Training needs for cow breeders in the villages of Al-Dabasa and Al-Aali in Al-Alam District, Salah Al-Din Governorate•.

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Abstract:
The research aimed to identify the level of training needs of cow breeders in the villages of Al-Dabasa and Al-Aali in Al-Alam District, Salah Al-Din Governorate, and to identify the descending order of the research areas, and to find a correlation between training needs and some variables related to breeders. A questionnaire was used as a tool to collect data from the respondents, consisting of two parts. The first part included some independent variables related to the respondents, and the second part included a cognitive test (multiple choice) consisting of 60 items. Validity was achieved in terms of both virtual and content by presenting the questionnaire to agroup of arbitrated experts. A preliminary test on the questionnaire was conducted on a random sample of 20 of the respondents. The size of the two villages was 29 subjects, the reliability value was 0.90, the validity of test was 0.948.

The results showed that the level of training needs for cow breeders was moderate and tended to rise in general, and that the areas that came in the first three ranks were cow nutrition, health care, and cow reproduction. From this, it is concluded that information on the experiences of breeders in the field of cow breeding in general and in the three aforementioned areas is weak. The results showed that there were negative significant correlations between training needs and each of the following (educational level, number of years of raising cows, adherence to personal and inherited experiences, number of cow herd, and sources of information). The research recommended It is necessary for the agricultural extension agency in the research area to prepare extension activities whose content covers information on cow breeding to provide cow breeders with everything related to cow breeding in terms of expertise, information and new techniques, as well as the need to pay attention to areas that have shown a high level of training needs and focus through training courses and extension activities on The fields of cow nutrition and health care Which occupied the first three places when arranged according to training need.

Keywords: training needs, cow breeders, Salah al-Din Governorate

Introduction:

The development of the agricultural sector is an effective weapon in reducing poverty and promoting sustainable development. Therefore, all developed and developing countries are committed to developing the agricultural sector, both plant and animal, to meet human food needs, especially developing countries that depend on agriculture as the primary source of income (Arab Organization for Agricultural Development, 2010: 14). The process of providing food does not depend on the extent of its provision, but rather extends to the extent of its distribution and quality in a way that guarantees food for all population groups (United Nations, 2017: 3),The agricultural sector, both plant and animal,

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plays an important role in providing the food needs of the population and supplying the local industry with its needs of the necessary raw materials. For its growth and development (Bahjat, 2022: 109-110.(

Livestock is an important source of agricultural products such as sheep, cows, buffalo and camels, and its importance comes from its role as an important source of animal protein and providing meat, dairy and their derivatives. (Al-Shafi'i and Shadi, 2006: 8). Cows are the most bred farm animals because they provide large quantities of milk as well as meat. These animals also carry a symbolic value and reflect the economic situation of the breeders. Also, the increase in the number of farm animals enables the application of modern breeding and care techniques, which Ensures the preservation and sustainability of important economic resources (Bally and Rabie, 2008::2979), This can be achieved by increasing the number of livestock and ensuring their nutritional and health care, as the health of animals directly affects the productivity of meat and dairy (Fouad, 2006: 13). The human element is considered one of the most important factors of production, because it is the most important determinant of production capacity, and even the exploitation of it depends on it. Other elements of production, which are capable of converting various resources into human benefits (Abbas, 2008: 46), and to ensure that farmers implement agricultural skills efficiently, their current level of knowledge and skills must be known, the gap between the current level and the desired level must be determined, and that gap must be reduced through training programs that must Providing technical information to train farmers on how to deal with it efficiently in light of his previous experience (Qeshta, 2012: 47), Training is considered one of the important areas for the development of individuals, whether they are professionals or producers, as the results of the knowledge revolution and the accompanying innovations are growing, almost covering all areas of life, and it is necessary to employ them in an optimal way (Zahran, 1998: 12), and since the human element is the primary responsible for all... With regard to raising cows, it is therefore important to identify the training needs that express the weakness of breeders' information and experience, which breeders must be provided with through extension activities targeting an important agricultural segment of farmers, namely cow breeders. Hence, the current research came to answer the following research questions .

-1 What are the training needs of cow breeders in the villages of Al-Dabasa and Al-Aali in Al-Alam district / Salah al-Din Governorate in general?

