

Determining cognitive and training needs of agricultural employees in the field of local soil management in Salah al-Din governorate and its relationship with some independent variables

¹Abdullah Waleed Salieh Al-Tekreeti ² Raafat Riyadh Abdul Wahhab

¹Economics and Agricultural Extension Department, College of Agriculture, Tikrit University, Tikrit, Iraq.

²Economics and Agricultural Extension Department, College of Agriculture, Tikrit University, Tikrit, Iraq.

¹E-mail: abdullah_w_salih@st.tu.edu.iq

²E-mail: Raafat.riyadh@tu.edu.iq

ABSTRACT

The research aimed to identify the level of cognitive and training needs of agricultural employees in the field of saline soil management in Salah al-Din province in general, and to identify the level of cognitive and training needs of agricultural employees in the field of saline soil management in Salah al-Din province in each of the areas of self-research (irrigation, drainage, reclamation) and to identify the correlation between the level of cognitive and training needs of agricultural employees and a number of independent variables, 50% of the number of agricultural divisions in the province were taken randomly, which is 28 agricultural divisions, and thus the number of divisions subject to research became 14 divisions (251) agricultural employees, after which 50% of the employees of each division were selected randomly in a simple proportional manner, and thus the number of employees subject to research procedures (118) employees. The results of the research showed that the average degrees of knowledge and training need for all agricultural employees in the field of local soil management is 138.48 degrees, and that 50% of the agricultural employees had their cognitive and training needs within the level of great need, and the results also showed that the priorities of the cognitive needs of the agricultural employees were in the drainage field if the first rank was in the degree of need for knowledge and training, and the focus of irrigation came in second place, while the focus of reclamation ranked last. The results also showed a correlation between the cognitive and training needs and a number of independent factors and recommendations for the need to study. Preparing and implementing periodic and specialized training programs in the fields of irrigation, drainage, and reclamation, with a focus on the practical and applied side. Including the latest scientific methods and modern techniques in local soil management within the content of training programs

Keywords: Cognitive needs, Agricultural staff, Saline soil management, Agricultural management

Introduction and research problem

The term need is commonly used in development work in general and agricultural in particular, especially in the fields of guidance, training and transfer of agricultural technologies. The guiding need has been defined as the need that did not find sufficient satisfaction because the owner did not discover it or because he discovered it, but he cannot satisfy it by relying on himself [1]. In the field of agricultural extension work, which focuses on bringing about desired cognitive, emotional, skill and performance behavioral changes in the targeted, the areas of rural people of different groups, men, women and young people, are distributed in those areas and in their fields of activity on the farm and at home, and thus fall within the framework of educational needs because they deal with the cognitive and knowledge aspect is the basis of progress and renaissance, [2]. It is the one that enables man to understand the world around him and interact with him positively, and the more human knowledge increases and deepens, the more capable he is of creativity, innovation and problem-solving, so we all have to pay attention to the demand for knowledge and its dissemination, as it is the way for the advancement and advancement of societies [3], and the concept of knowledge has two main interpretations, which are the concept of knowledge in language derived from the verb "know" in the sense of perceiving something with a sense of senses and knowledge is perceiving the facts, facts and principles through study, investigation, and knowledge is the perception of data, information and ideas carried by man or society, [4] Knowledge is linked to a specific semantic and historical context and knowledge that guides human behavior that directs human individual and collective behavior in all of the multiple areas of

knowledge that includes all the information that the knowledge[5] acquired by man The agricultural officer is one of the main pillars in the agricultural development process, as he is responsible for transferring scientific and technical knowledge to farmers and applying it in the fields, which contributes to facing contemporary agricultural challenges such as soil degradation, water scarcity and increasing demand for food [6]. The level of knowledge of these employees reflects their ability to perform their tasks efficiently, as this level includes theoretical knowledge derived from academic education, applied knowledge gained from practical experience and continuous training. Assessing the level of this knowledge is a necessary step to understand knowledge and training gaps and identify training needs that help develop agricultural performance [7] .Saline soil management is a key strategy to reduce and control the expansion of salt-affected land by co-existence with salinity and the application of a range of preventive and remedial measures that ensure the sustainability of agricultural production [8]. Sound management of saline soils depends on improving the efficiency of irrigation water use through the adoption of modern irrigation systems such as drip or sprinkler irrigation to reduce water loss and salt accumulation in surface layers, as well as the establishment of effective surface and subsurface drainage systems to drain salt water and prevent the rise of groundwater [9]. The use of genetically improved microorganisms or plants that help reduce the concentration of salts and improve the root environment of the plant. Recent studies indicate that integrated salinity management is not limited to technical means only, but also relies on extension and awareness programs for farmers on the importance of rationalizing water use, [10]

