

The knowledge needs of rural women in the field of sheep breeding in district-Hamrin sub / Al-Dur - Salah Al-Din Governorate

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Abstract

study aimed to This Identifying the knowledge needs of rural women in the field of sheep breeding in Hamrin district/Al-Dur - Salah Al-Din Governorate in general.and to identify the level of knowledge needs of rural , Dur district in each of the -Al / ictdistr-women in sheep breeding in Hamrin sub study areas nutritionThe .health care, reproduction, and flock management study population included all rural women working in sheep breeding in Hamrin Din Governorate, to-Dur district, Salah al-district, Al-sub talin (150) rural women. After excluding the pilot sample of (30) respondentsfrom the total study population, the study population became (120) respondents . From these, a simple proportional random sample of was selected, resulting in (105) respondentsm the study sample. Data werefro (70%) obtainedthrough personal interviews and a questionnaire. The first part of the questionnaire included a number of questions related to some variables concerning the respondents, while the second part include (49) The item was distributed across (4)domains: nutrition domain, reproduction domain, healthcare domain, herd management domain. It was presented to experts to achieve face validity and content validity, a wasand its reliability coefficient using Cronbach's alph (0.90)which is , statistically high. TheSPSS program was used to analyze the data. The study employed a set of statistical methods to analyze the data, the most important of ation which are (range, class length, percentage, arithmetic mean, Pearson correl coefficient, Spearman correlation coefficient, Cronbach's alpha coefficient, standard deviation, percentile weight, and the (t) test. The results showed that the overall level of knowledge needs of rural women in the field of sheep udy area is described as average, tending towards high. We breeding in the st conclude from this that they need knowledge to reduce this gap formed in their knowledge in the field of sheep breeding. The results showed that the level of

field of sheep breeding in the study area knowledge needs of rural women in the following areas: nutrition, reproduction, health care, flock management washigh. We conclude from this that the high level of knowledge needs may her the level of reflect a lack of knowledge among rural women, i.e., the high knowledge needs, the lower the level of actual knowledge and the greater the knowledge gap. The study recommended the necessity of preparing and implementing specialized extension programs based on an accurate knowledge needs of rural women to ensure reducing the identification of the knowledge gap between the actual knowledge and the required level. The study also recommended providing institutional and governmental support for women's sheep breeding projects through training and veterinary services.

Keywords. Rural women, Educational level, knowledge needs.

Introduction and Research Problem

The agricultural sector is a vital economic sector that represents a fundamental pillar for achieving economic and social development in many developing and developed countries because of its pivotal [1] role in achieving food security, providing job opportunities and supporting the stability of rural communities, as well as its contribution to reducing poverty and unemployment globally [2]. Agriculture is of particular importance in rural areas whose inhabitants depend directly on agricultural activities as a major source of income [3]. This makes the development of this sector a strategic necessity for achieving [4] sustainable rural development. Given this importance, agricultural development has emerged as a comprehensive process that not only increases agricultural production but also extends to improving the

efficiency of natural and human resource use, raising productivity, and achieving economic, social, and environmental sustainability, with a focus on improving the standard of living of rural populations and enhancing their ability to face economic and climatic challenges. Agricultural development is the main entry point for rural development, as it is closely linked to various economic and social activities in the countryside and contributes to reducing the gap [5] between rural and urban areas. Therefore, agricultural development is a basic necessity for any society, as it represents an important pillar for achieving food and economic stability. However, the importance of these justifications and the degree of their impact vary from one society to another, depending on the economic and social conditions it is going through, as well as according

to the nature of its needs and development priorities. [6] Agricultural development plays a pivotal role in improving the living and social standard of the population by raising the incomes of workers in the agricultural sector and enhancing job opportunities, in addition to its contribution to increasing national income, especially in Arab countries where agriculture constitutes a source of livelihood for a large segment of the population. [7] Livestock is one of the basic components of agricultural development, as it represents an important food and economic source. It contributes to providing animal protein, supporting local food security, and reducing dependence on imports. It also plays a role in providing income and creating job opportunities for rural families with limited resources, thus achieving a balance in agricultural production and enhancing the stability of the food system. It is also one of the main components of production in Iraq, as it represents an important sector in supporting the national economy. This wealth contributes to providing basic food sources such as red meat, poultry meat, and fish, in addition to other essential products that cannot be dispensed with in human nutrition and enhancing food security [8]. Sheep farming occupies a prominent place among livestock activities [9], especially in rural areas, due to the suitability of the environmental and pastoral