-2 Descending order of research fields according to the percentage weight of the average

-3 What is the correlation between training needs and each of the independent variables studied?

Research aims:

-1

Identifying the level of training needs of cow breeders in the villages of Al-Dabasa and Al-Aali in Al-Alam district/Salah al-Din Governorate in general.

-2 Descending order of research fields according to the percentage weight of the average.

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-3 Finding the correlation between training needs and each of the independent variables (age, educational level, adherence to personal and inherited experiences, number of years of raising cows, number of herd, relevant sources of information.(

Research hypotheses:

-1 There is no significant correlation between training needs and the age variable.

-2 There is no correlation between training needs and the educational level variable.

-3 There is no correlation between training needs and the variable of adherence to personal and inherited experiences.

-4 There is no correlation between training needs and the variable number of years of raising cows.

-5 There is no correlation between training needs and the variable number of the breeder's herd of cows.

-6 There is no correlation between training needs and the relevant information source variable.

Procedural definitions:

-1

Training needs: indicate the gap or deficiency in cow breeders' information through a comparison between the required level of performance and the current level of their knowledge, on the basis of which the training need is determined.

-2 Cow breeders: individuals who raise cows and are responsible for managing them for the purpose of obtaining food or a source of income.

-3 Information sources: Information sources from which the breeder obtains information in the field of raising and caring for cows.

Material and methods:

First: Research methodology:

Scientific research is a human activity characterized by following clear and organized rules and aims to solve a problem, investigate a specific situation, test a hypothesis, or verify the validity of results reached by a previous study (Al-Fadil 2010: 98). Use the descriptive analysis approach, which is characterized by its monitoring of reality and phenomena that helps in the future. In changing the conditions that govern that reality (Al-Fadil, 2010: 103.(

Second: Search region:

The villages of Al-Dabasa and Al-Aali in Al-Alam District in Salah Al-Din Governorate were chosen as the area to conduct the current research for several reasons, including:

-1The presence of a number of cow breeders in the Al-Bahaq area

-2It is an important source of income for educators and their families

-3The proximity of the research area to the researcher's residence

Third: The research community and its sample:

The research included all cow breeders in the villages of Al-Dabsa and Al-Aali, who numbered (143) breeders, including 60 breeders in the village of Al-Dabsa and 83 breeders in the village of Al-Aali. A 70% proportional random sample of 100 respondents was drawn from them, as shown in Table (1.(

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Table (1) The research population and its sample

N	Village	Population	Sample
1	Dabsa	60	42
2	High	83	58
Total		143	100

Source: Science Cultivation and Tikrit Division

Fourth: Preparing the data collection tool:

The questionnaire is considered one of the most important tools used to obtain information that is related to the conditions and methods that actually exist (Abdel Hafeez and Bahi, 2000: 146). After the researcher reviewed the literature, studies and scientific research that explain the correct methods of raising cows, consulting those with expertise and experience in this field, and conducting

A reconnaissance visit to the research area during which the research area was identified. It was found that most families raise cows, so a questionnaire form was prepared in its initial form and consisted of two parts:

The first part: It included a set of questions related to the independent variables for breeders, namely (age, educational level, adherence to personal and inherited experiences, number of years of breeding, number of the breeder's herd of cows, sources of information in the field of cow breeding.(

The second part: It included a Kimyas test for training needs consisting of five areas: (cow nutrition, cow barns, cow reproduction, health care, field care operations), through which the level of training needs in the field of cow breeding is measured. The areas in its initial form included (67) A standard paragraph distributed among the research areas as follows:

-1The field of cow nutrition, which includes (20(

-2The field of cow sheds, which includes (12(

-3The field of cattle breeding, including (12(

-4The field of health care includes (16(

-5The field of field care includes (7(

Fifth: Measuring test characteristics:

Validity

Validity is considered one of the most important standard characteristics that should be available in psychological and educational standards (Eble, 1972: 435) because of the connection between honesty and the goal or goals expected to be achieved by the measurement tool and the extent of its connection to the type and importance of the decision that will be taken accordingly (Al-Nabhan, 2004: 273). The best way to achieve apparent validity is for a group of specialized experts to decide to evaluate the validity of the items in measuring what they were designed to measure (Eble, 1972: 555), To achieve both types of validity, the tool was presented to a group of arbitrators in the Agricultural Extension Department at the College of Agriculture at the University of Tikrit, as well as arbitrators from the Department of Psychological and Educational Sciences at the College of Education As for content validity, it was achieved by presenting the data collection tool to A number of specialists in the field of research and the fields and paragraphs included in the data collection tool from the Animal Resources Department in order to obtain their opinions and comments regarding the type of questions, the soundness of their wording, and the extent of their clarity and suitability.