choosing appropriate irrigation methods, and periodically monitoring water and soil quality, which contributes to reducing salinization rates and maintaining land fertility in the long term [11]. Methods of effective management of saline soils include improved drainage and saline washing systems, the use of salt-resistant crops, the application of balanced fertilization and the addition of organic matter, as well as raising awareness among farmers about correct practices. And here is the pivotal role of the agricultural employee in implementing these measures through field guidance and follow-up [13].

And in Salah al-Din province, which is characterized by its important geographical location and diverse agricultural resources, the problem of salinity is emerging as one of the main challenges affecting the production of grains and vegetables. This problem increases the need for qualified agricultural cadres capable of managing local soils in scientific ways, which makes studying the level of knowledge of agricultural employees in this province an essential entry point to understand the readiness of the agricultural sector to face these challenges. The cognitive level of the agricultural employees is affected by several variables; including the age related to practical experience, the academic qualification reflecting the ability to understand and apply modern technologies, and field experience that enhances the ability to deal with

Objectives of the study:

- 1- Identify the level of knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din province in general.
- 2- Identify the level of knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din

agricultural problems. Also, they are affected by the continuous training that raises the efficiency of employees and updates their knowledge, as well as the institutional environment that provides support and capabilities to enhance performance. Based on the above mentioned, this study attempts to answer the following questions:

- 1- What is the level of knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din province in general?
- 2- What is the level of knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din in each of the following fields of study : (irrigation, drainage, reclamation)?
- 3- What is the order of the research fields in percentage by weight of each field?
- 4- What is the correlation between the level of knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din province and a number of autonomous (age, sex, academic achievement, number of years of employment, sources of information on local soil management, the trend towards local soil management)?

governorate in each of the following fields of research (irrigation, drainage, and reclamation)?

- 3- Identify the ranking of research areas in a descending order by the percentage weight of each field.
- 4- Identifying the correlation between the level of knowledge and training needs of agricultural employees in the

field of local soil management in Salah al-Din governorate and the following independent variables: (age, sex, academic achievement,

number of years of employment, sources of information on local soil management, trend towards local soil management)

Statistical hypotheses:

There is no correlation between the level of knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din province and the following independent factors (age, sex, academic achievement, number of years of

employment, sources of information on local soil management, trend towards local soil management)

Procedural definitions:

- 1- Cognitive needs: The lack of knowledge felt by the agricultural employee in some areas of saline soil management, which he seeks to satisfy through the search for knowledge, understanding and interpretation
- 2- Salt Soil Management: This management includes a set of administrative and technical procedures used to reduce or regulate soil salinity. They include crop selection, fertilization, land

reclamation, irrigation, drainage, and other related tasks.

- 3- Agricultural employees: These workers work in the official agricultural departments and divisions in Salah al-Din province, and their responsibilities include planning, supervising, advising, and practicing agricultural land management. This definition includes those for whom the research tool was designed.

Materials and methods of work

Study-Sampled Society:

The research community included the agricultural employees in the agricultural divisions of the Salah al-Din Governorate Agriculture Directorate, numbering (313)* agricultural employees distributed over (28) agricultural divisions, 50% of the number of agricultural divisions in the governorate were taken randomly, and thus the number of divisions subject to research became 14

divisions containing (251) agricultural employees, the Al-Dur Agriculture Division, which includes (15) employees, was excluded as a survey sample, after that 50% of the employees of each division were selected randomly in a simple proportional manner, and thus the number of employees subject to the research procedures became (118) employees, as shown in table (1).