conditions for raising sheep and managing them compared to ease of management of other animals. This makes it a common economic activity for many families. Sheep farming represents an important economic and social activity that contributes to improving the income of rural families and enhancing their stability, particularly in livelihood rural Iraq. This activity is considered one of the widespread traditional agricultural activities. It is also [10] one of the main sources of food for humans, as it clearly contributes to meeting an important part of needs, whether through nutritional the production of meat or milk. Its products have gained wide acceptance among consumers due to their nutritional value and suitability to the prevailing food demand. However, studies indicate a noticeable decline in the number of sheep during the past years, and this is attributed to a number of factors, most notably the high costs of feed, the decrease in grazing areas, and the reliance on traditional breeding patterns based on nomadic grazing, as well as the weak application of modern scientific methods in management and breeding, which has negatively affected the efficiency and sustainability of production [11]. Sheep contribute an important role in supporting the Iraqi economy, as they provide basic food products such as meat and milk, in addition to being a source of raw materials that enter into many different industries such as leather

and wool, which enhances their economic and productive importance alike [12]. The decline in local red meat production leads to a decrease in per higher prices a capita share of animal protein below the levels recommended to meet daily needs, which negatively impacts public health and the efficiency of individuals in their work. The average per capita consumption of animal protein is indicators of the progress one of the of societies and their level of being. To -nutritional well compensate for this deficit, the government resorts to importing meat from abroad, which constitutes additional pressure on the general budget as a result of the need to provide foreign currencies to cover import costs.[13] Numerous studies have shown that rural women often lack the technical knowledge and modern scientific practices necessary for efficient herd management, leading to decreased health productivity and increased At the [14]. and economic losses global and local levels, studies were conducted to measure the knowledge and practical skills of those being guided in the field of animal production in general and sheep breeding in particular. The results of studies showed a clear these weakness in the knowledge base of a large number of rural women, especially regarding the proper care and breeding of farm animals. The studies also pointed to a number of problems, most notably the limited

es and the role of veterinary service lack of an effective role for agricultural extension in this field. Through a review of previous [15] studies, the researcher found studies that focused on sheep breeding. Some of these studies focused on measuring the level of knowledge rning needs in sheep and lea -breeding, such as the study by Al Abbasi and Hafez (2010) which , indicated that the knowledge needs of rural women in sheep breeding in Kuwait district/Nineveh -Al Governorate were moderate. -Another study by AlKhazraji (2012) indicated that the knowledge and training needs of agricultural employees in sheep nutrition during partum -breeding and pre-the pre stages in Najaf Governorate were -moderate. A further study by Al Sudani and Naji also addressed this topic(2014) that which indicated the knowledge of sheep breeders in the field of veterinary care in Karbala Governorate was average and the studies recommended the need to conduct other studies in multiple areas of the governorates of .the country Sheep farming is d social gaining economic an importance in the Hamrin district of Din -district in Salah al-Dur sub-Al Governorate, due to the nature of the rural area and the dependence of a large percentage of families on agricultural and animal activities as a main source of income that ntributes to improving the co standard of living of rural families and supporting local food security.

Sheep farming is considered an important productive activity compared to other agricultural activities, and it provides job opportunities for family members especially women, through participation in many areas of sheep farming, including feeding, health care, reproduction, and flock management. Despite the increasing role played by rural women in sheep farming, many of them still rely on once and inherited traditional experience and practices, which negatively affects the level of production and economic efficiency. From the above, the problem of the study is highlighted by the absence of an accurate scientific diagnosis of the knowledge needs of rural women in

field of sheep breeding in the the f Dur district in -Hamrin district of Al Din Governorate, -Salah Al especially in the basic areas related to sheep breeding. This results in difficulty in preparing effective extension programs that respond to and contribute to their actual needs a raising their productive efficiency and improving their standard of living. Hence, the need arises to conduct this study to reveal those knowledge needs and identify the shortcomings in knowledge and application in order to supporting extension and research direct efforts towards achieving sustainable agricultural and rural development.

Hence the questions raised in the Research:

- What knowledge needs of rural women in the field of sheep breeding in Hamrin district / Al Dur-Salah Al-Din Governorate in general?
- What knowledge needs of rural women in the field of sheep

-breeding in Hamrin district / Al Dur- Salah Al-Din Governorate in each of the following areas of study (nutrition, healthcare, reproduction, herd management) ?

Research objective:

1. Identifying the knowledge needs of rural women in the field of sheep breeding in Hamrin district/Al-Salah Al-Din Governorate in general.
2. Identifying the knowledge needs of rural women in the field of sheep

-district / Al-breeding in Hamrin sub DurSalah Al-Din Governorate in each of the following areas of study (nutrition, healthcare, reproduction, flock management).