According to the level of the respondents, and after taking into account their comments and

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suggestions, the arbitrators made amendments, additions or deletions to a number of items in the questionnaire, and the researcher adopted a cut-off threshold of (75% - 100%) to approve the validity of the items of the scale, as shown in Table (2.(

Table (2) Distribution of the items of the training need scale in its initial form after the validity of the arbitrators

Fields	Initial Formula	Deleted paragraphs	Modified Formulation	Paragraphs added	Formula after arbitration
First field	20	1	3	0	19
Second field	12	2	2	0	10
Second field	12	0	2	0	12
Fourth field	16	1	3	0	15
Fifth field	7	0	2	1	8
total	**67**	**4**	**12**	**1**	**64**

Sixth: Pre-test

After the final form of the questionnaire was completed, a random sample of 20% of the total respondents in each village was chosen, with a size of 29 educators from the two villages from the research community and from outside the research sample to conduct a preliminary test on the questionnaire. The data of the survey sample was collected during the period (1/11/2023 to 11/20/2023(

Seventh: Reliability and validity

Reliability means stability in the sense that if the measurement process was repeated for a particular phenomenon, its score would show some stability (Abdel Hafeez and Mustafa 2000: 178). To find stability (the cow breeder's test), Pearson correlation coefficient was used to find the correlation between the even and odd items for the scale as a whole, as its value reached 0.82, which represents stability. Half of the scale was corrected using the Spearman-Brown equation, with a value of 0.90, and the validity of the scale was calculated using the root of the reliability coefficient, which had a value of 0.948. Thus, A questionnaire was characterized by high reliability and validity.

Eighth: Calculating ease, difficulty, and discriminatory power:

An analysis of the coefficient of ease, difficulty, and discriminatory power of the paragraphs of the data collection tool was conducted according to the relevant equations. Four items with ease, difficulty, and discriminatory power were deleted, two paragraphs in the first field, one paragraph in the third field, and one paragraph in the fifth field. Thus, the total number of questionnaire items in its final form reached 60 test items.

Ninth: Measuring independent factors:

The independent variables included in the research were measured as follows

-1 Age: It was measured by the number of years the respondent was alive at the time of data collection

-2 Educational level: It was measured through the following alternatives: (illiterate, reads and writes, primary, middle, middle, institute, college, graduate certificate) and numerical values were given (1, 2, 3, 4, 5, 6, 7, 8) in a row.

-3 Adherence to personal and inherited experiences: It was measured through the following alternatives: 1- Always, 2-

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Sometimes, 3- Rarely. The values were given (1, 2, 3) respectively.

-4 Number of years of raising cows: It was measured by the number of years in which the breeder practiced raising cows.

-5 Number of the breeder's herd of cows: It was measured by the number of cows the breeder owned when collecting the data.

-6 Sources of information in the field of cattle breeding: To measure this variable, the researcher used (9) sources and placed four alternatives in front of each source (always, sometimes, rarely, I never get). Numerical values of (1, 2, 3, zero) were given respectively, thus summing up The values expressing this variable are between (0 – 27.(

Tenth: Measuring the dependent factor:

The current knowledge level of the respondents was measured by giving one score for the correct answer and zero for the wrong answer, and the training needs were measured by subtracting the actual knowledge score from the maximum (theoretical) knowledge score. The number of test items in its final form was 60 items divided into five areas. The paragraphs of the first domain are 17 paragraphs with a theoretical range of (0-17) degrees, the second domain is 10 paragraphs with a theoretical range of (0-10) degrees, the third domain is 11 paragraphs with a theoretical range of (0-11) degrees, and the fourth domain is 15 paragraphs with a theoretical range of (0-15) degrees. While the fifth domain consists of 7 items with a theoretical range of (0-7) degrees, the theoretical range of the scale as a whole reached (0-60) degrees.

