n(n^2-1)}$$

   Whereas:
   r_s = coefficient of correlation.
   $\sum d^2$ = The sum of the squares of the orders of differences between the two variables.
   n = number of respondents.

4. **T-Test:** to test the significance of the correlation relationship between each of the independent factors studied and the level of cognitive extension needs by comparing them with tabular (t) values and their equation [8].

$$t = r\sqrt{\frac{n-2}{1-r^2}}$$

Whereas:
t = computed value
n = number of respondents
r = the value of the coefficient of correlation

3 Results and discussion

3.1 First: Analyzing the Website of the Agricultural Extension and Training Department on the Social Network "Facebook" as follows:

1. **The Nature of the Diffusion of Agricultural Ideas.**
The results showed that those responsible for diffusion agricultural ideas on the website of the Agricultural Extension and Training Department on Facebook have published agricultural ideas, either agricultural information or agricultural activities carried out by extension centers in the governorates.
Table (1) shows that (74%) of the agricultural ideas were diffused in the form of information with an average degree of diffusion of (21.82) degrees, while (26%) of the agricultural ideas were diffused to the followers in the agricultural activities carried out by the extension centers in the Iraqi governorate. The average degree of diffusion was (18.43) degrees.

Table 1: The nature of the diffusion of agricultural ideas on the website of the Agricultural Extension and Training Department

The nature of agricultural ideas diffusion	The number of ideas	%	Average degree of diffusion
Agricultural information	474	74	21.82
Agricultural activities	164	26	18.43
Total	638	100%	

The reason for this may be the health situation in the country and the conditions of the ban, which caused the lack of extension activities provided to farmers and the restriction of extension services to diffusing information on the website.

2. **The Patterns Used in the Diffusion of Agricultural Ideas.**
The results showed that the most common patterns followed by the administrators of the website of the Agricultural Extension and Training Department in the diffusion of agricultural ideas on Facebook is (text with pictures) by (67.24%) of the number of activities that circulated on the website.
The average degree of agricultural ideas diffusion that were broadcast with this pattern was (24.36) degrees, then the pattern (pictures) followed, at a ratio of (17.71%) of the total that was diffused on the website during the period in which the website was studied, with an average prevalence of (17.46) degrees.
While it was found that the least used patterns in the diffusion of agricultural ideas is (video) and by (0.63%) of the total agricultural ideas, while the average degree of diffusion of agricultural ideas is the lowest, with an average of (16) degrees, as shown in table (2).

Table 2: Patterns of diffusion of agricultural ideas on the website of the Agricultural Extension and Training Department.

Pattern of diffusion of agricultural ideas	The number of ideas	Percentage	Average degree of diffusion
Text with pictures	429	67.24	24.36
Pictures	113	17.71	17.46
Link	89	13.95	9.19
the video	4	0.63	16
Text with a link	3	0.47	19.33
Total	638	100%	

The reason may be that enhancing ideas with pictures makes it easier for the farmer to understand the idea, which leads him to circulate this idea among his peers for benefiting from it.
As for the use of the link in diffusion ideas, it ranked last. The reason may be that many links carry viruses or from unreliable parties, which makes users hesitate to open them and know the content of the message opening links may require a high Internet speed.

3. **Times of Diffusion Agricultural Ideas.**
The results showed that the most times the officials responsible for managing the website of the Agricultural Extension and Training Department in diffusion agricultural ideas on Facebook approved the time period (12:00 AM - 5:59 AM), with a percentage (32.13%) of the total ideas that were circulated. On the website, with an average (23.05)
In second rank is the period extending from (6:00 AM - 11:59 AM), with a percentage of (26.65) score out of the total number of what was diffused on the site during the period in which the website was studied, with an average (17.35). While the lesser period was in the diffusion of agricultural ideas in it is the period from (6:00 pm -11: 59 pm), with an average (21.51) degrees.
It was evident from the results that the period after midnight was the highest in the number of agricultural ideas published by those in charge of managing the website, but the morning period (the official working period) was the lowest in the average degree of spread of agricultural ideas, as shown in Table (3).

Table 3: Times of diffusion of agricultural ideas through the website of the Agricultural Extension and Training Department.

Time of agricultural ideas diffusion	The number of ideas	percentage	Average degree of diffusion
(12:00AM-5:59AM)	205	32.13	23.05
(6:00AM-11:59AM)	170	26.65	17.35
(12:00PM-5:59PM)	153	23.98	20.92
(6:00PM-11:59PM)	110	17.24	21.51
Total	638	100%	

Perhaps the reason is due to the strength of the Internet signal in the period after midnight compared to other times, which the employees responsible for the website exploit to diffusion modern agricultural ideas.