Materials and methods

Research methodology

Approved analytical -The descriptive approach is the most suitable for the nature of the study's objectives, as it seeks to identify the knowledge needs of rural women in sheep breeding and assess their level of understanding across a range of study areas covered by the instrument. Furthermore, it examines the relationship between these needs and certain personal,

economic, and social variables. This approach is among the most widely used in agricultural extension research due to its ability to describe they occur in the field phenomena as and analyze them scientifically based on actual data without interfering with or manipulating the Or controlling it, which variables enhances the objectivity and accuracy of the results .[16]

Research area:

The Hamrin district is located in the northeastern part of Iraq, extending within the administrative boundaries of Diyala Governorate (specifically Adhaim District) and southeast -Al Din Governorate. It is -of Salah al cation within distinguished by its lo Adhaim River basin and is -the Al geographically bordered to the north by Kirkuk Governorate(Daquq District) , -to the south by the Al Khalis and Baquba districts in Diyala, to the east by the Hamrin Dur -Hills, and to the west by the Al Din -krit districts in Salah aland Ti Governorate. The total area of the Hamrin district is approximately dunams equivalent 286,754 to approximately (286.7km²) , with arable land constituting about 84% of the total area, reflecting the agricultural nature of the region. The Hamrin district consists of a number sized -of small and medium agricultural villages, estimated at between 40 and 70. These villages

red according to the nature are scatte of the land and water resources. It is considered a rural area with an pastoral character, as its -agricultural inhabitants rely heavily on agricultural activities and animal husbandry, particularly sheep ts a breeding, which represen primary source of income and food for rural families. This region holds particular importance in The field of animal production is characterized by the availability of suitable natural resources such as agricultural areas tribute and natural pastures that con to supporting and sustaining sheep farming. It is also characterized by the prevalence of the rural family model in which women actively participate in various productive activities related to sheep farming, especially in the areas of nutrition, production, health care, and herd re management, in addition to benefiting from sheep products. This reflects the vital role that rural

women play in supporting the family economy and achieving local food

security.

population and sample:

The study population included all rural women working in sheep -farming in the Hamrin district of Al Din -Dur district, Salah Al Governorate, numbering 150 rural women. After excluding the exploratory sample of (30), respondents from the total study

population, the study population became (120), respondents, from whom a simple proportional random sample was chosen at a rate of (70%) and thus the number of respondents subject to the study procedures was (150) ndentsrespo .

Results and Discussion:

The dependent variable:

Cognitive needs were measured through (49 items distributed across the study areas nutrition, reproduction, healthcare, and herd management. Three alternatives

placed in front of each item a were large need, a medium need, a small need, and numerical values 1, 2, 3 .were given to them

Statistical methods:

After the data was collected, verified and classified, it was entered into the mputer and statistically processed co which is one , SPSS software using of the most widely used statistical programs for analyzing

data in social and agricultural A range of appropriate .[studies [17 statistical methods were used to the study objectives and achieve analyze the data, as follows:

1- Range:

Use to distribute the independent variables into statistical categories, [according to the following law: [18

Lowest –Range = Highest value value

Number of Class length = Range ÷
classes rounding the result to the

nearest whole number

2- Percentage:

It was used to show the proportion
of each category of respondents

within the independent variables
included in the study

3- Arithmetic mean:

Use the following equation to
describe the knowledge needs of
rural women in the field of sheep
[16] breeding.

Where:

arithmetic mean $\bar{X} =$

Sum of numerical values = $\sum Xi$
of respondents Number n

$$\bar{X} = \frac{\sum Xi}{n}$$

4- Pearson correlation coefficient:

It was used to find the correlation
between cognitive needs and the
independent variables with
quantitative values according to the
following equation: [19]

Where:

Correlation R

Numerical values of = coefficient X
the independent variable
Numerical values of the = Y
dependent variable
of respondents Number n

$$R = \frac{\sum x_i y_i - n \bar{x} \bar{y}}{\sqrt{(\sum x_i^2 - n \bar{x}^2)(\sum y_i^2 - n \bar{y}^2)}}$$

5- Spearman's correlation coefficient:

It was used to find a correlation
between cognitive needs and
descriptive independent variables.
[19]

ordinal correlation coefficient = r
the sum of the squared = d
.the percentages differences between
number of participants = n

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

Because:

6- Cronbach's alpha coefficient:

The reliability coefficient of the scale in the study was used according to the following law.[20]

$$\alpha = \frac{n}{n-1} \left[1 - \frac{\sum s_i^2}{s_x^2} \right]$$

Because:

α .Alpha coefficient =

.number of paragraphs = n

.Variance of a single item = s_i^2

Total variance of the scale = s_x^2 items.