Results and discussion

The first objective: The level of training needs of cow breeders in the villages of Al-Dabasa and Al-Aali in Al-Alam District, Salah Al-Din Governorate.

The results showed that the lowest score expressing the level of training needs of cow breeders in the villages of Al-Dabasa and Al-Aali in Al-Alam District in Salah Al-Din Governorate is (12) degrees, and the largest value is (39) degrees, with an average of (22.71) degrees, and a standard deviation of 5.47. The respondents were distributed into three categories using The range appeared to be the highest percentage within the medium need category, as shown in Table (3(

Table (3): Distribution of respondents according to categories of training needs in general.

Categories Training need	Number	%	average
Low (12-20)	14	14	17.59
Mediate (21- 29)	47	47	24.02
High (30- 39)	39	39	32.57
total	100	100%	Sd=5.47

It is clear from Table (3) that the highest percentage of 47% of the respondents fell within the medium need category with an average training need of 24.02 degrees, followed by the high need category with a percentage of 39% and an average training need of 32.57 degrees. Therefore, the level of respondents' need is described as medium, tending to rise. This means The largest percentage of respondents lack the experience and knowledge necessary to raise cows. The reason may be that the respondents do not care much about scientific information and expertise or that they follow traditional inherited experiences in raising cows. Therefore, they need extension activities to provide them with experiences and

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information that improve their current level of information.

Second objective: Descending order of research areas according to the percentage weight of the training need rate

The results of the descending order of the research fields came with the highest percentage weight for need being 26.02 and the lowest percentage weight being 13.03, as shown in Table (4.(

Table (4) Descending order of areas of training need according to the percentage weight of the mean.

N	Domains	Need average	Need General average	Weight percentile	rank
1	Cow nutrition	5.91	22.71	26.02	1
2	health care	5.49	22.71	24.17	2
3	Cow reproduction	4.28	22.71	18.84	3
4	Cow barns	4.07	22.71	17.92	4
5	Field care	2.96	22.71	13.03	5

It is clear from Table (4) that the field of cow nutrition came in first place when arranging the fields according to the percentage weight of the fields. The reason for this may be the respondents' weak knowledge of the components of the diet, including the quantities and timings of feeding cows and calves, as well as the difference in quantities according to the diets, including concentrated, rough, and green diets, and the addition of proteins, salts, and basic components. To feed cows, the respondents may not know these quantities and their difference between dairy cows, non-dairy cows, and calves, which is an indication of their need for theoretical and applied guidance information. In second place came the field of health care, and the reason for this may be that companionship protects them from therapeutic and preventive measures To protect cows from diseases and methods of applying these procedures. The field of cow reproduction came in third place, and the reason may be the weakness of the information and experience of the respondents in some paragraphs in the field of cow breeding, while the field of cow barns ranked fourth, and the reason for this may be that we raise cows. The respondents have experience on how to build barns. Cows and materials used in construction, as well as the importance of removing cow waste from barns. The field of field care operations came in last place, after an indicator of the extent to which the respondents possessed information and experience about field care operations.

Third objective: Identify the correlation between training needs and the independent variables studied

-1Age

The research results showed that the youngest age of the respondents was 23 years and the oldest age was 71 years, with an arithmetic mean of 41.09 and a standard deviation of 14.78. The researchers were classified into three categories using the range law, and it appeared that the highest percentage of respondents was in the young age category, as shown in Table (5.(

Table (5) Distribution of respondents according to age

Age Categories	Number	%	Average	r- value	t-Value	sig
Low (23- 38)	51	51	23.80	0.17*	1.708	0.05
Mediate (39- 54)	26	26	20.96			
High (55- 71)	23	23	22.26			
total	100	100%	Significant at level of 0.05			

To find the correlation between training needs and the variables of the years of life of the respondents, the Pearson correlation coefficient was used, which had a value of 0.17 and indicated a positive relationship between the two variables. To calculate the significance of the relationship, the t-test was used, which had a value of 1.708, and when compared with the tabular t-value of 1.658, it was found to be significant at the level of probability. 0.05, so the null hypothesis is rejected and the alternative hypothesis is accepted which states (there is a significant relationship between the two variables). The reason for this may be that the respondents in the young group are more knowledgeable about raising cows and therefore they are less in need than the respondents in the middle-aged and elderly categories who have more training needs. In the field of education Cows: This study agrees in terms of the direction of the relationship with what was found by (Mahmoud, 2013), where he found a weak positive relationship between guidance needs and the age variable.