4. **Days of Diffusion of the Agricultural Ideas**
The results showed that the most days that the officials responsible for managing the website of the Agricultural Extension and Training Department adopted for diffusion of agricultural ideas on Facebook was Tuesday, then it was followed on Monday, as the percentage of agricultural ideas that were diffused during each of them was (16.9%) and (16.14%). respectively, then it came in third place on Sunday, at a ratio (15.99%) of the total agricultural ideas that were circulated during the study period, while the least popular days for agricultural ideas were Friday and then Saturday, at a ratio of (10.03%) and (10.82%) of the total agricultural ideas. Each of them respectively.
As for the degree of diffusion of the agricultural ideas, it was found that the highest average of diffusion was (27.15) degrees for agricultural ideas that were circulated on Friday, while the lowest average of diffusion was (17.87) degrees, which is for ideas that were circulated on Tuesday.
Which means that despite of few ideas that was diffused on Friday by those in charge of managing the website of the Agricultural Extension and Training Department, but it was the highest in the average degree of diffusion, and as shown in Table (4).

Table 4: Days during which the agricultural ideas were diffused on the website of the Agricultural Extension and Training Department

Time of agricultural ideas diffusion	The number of ideas	Percentage	Average degree of diffusion
Sunday	102	15.99	21.84
Monday	103	16.14	21.62
Tuesday	108	16.93	17.87
Wednesday	94	14.93	21.98
Thursday	98	15.36	18.01
Friday	64	10.03	27.15
Saturday	69	10.82	20.44
Total	638	100%	

5. **The months of diffusion of agricultural ideas**
The results showed that the month during which the agricultural ideas were diffused the most was January 2021, where the number of agricultural ideas that have been circulated during this month reached (88) agricultural ideas, with a percentage (13.79%) of the total agricultural ideas, followed in second rank in February 2021, with ratio of (13.63%) of all agricultural ideas.
While it is clear that in April 2020 did not publish any agricultural idea, it was in the month of March of the same year, as it was diffused when (23) agricultural ideas were published (3.61%) of the total agricultural ideas. It deluded all aspects of life and confused work in all sectors.
Table (5) shows that the highest average diffusion of agricultural ideas was during in March 2020 with average of (36.21) degrees, and then it was followed by the month of August 2020 with an average of diffusion (32.35) degrees.
The lowest average of diffusion was in the month of April 2020, as its value reached (zero) due to the absence of agricultural ideas that were published during this month, and it came in the second place in February 2021 with an average of (11.11).

Table 5: The months of diffusion of agricultural ideas

the month	The number of diffusion ideas	percentage	Average degree of diffusion
March-2020	23	3.61	36.21
April-2020	Zero	Zero	Zero
May-2020	25	3.92	23.48
June-2020	40	6.27	23.97
Jul-2020	46	7.21	24.15
August-2020	42	6.58	32.35
Sep-2020	63	9.87	25.87
October -2020	75	11.76	25.96
Nov-2020	64	10.03	21.21
December -2020	85	13.32	18.23
Jan-2021	88	13.79	12.10
Feb-2021	87	13.63	11.11
Total	638	100%	

6. **Classification of Agricultural Ideas According To Their Agricultural Specialization**
The results showed that the agricultural ideas that were circulated on the website of the Agricultural Extension and Training Department varied in several agricultural specialties, where it became clear that the most agricultural specialties in which agricultural ideas were disseminated were (animal production) by (28.84%), with an average degree (17.67).
While the agricultural ideas in the field of (plant protection) came in the second rank, at a ratio of (15.05%) of the total ideas that were circulated on the website, with an average degree of circulation of (21.5) degrees, then followed in third place in the specialty (horticulture and landscape design) at a ratio of (12.54%) With an average publicity score of (27.27) out of the total that was published on the site during the period for which the website was studied.

As Table (6) shows that specialization (Forestry Sciences) was the least agricultural specialization in its ideas on the website, only one idea in this specialty, and it is the lowest agricultural specialization in the average degree of diffusion compared to the specialty of horticulture landscape design, which was the highest in the average degree of diffusion.

