Descriptive Study of the Training Needs for Men and Women Farmers in Semi Desert Areas
A Case Study in East of Jordan

Ahmad N. Al-Shadaideh[✉*]

ABSTRACT

This study aimed at specifying the training needs for farmers (men and women) in semi-desert areas in east of Jordan.

The study has been conducted on a sample of (100) men and women. The data was collected by using a questionnaire prepared by the researcher. The questionnaire was composed of two parts: one for personal and job information and the second included a measure to test the level of information of the men and women farmers in plant production, animal production, bee keeping and food processing.

The questionnaires were shown to a number of experts and arbitrators to assure usefulness and efficiency, as well as the coefficient of validity and reliability for some variables in the study. Then the information was collected (April up to June, 2005. The data was analyzed by using the (S.P.S.S). The following points are the most important findings of the study:

1-The animal production came first, then food processing, bee keeping and finally, the plant production for men. While for women the plant production ranked first, then bee keeping, animal production and food processing.

2- With respect to training needs in plant production field, for women the priority of training needs was given to fruit trees followed by crops then vegetables. While for men the vegetables ranked first followed by Crops and the fruit trees were in the last place.

3- Regarding the priorities of training in animal production, the poultry came first followed by sheep and goats then the cattle for men, while for women the sheep and goats came first followed by poultry then the cattle.

Important recommendations:

1- Training center in extension administration should develop practical and scientific plan building on the results of this study.

2- More regular field surveys aiming at specifying the needs of men and women.

3-The extension administration should provide the extension workers especially in the fields of animal, plant production and food processing.

KEYWORDS: Agricultural extension, Training needs, Knowledge level, Women farmers, Men farmers, Jordan.

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*✉ Faculty of Agricultural Technology, Al-Balqa'a Applied University, Al-salt, Jordan; Email: shadydeh2004@maktoob.com. Received on 11/12/2005 and Accepted for Publication on 6/5/2007.

1. INTRODUCTION

For more than 100 years, Extension has been an organization to help people solving their problems. As we enter the 21st Century, The people are facing critical issues that are requiring better emergency preparedness skills and self-reliance.

The need for Extension to become a stakeholder in homeland security is evident. Extension's accurate knowledge and skills can assist communities in reducing loss in the event of a natural or manmade disaster. Knowing which hazards will be the most likely threat to your locality will help in determining what information you provide. **(**Carolyn Washburn, 2006).

The planned programs for socio- economic development represent the new trend that is adopted by most of the countries to modernize their societies; however, most of the planners for the required development have paid more attention toward the economic aspects rather than development of human resources. This might highlight the importance of extension and training for farmers, as these means play a major role to develop the farmers' knowledge.(M. Kalim Qamar , Sonny S. Lmeta , 2005).

Despite all efforts in this field from all development agencies, still the extension and training programs suffer many deficiencies that seem to be necessary to achieve the planned goals. These goals will reflect their results on farmers' skill and their performance in the related fields. One of the critical factors is the absence of definite specification for the training needs for target groups. This considers from the important basics that should be taken into consideration in planning of extension programmes. (Al-Farhan, 1969) ,(Al- Shadiadeh, 1999).

Building on these difficulties and constraints the researcher conducted this study to determine the training needs for the farmers in the desert in order to plan the extension programmes that might meet their needs.

Importance of the Study

The training needs assessment for men and women farmers is the important base for extension process and its activities, so specifying the training needs for men and women farmers in different agricultural fields such as plant production, animal production, food processing and bee keeping with all its different aspects is considered an important step in planning the programmes aiming at building farmers capacity. (Ingrid Nya Ngathou,James O. Bukenya, Duncan M. Chembezi,2006).

All programmes that do not take these needs into consideration tended to be wasting for valuable resources.(Kaplan, M. 2002).However, the importance of this study refers to the following considerations:

1- One of the pilot studies in Jordan that limit, the extension needs for farmers in semi desert areas.

2-The results of this study can be base for planning the future programmes in this area, to enhance agricultural extension programs and it can be further developed in the future.

Objectives of the Study

The goal of the study is to determine the training needs for men, women farmers in east deserts of Jordan. Ultimate goals set have been as follow:

1- Determining the general needs for women and men farmers for agricultural extension and training.

2- Determining needs for the extension and training in the following sectors: (plant production, animal production, food processing and bee keeping) and determining needs for the extension and training of the components of every sector.