Table (1) Distribution of Agricultural employees to Agricultural Divisions

Final Sample	Research Community	Al-Shaab Agricultural	T
8	16	Tikrit Agriculture Division	1
reconnaissance sample	15	Al Dawr Agriculture Division	2
6	12	Baiji Agriculture Division	3

8	16	Science Division	Agriculture	4
6	11	Hamrin Transplant Division		5
6	13	Tulul Al Bagh Division	Agriculture	6
14	27	Sharqat Division	Agriculture	7
8	16	Left Coast Division	Agriculture	8
14	28	Tuz Division	Agriculture	9
9	19	Samarra Division	Agriculture	10
14	28	Dujail Division	Agriculture	11
11	22	Al-Dhuluiyah Division	Transplant	12
6	11	Balad Division	Agriculture	13
8	17	Isaac Division	Transplant	14
118	251	total		

**** Salah al-Din Governorate Agriculture Directorate, Human Resources Division, on 3/7/2025.**

Questionnaire tool :

After reviewing the literature, previous studies, scientific research, and consulting experts and specialists in the field of research, the questionnaire form was prepared as a means of collecting field data from the researches, which included three parts:

Part 1: Includes some independent variables related to agricultural employees:) age, sex, educational attainment, number of years of

employment, sources of information on local soil management, trend towards local soil management)

Part 2: This part includes (3) areas to measure the level of knowledge of agricultural employees in the field of salt soil management in Salah al-Din province, namely: (Irrigation, drainage and reclamation) and included 30 paragraphs as shown in table (2).

Table (2) Showing the areas of research and the number of paragraphs of each area

Number of Final Paragraphs	Number of Deleted Paragraphs	Number of Paragraphs	Domain	T
11	5	16	Irrigation	1
10	2	12	Puncture	2
9	1	10	Reclamation	3
30	8	38	Total	

Preliminary test (pre-test)

After completing the preparation of the form in its final form and taking all the expert modifications in the apparent credibility and integrity of the content, the researcher chose a random sample from the research community, but from outside the basic sample of the study, with (15) researchers, and the aim of this

was to extract the stability factor, and validity, where the stability value was 0.82 and the validity factor was 0.90, and stability is acceptable if it was 0.70 or more and is more acceptable as it approaches the correct one [12], and the data was collected during the period from (19/10/2025 until 5/11/2025)

Measure search variables:

First- Measuring independent variables: The independent variables included in the research were measured as follows:-

- 1- Age: Measured by the number of years of age examined at the time of data collection.
- 2- Gender: Measured by two surrogates (male and female) and given a numeric value (2, 1) respectively.
- 3- Academic achievement: It was measured through the following alternatives: (preparatory agriculture, diploma of agriculture, bachelor of agriculture, master of agriculture, doctorate of agriculture) and digital values were given (1, 2, 3, 4, 5) respectively.
- 4- Number of years of employment: Measured by the number of years spent in the job until the time of data collection
- 5- Sources of information: To measure this variable, the agricultural employees used (9) sources and put in front of each of them four alternatives (always, sometimes, rarely, I do not get) were

given numeric values 3 (2,1,0) respectively and thus the values expressed for this variable are limited between (0) and (27).

- 5- Sources for obtaining information on soil salinity management: To measure this variable, the agricultural employees used (7) sources and put in front of each of them three alternatives (always, sometimes, rarely (given numeric values 3), 2, (1 respectively) and thus the values expressed for this variable are limited between (7 – 21)
- 6- The trend towards saline soil management: It was measured through (8) phrases representing the level of knowledge of agricultural employees in the field of saline soil management, and three alternatives were put before each of them (OK, Neutral, Disagree) and the numerical values were given 3 (2, 2), (1) for positive paragraphs and vice versa for negative paragraphs, and thus the values expressed for this variable are limited between (24-8) .