7- Standard Deviation:

It was used to measure the extent of dispersion of values from their arithmetic mean in the study variables according to the following equation.[17]

$$S = \sqrt{\frac{\sum xi^2 - (\sum xi)^2}{n-1}}$$

Where:

Deviation Standard S
Arithmetic mean = $\bar{X}$
Individual values = X_i
of respondents Number n

8- Percentile weight:

The percentage weight was used to rank the cognitive needs areas of the respondents according to the following equation:[21]

Percentage weight =
 $\frac{\text{متوسط درجة الفقرة}}{\text{الدرجة القصوى للفقرة}} \times 100$

9- (T) Test:

It was used to verify the significance of the correlation between the studied independent variables and cognitive needs, by comparing the with the T) value) calculated tabulated value, and its equation is: .[16]

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

where:

Calculated value = t
Correlation r
size Sample coefficient n

First goal: Identifying the knowledge needs of rural women in the field of district and its relationship -Dur sub-sheep breeding in Hamrin district/Al to some variables in general.

It was found that the highest value expressing the level of knowledge

needs of rural women in the field of sheep breeding was 148 and the

lowest value was 119 with an arithmetic mean of 135.49 and a standard deviation of 6.121 The

ts were distributed into responden three categories using the range as shown in Table (1)

Table (1) shows the distribution of the respondents according to their cognitive needs categories.

Categories	number	Percentage	cognitive Average needs
128-Low 119	18	17.14	123.6
138-Average 129	44	41.90	134.2
148-High 139	43	40.96	141.8
the total	105	%100	Sd = 6.21

Table (1) shows that the highest value for the knowledge needs index was within the high category, reaching 8.141 The majority of the women surveyed had moderate to high knowledge needs, indicating a need for knowledge in sheep farming. This may be attributed to rect participation in sheep their di farming, acquiring some knowledge through practical experience and daily practice. However, recent developments in sheep farming, particularly in health care, nutrition, reproduction, and flock management, have created a ge gap between traditional knowled practices and modern scientific standards. Knowledge is often

traditional and not based on modern scientific principles, creating a continuous need for additional information. This level of knowledge needs may also stem limited agricultural and from the veterinary extension services available to rural women in the region and their limited participation in sheep farming training courses and awareness programs. Therefore, the women surveyed still require ledge of further support . Their know modern scientific recommendations through guidance programs that contribute to developing their skills and improving the productivity of .sheep flocks

The second objective: To identify the knowledge needs of rural women in the field of sheep -breeding in Hamrin district / Al

district in each of the -Dur sub following areas of study the field of nutrition, the field of health care, the field of reproduction, the field of herd management

1- Nutrition field:

It was found that the highest value expressing the field of nutrition was and the lowest value was 38, 49 with an arithmetic mean of 43.68

and a standard deviation of 2.44 The respondents were distributed into categories using the range as three shown in Table (2)

Table (2) shows the distribution of the respondents according to the categories of knowledge needs in the field of nutrition.

Categories	number	Percentage	Average cognitive needs
41-38 Low	21	20	39.8
45-Average 42	56	53.33	43.57
49-High 46	28	26.67	47.2
the total	105	%100	

Table (2) shows that the highest value for the knowledge needs index was within the high category, reaching 47.2 More than half of the respondents had moderate to high knowledge needs. This is because the respondents need knowledge in This is .the field of sheep nutrition attributed to the fact that nutrition is a fundamental element in determining the level of production and is directly related to the animal's health and productivity. It is one of the daily operations carried out by m the respondents, which helps the gain practical experience through direct practice. The women's reliance on locally available feed and natural pastures contributes to

the formation of some knowledge related to sheep nutrition. However, this knowledge is often based on ence and a lack of traditional experi familiarity with balanced nutritional needs, especially during pregnancy. In addition, the high prices and scarcity of feed contribute to this. Therefore, it is clear that there is a need to strengthen agricultural programs that extension and training focus on improving women's knowledge regarding the preparation of balanced feed rations, the use of nutritional supplements, and modern sheep feeding methods, which will contribute to improving flock productivity and increasing rnseconomic retu For them.