Study Limits

The study conducted within three limits first: the geographical limits, second: the size of sample and third: fields of agricultural extension and training. Geographical limits, Sabha and Subhieh Region in the east desert of Jordan, the size of random sample that studied (100) men and women farmers, fields of training and extension that studied the plant production, animal production, food processing and bee keeping.

Study Methodology

The study region: the region of study is Sabha and Subhieh Region in Al-Mafraq governorate in east of Jordan.

Method of needs assessments: the researcher depended on farmers themselves to identify their needs.(Kratem, 1962).

The study's society and sample: the study society includes 1500 men and women farmers, random sample had been selected from the total number of Society was (100) men and women farmers. The sample had been divided into two groups: men and women from the different families.

Method of data collection: the researcher relies mainly on collecting field data from the men and women farmers. For this purpose the researcher has designed an interview questionnaire which includes a number of questions:

Firstly: personal and economical data such as age, education level, the main career, the attitude toward extension work ….etc.

Secondly: identify the training needs in four main fields:

Plant production: includes the vegetables, crops and fruit trees.

Animal production: includes cattle, sheep and poultry.

Food processing: includes processing of cheese, tomato, pickling and jam.

Bee keeping: includes some knowledge and skills related to bee keeping.

Data collection had started using the personal interview during the period from middle of April up to the middle of June 2005.

Data analysis method: In the final version of the test, the number of tested paragraphs became (49) paragraph. One degree was assigned for the true answer, as well as zero for false answer. After collecting the weight of all tested paragraphs, the final degree will demonstrate the extensional knowledge level for the research, which is known as a current situation. While, the desired case that the research gets 100 digital degrees in the test when answering correctly. As a result, the difference between the two levels (the current and the desired levels) demonstrates the lack in extensional knowledge, which reflects the need for training, which means the equation:

Training needs = the desired extensional knowledge level - the current extensional knowledge level. For need of evaluation, the degree Averages of need in the research were calculated in all the training levels. After data collection, the data was purified and classified in organized tables according to the study objectives. For assessment of needs, the average needs for training was calculated by finding out the means for degrees. The data was analyzed by using the Statistical Package for Social Science (S.P.S.S). Following statistical criteria have been used:

- **Frequencies**: used in description of numbers of research samples.

-**Percentages**: used in description of researched

sample according to their distribution in the defined categories and levels for every variable.

-**Averages**: used to describe the numerical values for different variables.

2. RESULTS AND DISCUSSION

Personal and professional Characteristics for Men and Women Farmers

Age: The study shows that half of the men and women farmers are aged between 35 - 50 years (Table 1) and the study shows their need for training and extension to develop their skills and their sense of responsibility at this age is very high for their liking to give more attention for their future through developing their work.

Table (1): Distribution of men and women farmers according to age.

Sex / Age Categories	men		women	
	Number	Percent	Number	Percent
Less than 35	6	12	8	16
35 – 50	26	52	26	52
More than 50	18	36	16	32
Total	50	100	50	100

Table(2): Distribution of men and women farmers according to education level.

Sex / Education	Male		Female	
	Number	Percent	Number	Percent
Illiterate	10	20	14	28
Elementary education	24	48	16	32
Secondary education	16	32	18	36
High education	---	----	2	4
Total	50	100	50	100

Education level: The study shows that most men are with elementary education for men, while most women are with elementary or secondary education (Table 2). This requires the extension agents not to rely much on written materials, so audio- visual aids materials in delivering the extension messages for the farmers should be used .

Time available for farming: The study shows that more than half of the men and women farmers are full time farmers (Table 3). This means that farming is the main source of income for the majority of the farmers in these regions, so more extension and training programs should be planned to improve their skills in order to raise their income level.

Table (3): Distribution of men and women farmers according to time available for farming.

Sex / Categories	men		women	
	Number	Percent	Number	Percent
Full time farming	40	80	34	68
Part time farming	10	20	16	32
Total	50	100	50	100

Table (4): Distribution of men and women farmers according to reasons for not being members in farmers' organizations.

Sex / Reasons	men		women	
	Number	Percent	Number	Percent
Lack of knowledge	18	36	12	24
Being small farmers	2	4	---	---
No need for them	22	44	22	44
Low participation in its activities	6	12	10	20
Low interactions between farmers	2	4	6	12
Total	50	100	50	100

* The highest degree is (3).

The membership in local organizations: The study shows low membership in local farmers' organizations. There are many detailed reasons in (Table 4). Continuous

efforts should be given to understand this reasons in order to overcome the individuality and to organize farmers groups and organizations that might serve the goal of agricultural extension work.