II- Measurement of dependent variable:

The level of cognitive and training needs of agricultural employees in the field of local soil management was measured through (30) paragraphs distributed in the areas of research and put before each of the following alternatives (large need, medium

need, low need, no need (given numerical values 4), 3, 2, (1 respectively) and thus limited the values expressed in the knowledge of agricultural employees between (30 - 120)

Data Collection:

After conducting the initial measurement (Pre-Test) of the development and improvement scale and independent variables and ensuring their stability and validity, and then the process of collecting the study data was started through a

questionnaire form and in the personal interview method. The data collection process took from 22/11/2025-12/1/2026, and all the forms that were distributed to agriculture were obtained by (100%) of the total number of (118) employees

Statistical Methods:

For the purpose of reaching the research objectives, he used many statistical methods and means such as: range, arithmetic mean, simple correlation coefficient (Pearson),

Spearman's correlation law, percentile weight, t-test, percentage

Results and discussion:

First Objective: Identify the level of cognitive and training needs of agricultural employees in the field of local soil management in Salah al-Din province in general.

The results of the research showed that the highest numerical value of the degree of the level of knowledge and training needs of agricultural employees in the field of local

soil management in Salah al-Din province in general is (164) degrees and the lowest numerical value is (100) degrees, with an average of (139.50) degrees and a standard deviation of (17.21), and the agricultural employees were distributed into categories according to the law of extent law and as shown in table (3)

Table (3) Distribution of agricultural employees according to the cognitive and training needs of agricultural employees in the field of local soil management in general

S. D	\bar{X}	Average needs	%	number	level of needs	T
17.21	138.48	111.90	17.8	21	Few (100-121)	1
		132.15	32.2	38	Medium (122-143)	2
		154.06	50	59	Large (144+)	3
			100%	118	total	

The table above shows that the highest percentage of agricultural employees falls within the large category by (50%), with an average of (145.06) degrees, the lowest percentage of agricultural employees falls within the category of few needs by (17.8%)

and an average of (111.90) degrees, and this may be due to lack of experience in the field of local soil management and weak training, knowledge and training courses in the field of soil management

Second Objective: To identify the level of knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din province in each of the areas of self-study irrigation, drainage, reclamation)

1- Irrigation field

The results showed that the lowest value expressed in terms of the level of knowledge and training needs of agricultural employees in the field of irrigation is (23), the highest value is (46), and with an arithmetic average

of (37.30) and a standard deviation of (5.65), the agricultural employees were divided into three categories according to the extent of knowledge and training needs in the field of irrigation and the results were as shown in table (4).

Table (4) Distribution of agricultural employees according to the level of knowledge and training needs of agricultural employees in the field of irrigation

Medium	%	number	Categories	T
26.84	11	13	Small (23-30)	1
33.53	33	39	Medium (31 - 38)	2
41.59	56	66	Large (39-46)	3
	100%	118	total	

Table 4 shows that the highest proportion of respondents is large (56%), with an arithmetic average of 41.59, followed by the middle group (33%) and an arithmetic average of 33.53, indicating that the majority of agricultural employees see the level of knowledge and training needs of agricultural employees in the field of irrigation as significant. The nature of saline soils also requires careful expertise in irrigation water management to reduce salt accumulation, which increases the need for training

2- puncture field

The results showed that the lowest value expressed for the level of knowledge and training needs of agricultural employees in the field of drainage is (40), and the highest value is (22), with an arithmetic average of (34.79) and a standard deviation of (4.93), the agricultural employees were divided into three categories according to the extent of knowledge and training needs in the field of drainage and the results were as shown in table (5).

Table (5) Distribution of agricultural employees according to the level of knowledge of agricultural employees in the field of drainage

Medium	Percentage	number	Categories	T
25	10.1	12	Small (22-28)	1
31.18	27.9	33	Medium (29-35)	2
38.04	62	73	Large (36+)	3
	100%	118	total	

Table 5 shows that the highest proportion of respondents is large (62%), with an arithmetic average of 38.04, followed by the middle group (27.9%) and an arithmetic average of 31.18, indicating that the majority of agricultural employees see the level of knowledge and training needs of agricultural employees in the field of drainage as significant. This result can be explained by the fact that agricultural employees face a clear deficiency in their knowledge and skills related to drainage operations, as the management of drainage in local land requires accurate technical expertise to ensure the effective discharge of excess salts and water. In addition, the nature of training in Salah al-Din province and the pressing problems it faces increase the importance of developing the capabilities of employees in this regard

3- Reclamation field

The results showed that the lowest value expressed for the level of knowledge of agricultural employees in the field of reclamation is (18), the highest value is (36), and with an arithmetic average of (30.29)

and a standard deviation of (4.37), the agricultural employees were divided into three categories according to the extent lawand the results were as shown in table (6).