-2Educational level:

The educational level variable was classifieAd into seven categories, and the highest percentage was in the middle school graduate category, as shown in Table (6.(

Table (6) Distribution of respondents according to the categories of educational level variable

Educational Categories	Number	%	Average	r- value	t-Value	sig
Don't read and writes	2	2	23.00	**-0.35	3.692-	0.01
Reads and writes	13	13	25.00			
Primary	16	16	25.00			
Medium	16	16	23.25			
Preparatory school	21	21	21.76			
institute	18	18	20.06			
college	14	14	21.71			
total	100	100%		Significant at level of 0.01		

To find the correlation between training needs and the educational level variable, the Spearman rank correlation coefficient was used, which had a value of 0.35 and indicated a negative relationship between the two variables. To verify the significance of the relationship, a t-test was used, which had a value of 3.692. When compared with the tabular t value of 2.358, it was found to be significant. The probability level is 0.01, so the null hypothesis is rejected and the alternative hypothesis is accepted which states (there is a significant relationship between the two variables). The reason for this may be that the respondents who are cow breeders with a high level of education are more knowledgeable about the requirements of raising cows and thus they have less training need than their peers with a higher educational

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level low, This result agrees, in terms of the significance of the correlation relationship, with what was found by (Mahmoud, 2013), where he found a positive, significant relationship between guidance needs and the educational level variable, and it does not agree in terms of the direction of the correlation relationship.

-3Stick to personal and inherited experiences

The variable of adherence to personal and inherited experiences was classified into three categories, and the highest percentage was in the category of adherence to personal and inherited experiences on a moderate level, as shown in Table (7.(

Table (7) Distribution of respondents according to the categories of the variable Stick to personal and inherited experiences

Categories	Number	%	Average	r- value	t- Cal	sig
rarely	29	29	19.88	0.39**-	-4.194	0.01
Sometimes	37	37	23.11			
always	34	34	24.41			
total	100	100%	Significant at level of 0.01			

To find the correlation between training needs and the variable of adherence to personal and inherited experiences, the Spearman rank correlation coefficient was used, which had a value of 0.39 - and indicates a negative relationship between the two variables. To confirm the significance of the relationship, a t-test was used, which had a value of 4.184 - and when compared with the tabular t value of 2.358, it was found that it was Significant at the probability level of 0.01, so the null hypothesis is rejected and the alternative hypothesis is accepted which states (there is a moral relationship between the two variables). The reason for this may be that the respondents who cling to personal or inherited experiences are more in need of information related to raising cows in all its fields and this is reflected in their training needs..

-4Number of years of raising cows:

The research results showed that the minimum number of years of raising cows was 4 years and the maximum number of years was 16 years, with an arithmetic mean of 8.45 and a standard deviation of 2.90. The researchers were classified into three categories using the law of range, and it appeared that the highest percentage of respondents was within the category of average years of raising cows, as shown in the table (8.(

Table (8) Distribution of respondents according to categories of the variable number of years of raising cows

Categories	Number	%	Average	r- value	t- Cal	sig
Low (4- 7)	30	30	23.10	-0.12	-1.192	N.S
Mediate (8- 11)	55	55	23.16			
High (12- more)	15	15	20.27			
total	100	100%	Non-Significant			

To find the correlation between training needs and the variable number of years of raising cows, the Pearson correlation coefficient was used, which had a value of -0.12, indicating a negative relationship

between the two variables. To confirm the significance of the correlation, the t-test was used, which had a value of 1.192, and when compared with the tabular t-value of 1.658, it was found to be non-significant. Therefore, the null hypothesis is accepted, and the reason for this may be that the information the respondents have is not related to the number of years of raising cows, Rather, it is based on the experiences possessed by the respondents, and it may be academic experiences or through other scientific sources or various social media. This result is consistent in terms of the non-significant relationship with what was found in their study (Bali and Rabie, 2008: 2985), where a non-significant relationship was found between needs. The guidance and the educational level variable do not agree in terms of the direction of the correlation relationship.