Sources of agricultural information: The study shows that the men and women farmers' personal experience is the first source that they depend on to face any situation or difficulty. Other sources vary as illustrated in (Table 5). This might indicate the weakness of agricultural extension in its current situation, so dependence of farmers on their experience to obtain solutions for their problems might constrain the effective ways in farming.

Availability of audio-visual media: The study shows that most farmers own televisions and radios (Table 6). This means there is possibility for using the two means in agricultural extension programs to deal with problems facing the farmers. This might compensate some of the deficiencies in the number of extension workers and cover all the activities with little number of specialists.

Table (5): Distribution of men and women farmers according to sources of agricultural information.

Sex / Information Sources	men		women	
	Mean*	Rank	Mean*	Rank
Extension workers in the region	2,13	3	2,08	2
Researcher from NCARTT	1,20	12	1	12
Private agr. companies	1,24		1,08	11
N.G.O's	1,36	10	1,18	10
Veterinary from M.O.A.	2,12	4	2	3
Veterinary from private sector	1,72	7	1,4	7
Agr. program in Jordan's broad cast	1,56	9	1,28	9
Agr. program in Jordan's television	1,80	6	1,62	6
Agricultural extension leaflets	1,84	5	1,68	5
Local newspapers	1,64	8	1,36	8
Other farmers	2,15	2	2,92	4
Personal experiences	2,8	1	2,64	1

* The highest degree is (3).

Table (6): Distribution of men and women farmers according to availability of audio-visual media.

Sex / Media	men			women		
	Number	Percent	Rank	Number	Percent	Rank
Radio	44	88	1	46	92	2
Television	44	88	1	50	100	1
Satellite	16	32	3	8	16	3
Video	2	4	4	4	8	4
Phone	42	84	2	46	92	2

* The highest degree is (3).

Table (7): Distribution of men and women farmers according to their exposure to Agricultural Technical Problems.

Sex / Technical Problems	men			women		
	Number	Percent	Rank	Number	Percent	Rank
Lack of the knowledge of fertilizing	2	4	5	---	---	---
Poor Soil	7	12	3	4	8	4
Infections and pests	28	64	1	20	40	1
Low level of experience in farming	9	20	2	---	---	---
Diseases of sheep	3	8	4	14	28	2
Lack of knowledge to proper keeping system for sheep	1	4	6	12	24	3
Total	50	100		50	100	

Table (8): Distribution of men and women farmers according to their favorite place for meeting the Extension workers.

Sex / Favorite place	men			women		
	Number	Percent	Rank	Number	Percent	Rank
The farm	50	100	1	---	---	---
Extension office	1	4	5	---	---	---
Farmer home	18	36	3	16	32	2
Group meeting on farm	40	80	2	18	36	1
Group meeting in extension office	14	28	4	4	8	3

Table (9): Distribution of men and women farmers according to the nature of activity for farmers.

Sex / Activities	men			women		
	Number	Percent	Rank	Number	Percent	Rank
Vegetables	40	80	1	40	80	2
Fruits	28	56	3	32	64	3
Crop	24	48	4	26	52	4
Cattle	16	32	5	18	36	5
Sheep	30	60	2	26	52	4
Poultry	12	24	6	16	32	6
Bee keeping	4	8	7	8	16	7
Food processing	---	---	---	42	84	1

Agricultural problems: The study shows that plant infections and pests were the major threat for farmers, even the problems vary from one farmer to another as illustrated in (Table 7). This indicates the need to take this into consideration in planning the extension programs and activities in order to deal with these problems according to priorities.

Place of meeting with extension workers: Most men

prefer meeting the extension workers on their farms as first choice, then in their homes, then in the extension offices. While most of the women prefer meeting the extension workers in Group meeting on farm (Table 8).This requires the extension workers to take farmers' opinions into consideration. This might be helpful for many farmers are to survive in semi-desert areas and closed societies, so interviewing of the farmers in their places will encourage their participation and engagement in the extension work.

Nature of activity for farmers: The result of the Study shows that the dominant farming activity for most of the men and women farmers is food processing activity. It is the first activity followed by vegetables, fruit then crops for women. While is the vegetables activity is the first activity followed by sheep, then fruit, then crops for men (Table 9). This indicates the importance for extension programs planning that is related to these activities as well as increase in the number of subject matter specialists in these fields.