Table (6) Distribution of the agricultural employees according to the level of knowledge of agricultural employees in the field of rehabilitation

Medium	Percentage	number	Categories	T
22.05	14.5	17	Small (18-24)	1
28.83	35.5	42	Medium (25-31)	2
33.71	50	59	Large (32 - or greater)	3
	One hundred percent.	118	total	

Table 6 shows that the highest percentage of the respondents believe that the level of knowledge and training needs is large (50%), with an arithmetic average of (33.71), followed by the middle category (35.5%) and an arithmetic average of (28.83), which indicates that the majority of agricultural employees see the level of knowledge and training needs of agricultural employees in the field of reclamation as significant. This result can be explained by

the fact that agricultural employees lack sufficient experience in the field of reclamation of saline land, an area that requires advanced knowledge of scientific and practical methods to restore soil to productivity. In addition, the nature of the training in Salah al-Din province, its pressing problems, and the difficulty of reclamation make employees more aware of the importance of intensive training in this field

The third goal: to identify the ranking of research areas in descending order according to the percentage weight of each field.

The areas of research were ranked in descending order by percentage weight and the results were as shown in Table (7)

Table (7) Ranking of research areas downward by percentage weight

rank	Percent weight	Maximum value	Number of paragraphs	Medium	domain
1	86.99	40	10	34.79661	puncture
2	84.78	44	11	37.30508	irrigation
3	84.15	36	9	30.29661	reclaim

It is clear from the above table that the field (puncture) ranked first with a percentage weight of (86.99) and may be the reason for this (and this can be explained that puncture operations are the basis in addressing the problem of saline soils, as they are the

decisive factor in the disposal of excess salt water and the discharge of salts from the root zone. The lack of practical experience of staff in this area, and the weakness of previous training programs, made the need for qualification more urgent than others.)

The area that ranked last was (reclamation) with a percentage weight of (84.15), and the reason for this may be (that agricultural employees focus more on the areas of irrigation and drainage as the direct basis for addressing the problem of salinity, while reclamation is seen as a subsequent or complementary stage to these processes. The lack of practical experience in reclamation projects, and the weak implementation of field programs, have made the training need in it less prominent compared to other fields

Objective 4: Identify the correlation between the level of knowledge of agricultural employees in the field of saline soil management in Salah al-Din governorate and the following independent variables: (age, sex,

Table (8) Distribution of the agricultural employees according to age groups

Calculated value	Pearson	Medium	%	number	Age groups
-3.14	-0.28 **	142.89	49.1	58	Young people (25-35 years)
		139.40	31.5	37	Average age (36-46)
		131.13	19.4	23	Older adults (48 years and older)
			100%	118	total

**** Significant at the (0.01) level**

In order to find the correlation between the needs of the agricultural employees and the age variable, I use the Pearson correlation coefficient, which amounted to (0.28**-) and indicates a negative relationship between the two variables, and to ensure the significant of the relationship, I used the t test, which amounted to 3.14-, and when compared with the t tabular value of 2.62, I found that it was significant at the probability level of 0.01, so it is refused to impose a support that states (There is no correlation between the level of knowledge and training needs of agricultural employees in the field of local soil management in

academic achievement, number of years of employment, sources of information on saline soil management, trend towards saline soil management)

1- Age:

The results showed that the age of the agricultural employees ranged between (25-60) years, with a mathematical average of 37.80 years and a standard deviation of 8.84. The agricultural employees were divided into three categories using the term law, and it appeared that the highest percentage of 40% of the agricultural employees was within the category of young people, followed by the category of elderly and by 31.2%, while the category of middle-aged came with the lowest percentages, reaching 28.8%, as shown in Table (8)

Salah al-Din-Din-Din-Salaheddine Governorate and the age), and this may be due to the fact that older agricultural employees have acquired long practical experience through direct work experience through direct work, which made them less of the need for additional training. They are still at the beginning of their practical experience and need more qualification and training to make up for their lack of applied knowledge

2-Sex

The agricultural employees were divided by gender into two categories, and it was found

that males obtained a higher average than females, and the results were as in table (9).