Table 6: Specializations of the agricultural ideas were diffused on the website of the Agricultural Extension and Training Department

specializations of the agricultural ideas	The number of ideas	percentage	Average degree of diffusion	Rank
Animal Production	184	28.84	17.67	1
Plant Protection	96	15.05	21.5	2
Horticulture	80	12.54	27.27	3
Field crops	78	12.23	26.69	4
Soil and water resources sciences	67	10.50	17.38	5
Agricultural Economics and Extension	59	9.25	21.44	6
Mechanization and agricultural equipment	37	5.80	20.43	7
Environment and health of society	27	4.23	19.81	8
Food Industry	9	1.41	16.88	9
Forest Sciences	1	0.16	10	10
Total	638	100%		

3.2 Second: Determining the Degree of Diffusion of Agricultural Ideas through the Website of the Agricultural Extension Department on the Social Network "Facebook"

The results showed that the number of agricultural ideas that were diffused on the website of the Agricultural Extension and Training Department over a whole year and during the period from the beginning of March 2020 until the end of February 2021 were (638) agricultural ideas.

The number of likes, comments, estimated degree of diffusion and shares by the followers of the website express for each agricultural idea. It was found that the highest degree of diffusion reached (234) degrees, while the lowest degree of diffusion was (zero), with an average general prevalence of (21.103) degrees, and a standard deviation of (20.95) degrees. The degree of diffusion was divided into three categories according the range, as in Table (7).

It was also found that (98.12%) of agricultural ideas had a low degree of prevalence, while the number of agricultural ideas in the category of medium diffusion (1.41%) of the total agricultural ideas, while the number of agricultural ideas in the category of high diffusion reached (0.47%) of the total Agricultural ideas.

Table 7: Distribution of agricultural ideas according to their degree of publicity

Category of diffusion	The number of ideas	percentage	Average degree of diffusion
(less than78) Low	626	98.12	19.06
(78-155) medium	9	1.41	103.3
(156 and more) High	3	0.47	200.6
Total	638	100%	

Despite the low degree of diffusion of the agricultural ideas in general, the website of the Agricultural Extension and Training Department had a prominent role in the diffusion of agricultural ideas, given the amount of agricultural ideas that were diffusion through it during a difficult period that the officials in the Agricultural Extension and Training Department.

That period was spread of the Corona pandemic, which prevented their ability to use traditional agricultural extension methods and means due to the imposition of a curfew during the study period, as well as the financial difficulties that restricted them in establishing activities and extension activities for the diffusion of agricultural ideas.

In order to determine the agricultural ideas that were most diffusion on the website of the Agricultural Extension and Training Department, the five most common agricultural ideas were presented as in Table (8)

Table 8: The five most diffusion agricultural ideas on the website of the Agricultural Extension and Training Department

The ranking	The idea	Degree of diffusion
1	Dates for planting palm cuttings	234
2	The most important Beekeeper business in the month of October	200
3	The importance of silage for cows and buffaloes	168
4	The most important recommendations for wheat cultivation for the month of March	142
5	Corn crop germination	128

The results show in Table (8) that the idea of (dates for planting palm cuttings) came in first rank among the agricultural ideas circulating on the website, as it obtained the highest degree of publicity, as it reached the degree of diffusion (234) degree

It was followed in second rank by the idea of (the most important beekeepers' business for the month of October) with a degree of diffusion of (200) degrees. As for the idea of (the importance of silage for cows and buffaloes), it ranked third in terms of its degree of diffusion.

The two ideas (the most important recommendations on cultivation of wheat for the month of March) and (the germination of the corn crop) came in the fourth and fifth ranks, with a degree of prevalence of (142) and (128) degrees for each, respectively.

It is clear from the nature of these ideas that they varied in terms of their fields of horticulture, field crops and animal production, the reason for their high diffusion may be due to a common pattern or time of diffusion.

On the other hand, it was found that (18) agricultural ideas had an average degree of spread (zero). The reason for their lack of popularity may be that they were diffusion in a link, as it is the pattern used in the majority of them.

3.3 Third: Identify The Correlational Relationship Between The Degree Of Diffusion Of Agricultural Ideas On The Website and each (The Nature Of Their Diffusion, The Patterns Of Their Diffusion, The Times Of Their Diffusion, The Days Of The Diffusion, The Month, And Their Specialization) Of Agricultural Ideas.

The results in Table (9) showed that the value of the Spearman correlation coefficient between the degree of diffusion of agricultural ideas and the nature of their diffusion on the website amounted to (0.075)

In order indentify the significance of the relationship between the two variables, the t-test was used, as the calculated value of (t) reached (1.907), which is not significant

This means accepting the research hypothesis which states that (there is no significant correlation between the nature of diffusion of the agricultural idea and the degree of diffusion among the followers of the Agricultural Extension and Training Department website on the social network "Facebook").