2- Reproductive field:

It was found that the highest value expressing the reproductive range was 41 and the lowest value was 27 with an arithmetic mean of 34.77

and a standard deviation of 3.17 The e distributed into respondents wer three categories using the range as shown in Table (3)

Table (3) shows the distribution of the respondents according to the categories of cognitive needs in the field of reproduction.

Categories	number	Percentage	Average needs	cognitive
31-Low 27	20	19.05	29.4	
36-Average 32	44	41.91	34.1	
41-High 37	41	39.4	38.9	
the total	105	%100		

Table 3 shows that the highest value of the rate of knowledge needs was within the high category, as it amounted to 38.9 and that the majority of the respondents were of average knowledge needs tending towards high. The reason may be he reproductive due to the fact that t process often depends on the accumulated experience of the respondents, but the lack of knowledge of scientific aspects such as managing pregnancy, timing of

insemination and early detection of reproductive problems, which are cannot be relied on matters that experience alone, and the weakness of veterinary services and the lack of guidance lead to the continuation of reliance on traditional methods, which increases the awareness of the need for modern information, a and thus the existence of knowledge gap in the precise scientific aspects of the reproductive process.

3- health care:

It was found that the highest value expressing the field of health care was 35 and the lowest value was 21 withan arithmetic mean of 25.95

and a standard deviation of 3.22 The respondents were distributed into three categories using the range as shown in Table (4)

Table (4) shows the distribution of the respondents according to the f knowledge needs in the field of healthcategories o care.

Categories	number	Percentage	Average needs	cognitive
25-Low 21	56	53.33	23.1	
30-Average 26	34	32.39	28	
35-High 31	15	14.28	32.8	
the total	105	%100		

Table 4 shows that the highest value of the rate of cognitive needs was within the high category, as it amounted to 32.8, and that more than half of the respondents were of low cognitive needs tending towards the average, and this may be due to el of health knowledge the low lev among the respondents, which is a dangerous indicator given the importance of health care, especially with the spread of epidemic diseases and the weakness of immunization

programs. Also, the limited awareness of preventive measures such as vaccination and disinfection programs, the weakness of veterinary services, or the lack of awareness of diseases and methods of prevention increases the respondents' reliance on inaccurate information, and therefore there is gthen health an urgent need to stren and preventive guidance in sheep breeding.

4- Herd management:

It was found that the highest value expressing the herd management domain was 43 and the lowest value was 23, with an arithmetic mean of standard deviation of and a 31.49 The respondents were 3.82 distributed into three categories using the range as shown in Table (5)

Table(5) shows the distribution of the respondents according to the categories of knowledge needs in the field of herd management.

Categories	number	Percentage	Average needs	cognitive
29-Low 23	36	34.28	26.4	
36-Average 30	50	47.71	33	
47-High 37	19	18.09	39.6	
total the	105	%100		

Table 5 shows that the highest value of the cognitive needs rate was within the high category, as it amounted to 39.6 and that the majority of the respondents are of average cognitive needs tending towards low. This may be due to the fact that managing the herd is one of the daily tasks that the respondents practice continuously, such as organizing grazing and feeding operations and cleaning the barns, which contributes to their gaining

Conclusions:

- ❖ The results showed that the overall level of knowledge needs of rural women in the field of sheep breeding in the study area is described as average, tending towards low. We conclude from this that they need knowledge to reduce this gap formed in their knowledge in the field of sheep breeding.
- ❖ The results showed that the level of knowledge needs of rural women in the field of sheep breeding in the study

practical experience in this field. However, this experience does not include modern scientific aspects such as production planning and record management. Also, the absence of specialized guidance programs leads to the continuation of the gap between traditional practices and modern scientific methods, which leads to the existence of an administrative cognitive need.

following areas are for the nutrition, reproduction, health care, herd management high. We conclude from this that the high level of knowledge needs may reflect a lack of knowledge among rural women, i.e., the higher the level of knowledge needs, the lower the level of actual knowledge and the greater the knowledge gap.

- ❖ The results showed that rural women rely heavily on informal sources such as

family and sheep breeders in the region to gain experience in sheep breeding, especially

not since these are productively efficient

Recommendations:

- ❖ The need to prepare and implement specialized guidance programs based on an accurate identification of the knowledge needs of rural women, in order to reduce the gap between the the knowledge reality and required level.
- ❖ Providing institutional and governmental support for women's sheep farming projects through training and veterinary services.
- ❖ The focus is on the areas of nutrition, reproduction, and herd management within the n their extension programs, give importance in improving production and reducing losses.
- ❖ Organizing practical and field training courses that focus on the applied aspects of sheep farming, in order to contribute to transforming theoretical nd knowledge into practical a applicable skills

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