Table (9) Distribution of agricultural employees by gender groups.

Calculated value	Spearman	Medium	%	number	Sex categories
0.75	0.07	140.29	72	85	male
		137.48	28	33	female
			100%	118	total

To find the correlation between the needs of the agricultural employees and the gender variable, I use the Spearman correlation coefficient, which amounted to (0.07), and to ensure the significant of the relationship, I used the t test, which amounted to 0.75, and when compared with the t value of 1.98 Tabular, I found it to be insignificant. Therefore, we accept the imposition of support, which states (There is no correlation between the level of knowledge and training needs of agricultural employees

in the field of local soil management in Salah al-Din and gender).

3- Academic achievement

The agricultural employees were distributed according to academic achievement into five categories to indicate the knowledge and training needs of agricultural employees in the field of soil management, and it is clear from table (10) that the highest percentage of agricultural employees was within the category (Master of Agriculture) by (32.2%), and the results were as follows:

Table (10) Distribution of the agricultural employees according to the academic achievement categories.

Calculated value	Spearman	Medium	%	number	Categories
-3.02	*0.27-	149.09	9.4	11	Prep Agriculture
		140.60	19.5	23	Diploma of Agriculture
		143.24	24.5	29	Bachelor of Agriculture
		138.07	32.2	38	Master of Agriculture
		128.46	14.4	17	Doctor of Agriculture
			One hundred percent.	118	total

**** Significant at the (0.01) level**

To find the correlation between the needs of the agricultural employees and academic

achievement, I use the Spearman correlation coefficient, which amounted to (0.27**) and

indicates a negative relationship between the two variables, and to ensure the significant of the relationship, I used the t test, which amounted to 3.02-, and when compared with the t value of 2.62, it was found to be significant at the probability level of 0.01, so it refuses to impose support, which states (There is no correlation between the level of knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din and academic

4- Number of years of career service:

The values expressed for the service of employees between (1-23) years, with a calculated average of 8.35 and a standard

achievement), this result can be explained that employees with higher academic achievement have broader theoretical knowledge, which reduces their sense of the need for additional training. In contrast, less educated employees lack sufficient scientific foundations, believing that they need more training to make up for the shortfall. This explains the negative relationship between the level of academic achievement and cognitive and training needs.

deviation of 6.13 were distributed by range into three categories and the results were as in table (11).

Table (11) Distribution of agricultural employees according to the categories of the number of years of employment service

Calculated value	Pearson	Medium	%	number	Service Categories
-3.02	0.27**-	143.31	53.4	63	Short (1-7) years
		138	28.9	34	Medium (8-14 years)
		130.5	17.7	21	Long (15 years or more)
			One hundred percent.	118	total

**** Significant at the (0.01) level**

To find the correlation between the needs of the agricultural employees and the number of years of employment, I use the Pearson correlation coefficient, which amounted to (0.27**-) and indicates a negative relationship between the two variables, and to ensure the significant of the relationship, I used the t test, which amounted to 3.02-, and when compared with the t-tabular value of 2.62, I found that it was significant at the level of probability of 0.01, so it is rejected to impose support, which provides that (there is no correlation between the level of knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din and the number of years of employment), and this result can be explained that agricultural employees with longer years of accumulated practical experience through field practice, which reduced their sense of the need for additional training. In contrast, less experienced staff still lack adequate applied skills and knowledge, which makes their need for training greater. This explains the negative relationship between the number of years of service and the level of cognitive and training needs.