The results also showed that the value of Spearman's correlation coefficient between the diffusion degree of agricultural ideas and the pattern of their spread on the website amounted to (0.1584).

In order to indentify the significance of the relationship between the two variables, the t-test was used, as the calculated (t) value reached (4.046), which is significant at the level of (0.01)

This means rejecting the research hypothesis which states that (there is no significance correlation between the nature of the spread of the agricultural idea and the diffusion degree between followers of the Agricultural Extension and Training Department website on the social network "Facebook"), and accepting the alternative hypothesis and this result is consistent with what he found (Al-Jubouy, 2016 : 116).

The reason for this may be due to the fear of followers of clicking on the links to enter to view the agricultural ideas published in this way that they may contain viruses or to their need for a higher Internet speed, as well as the case for agricultural ideas that are published in the form of video clips.

Table 9: The value of the correlation coefficient and the values t- test and the moral of the relationship

T	Variables	Spearman correlation coefficient value	Values (T) Cal.	Values (T) Tab.	The Sig. of the relationship
1	The nature of the idea diffusion	0.075	1.907	1.96	n.s
2	The pattern of the idea diffusion	0.158	** 4.046	2.57	0.01
3	The time of the idea diffusion	-0.020	0.507	1.96	n.s
4	The day of the idea diffusion	0.013	0.339	1.96	n.s
5	The month of the idea	-0.301	** 7.959	2.57	0.01
6	The specialization of agricultural idea	0.025	0.641	1.96	n.s

The results indicate that the value of Spearman's correlation coefficient between the diffusion degree of agricultural ideas and the time of their diffusion on the website amounted to (-0.020), which is an inverse relationship. In other words, the agricultural ideas that were diffused during the period from (12:00 AM until 5:59 AM) were more common than the agricultural ideas that were propagated during the day or the first half of the night.

In order to identify the significance of the relationship between the two changes, the t-test was used, as its calculated value reached (0.507), which is not significant. This means acceptation the research hypothesis which states that (There is no significant correlation between the nature of the spread of the agricultural idea and the degree of its prevalence among the followers of the Extension and Training Department website. Agricultural on the social network "Facebook").

As for the relationship between the degree of prevalence of agricultural ideas and each of the two variables (the specialization of the agricultural idea) and (the day of its propagation), there was no significant correlation between them.

As the results show in Table (9) that the values of the Spearman correlation coefficient between the diffusion degree of agricultural ideas among the followers of the website and each of (the field of the agricultural idea) and (the day of its spread) amounted to (0.025) and (0.0134) respectively. Thus, we accept the two research hypotheses of the two variables.

As for the relationship between the month of agricultural ideas diffusion and their diffusion degree among the followers of the website of the Agricultural Extension and Training Department on Facebook, the value of the Spearman correlation coefficient (-0.301).

This means that the relationship is inverse, that is, the more recent the idea circulated at the site, the degree of its diffusion is low and rises over time. In order to test the research hypothesis, a t-test was used, and its value was (7.959), which is significant at the level of probability (0.01).

This means rejecting the research hypothesis and accepting the alternative hypothesis. However, this does not mean the importance of the months in the diffusion of agricultural ideas, but rather that the more time passes on the diffusion of the idea, the degree of spread increases.

4 Conclusion

From the results that were reached, we can conclude the following:

1. The number of agricultural extension activities were affected by the spread of the Corona pandemic and the restriction of the movement of agricultural extension workers, which led them to adopt the diffusion of agricultural ideas as information.
2. The formulation of agricultural ideas and their dissemination in the form of pictures supported by an explanatory text about them contributes to better spreading them among the members of the social system.
3. The degree of agricultural ideas diffusion is directly proportional to the length of their dissemination and the number of members of the social system who are exposed to them increases.
4. Those in charge of agricultural ideas diffusion on the website stay up late into the night, taking advantage of this to spread agricultural ideas.

5 Recommendations

In light of the conclusions reached by the research, the following is recommended:

1. Using the website of the Agricultural Extension and Training Department as a source of agricultural information, due to the presence of a large number of followers of the website and its exploitation of agricultural ideas.
2. We must avoid spreading agricultural ideas in the form of links, as they are not popular with followers, and it is preferable to use pictures supported by an explanatory text about them.
3. Holding training courses for those responsible for following up on the website to develop their skills in how to formulate and disseminate agricultural ideas, which require specialists in the subject of agricultural media.
4. Study the website of the Agricultural Extension Department on the web or on the social network "YouTube".
5. Studying the website's role in diffusion of agricultural ideas from the farmers 'point of view, and the extent of their benefit from the ideas that were diffused through it.

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