-5Number of the breeder's herd of cows:

The results of the research showed that the minimum number of cows the breeder has is 4 cows and the largest number of cows is 16 cows, with an arithmetic mean of 10.38 and a standard deviation of 4.05. The researchers were classified into three categories using the law of range, and it appeared that the highest percentage of the respondents was within the category of small herd of cows at the breeder, as shown in Table (9.(

Table (9) Distribution of respondents according to the categories of the variable of breeder's herd of cows.

Categories	Number	%	Average	r- value	t-Cal	sig
Low (4- 7)	44	44	25.29	-0.36**	-3.819	0.01
Mediate (8- 11)	29	29	23.00			
High (12- more)	27	27	20.79			
total	100	100%	Significant at level of 0.01			

To find the correlation between training needs and the variable of the breeder's herd of cows, the Pearson correlation coefficient was used, which had a value of 0.36 - indicating a negative relationship between the two variables. To confirm the significance of the relationship, a t-test was used, which had a value of 3.819 - and when compared with the tabular t value of 2.358, it was found that it was Significant at the probability level of 0.01, so the null hypothesis is rejected and the alternative hypothesis is accepted which states (there is a significant relationship between the two variables). The reason for this may be that the respondents with the largest number of cows realize the importance of the information and expertise needed to raise cows and thus they have less need than their comparison respondents with the largest number of cows. Fewer cows.

-6Review relevant sources of information.

The research results showed that the least value expressing sources of information is 5 and the largest value is 27, with an arithmetic mean of 14.03 and a standard deviation of 7.08. The respondents were classified into three categories using the law of range, and it appeared that the highest percentage of respondents fell into the category of few sources of information, as shown in Table (10(

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Table (10) Distribution of respondents according to the categories of the information sources variable

Categories	Number	%	Average	r- value	t- Cal	sig
Low (5- 11)	45	45	23-64	-0.32**	-3.337	0.01
Mediate (12- 18)	28	28	21.06			
High (19- 26)	27	27	19.85			
total	100	100%	Significant at level of 0.01			

To find the correlation between training needs and the relevant information sources variable, the Pearson correlation coefficient was used, which had a value of 0.32 - and indicates a negative relationship between the two variables. To confirm the significance of the relationship, a t-test was used, which had a value of 3.337 - and when compared with the tabular t value of 2.358, it was found to be significant. The probability level is 0.01, so the null hypothesis is rejected and the alternative hypothesis is accepted, which states (there is a significant relationship between the two variables). The reason for this may be that the respondents who are cow breeders who access multiple and diverse sources of information are more knowledgeable about the requirements for raising cows, and therefore they are less in need than those who They access fewer sources of information.

Conclusions:

-1 Based on the result of the first objective, it was found that the level of training needs for cow breeders was moderate and tended to rise in general. This infers the weakness of information on the experiences of breeders in the field of cow breeding. The result is an indicator of the importance of implementing extension programs and activities targeting cow breeders in the research area.

-2The results showed that the fields that ranked in the first three places were cow nutrition, health care, and cow reproduction. This infers the weakness of the information and experience of the respondents in the three fields, which increased their training needs.

-3The results showed the presence of negative moral correlations between training needs and each of the following (educational level, number of years of raising cows, adherence to personal and inherited experiences, number of cows herd, and sources of information, while a positive relationship was found with the age variable), which concludes from this the importance of the variables. Studied level of training needs.

Recommendations:

-1 The need for the agricultural extension agency in the research area to prepare training courses whose content covers information about raising cows in general, to provide cow breeders with everything related to raising cows in terms of experience, information, and techniques that play an effective role in increasing the productivity of the cow production unit.

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-2The need to pay attention to the areas that have shown a high level of training needs when implementing extension activities, and to focus through training courses and extension activities on the fields of cow nutrition and health care, which came in first and second place as the two most important fields in cow breeding, and to provide cow breeders with information and expertise to develop their knowledge and improve the level of their management of the two fields. Nutrition and health care.

-3It is necessary to take into account all the variables studied when implementing training courses because of their importance in identifying groups with a high level of need for guidance information.

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