5-Sources of information on local soil management:

The values expressed for the sources of information obtained for some indicative activities were limited to between-9 (21), and the highest value of the rate of knowledge and

training needs falls within the category of low (144.86) and the research was distributed into three categories using the law of extent, as shown in table (12):

Table (12) shows the distribution of the research according to the categories of sources of information on local soil management

Calculated value	Pearson	Medium	%	number	Categories
-3.14	-0.28	144.86	12.7	15	Low (9 – 12)
		140.02	58.5	69	Medium (13 – 16)
		136.08	28.8	34	High (17 – above)
			100%	118	total

**** Significant at the (0.01) level**

To find the correlation between the researchers' knowledge of the sources of obtaining information on salt soil management, I use the Pearson correlation coefficient, which amounted to (0.28**-) and indicates a negative relationship between the two variables, and to ensure the significant of the relationship, I used the t test, which amounted to -3.14, and when compared with the tabular t value of 2.62, I found that it is significant at the level of probability of 0.01, so it is rejected to impose a support that states (There is no

correlation between the level of knowledge and training needs of agricultural employees in the field of salt soil management in Salah al-Din and sources of obtaining information on salt soil management), this result can be explained that employees who have multiple sources of obtaining information about salt soil management are more knowledgeable and thus less to additional training. Those who rely on limited or traditional sources lack modern knowledge, which increases their need for training

6-The trend towards local soil management:

The values expressed in the trend were limited between (11-24) and it is shown from table (13) that the highest value of the rate of cognitive and training needs falls within the

category (positive) with a value of (153) and an average arithmetic of 19.86 and a standard deviation of 3.04, and the results were as follows:

Table (13) shows the distribution of the research according to the trend towards the management of local soils

Calculated value	Pearson	Medium	%	number	Categories
5.57	0.46**	123.14	5.9	7	Negative (11-15)
		133.48	47.5	56	Neutral (16-20)
		153	46.6	55	Positive (21+)
			100%	118	total

**** Significant at the (0.01) level**

To find the correlation between the needs of the agricultural employees and the trend towards the management of saline soils, I use the Pearson correlation coefficient, which reached a value of (** 0.46) and indicates a positive relationship between the two variables, and to ensure the significant of the relationship, I used the t test, which reached a value of 5.57, and when compared with the t value of 2.62, I found that it is moral at the level of probability of 0.01, so it refuses to impose the support that states (There is no correlation between the level of knowledge and training needs of agricultural

Conclusions

- 1- The results showed that the knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din province in general were high, as we conclude that agricultural employees in Salah al-Din province suffer from a clear gap in their knowledge and skills related to local soil management, which reflects the high level of their training and knowledge needs in general
- 2- The results showed that the field (puncture) ranked first among the fields, and this may be caused by excessive salinity and the discharge of salts from the root zone. The lack of practical experience of agricultural employees in this field, and the weakness of previous training programs related to drainage, made the need for it greater

Recommendations

- 1- Develop specialized and intensive training programs in the field of local soil management, focusing on practical and applied aspects, to

employees in the field of saline soil management in Salah al-Din the trend towards the management of saline soils), this result can be explained that agricultural employees who have positive trends towards the management of local soils are more aware of the importance of developing their knowledge and skills, which increases their sense of the need for training. In addition, awareness of the importance of proper management of local soils makes them more willing to acknowledge that there are knowledge gaps that need to be filled through training

than others. As for the field of reclamation, it ranked last, and the explanation for this may be that agricultural employees see that reclamation operations usually come as a later stage after the success of drainage and irrigation in reducing salinity, and therefore are not a direct priority compared to them.

- 3- The results showed a negative moral correlation between the knowledge and training needs of agricultural employees in the field of local soil management in Salah al-Din province and most of the factors studied, namely (age, academic achievement, number of years of service and sources of information on local soil management) We conclude that the rise of these factors is associated with a decrease in the need for knowledge and training .

reduce the knowledge gap among agricultural employees.

- 2- Include reclamation in subsequent programs after enhancing staff expertise in drainage and irrigation,

to ensure that knowledge is integrated and integrated according to practical priorities.

- 3- Designing training programs that take into account the characteristics of agricultural employees such as age, academic achievement, years of service, and sources of information, to ensure the suitability and effectiveness of training.

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