The training needs for men and women farmers: This part of the study discusses the needs of training in the main fields, then it discusses in the components of each of these fields:

Main training fields: The study shows high need for training in region for plant production activities of compared to animal production and bee keeping activities for men. While the study shows high need for training for animal production activities compared to plant production and bee keeping activities for men (Table 10). This might explain the plant production activities which are large in size requires much work because the farmers cannot follow all the farm activities nor they can face all the difficulties that might appear. The farmers in the fields of animal production and bee keeping are engaged in these activities the whole year.

The training needs in fields (plant production, animal production, bee keeping and food processing).

Plant production field includes vegetables, field crops and fruit trees. While animal production includes poultry, sheep and cattle. Bee keeping includes establishing hives, harvesting honey, feeding, inspection of hives, diseases and pests and other by-products.

Food processing activities includes only the making of cheese, tomato concentration, pickling and making jam. These different activities will be discussed as follows:

The training needs in plant production field (vegetables, field crops and fruit trees): The study shows that the farmers' needs for training on vegetables are higher than their needs on field crops and fruit trees for men. While the study shows that the farmers' needs for training on fruit trees are higher than their needs on field crops and vegetables for women (Table 10). This might indicate that most of the work in vegetables and fruit field is done with the family help. Unlike the field crops where all the family members are engaged in this activity. For this reason the training needs for the individual farmers are higher than that for the family as a whole. This also explains the other variations in the needs for training regarding the different activities.

The training needs in animal production sectors (poultry, cattle and sheep):

The study results show that the training needs in poultry keeping are higher than those of sheep and cattle for men. While the study results show that the training needs in sheep and goats are higher than those of poultry and cattle for women (Table 10). This might indicate the low level the farmers' knowledge is in poultry sector because it is a new sector being compared to the other traditional sectors (sheep and cattle). This creates

knowledge gap in this field. Same explanations can be used to illustrate the other variations.

Training needs in bee keeping field (establishing the hives, hives inspection, .etc)**:** The study shows that the needs of training in the diseases and pests of bees are higher than that for other bee keeping activities for men and women. This is partially due to low level of farmer's knowledge in bee keeping. (Table 10).

Training needs in food processing for women farmers: The study shows that the women farmers need more training in cheese processing activities more than other activities such as pickling, Jam, etc. the reason behind this is the wide spread of cheese making all over the country and the competition in the market that promote the farmers to find the optimal way of cheese processing while other activities are limited. Normally women process such products for home consumption not for marketing. (Table 10).

The Training needs in vegetables and field crops: The study shows the highest need for training in pest control and irrigation methods for men and women (Table 10) this due mainly to the emergent diseases and enormous varieties of medicines that confuse the farmers in addition to the new pattern of planting - the intensive one - that is different from the traditional farming system. This can also explain the other variations in the study.

The training needs in fruit fields: The study results show that the training needs in the fertilizing were higher than those in other activities in fruit fields for men. While the study results show that the training needs in the irrigation were higher than those in other activities in fruit fields for women (Table 10). The reason might be the low interest of men and women farmers in fertilizing and irrigating their fields either because of the droughts or the high prices for fertilizers .This reflects low level of knowledge in this topic.

The Training needs in poultry: the needs for training in vaccination were the highest among other activities related to cattle raising as it can be seen in (table 10). The reason might be due to modern introduced notion of vaccination that is related to intensive keeping systems which is not applied in the region of the study compared to the other activities of poultry raising. This explains the other variations for prioritizing the training needs in the different fields of poultry raising for men and women farmers in the region of the study.

The Training needs in cattle: The study indicates the high needs of men to training in udder inspection before milking, while the study indicates the high needs of women to training in precautions for infection before milking (Table 10). The reason might be due to the nature of this process that requires technical skills to prepare the material used in inspection which is not available for traditional farmers. This explains the other variations for prioritizing the training needs in the different fields of Cattle raising for men and women farmers in the region of the study.

The training needs in sheep sector: The study shows the training needs for the men and women farmers in feeding their flocks and controlling the diseases are higher than their needs in other areas as illustrated in (Table 10). This might be referred to the dominant traditional pattern of keeping that depend on continuous movement of flocks looking for range land and the limited time available for owners to look after the new knowledge. The same explanation can be given to other variations in needs for training on different topics related to sheep rising.

3. CONCLUSIONS AND RECOMMENDATIONS

Conclusions : The following are the main conclusions of the study:

1- The results show that the training needs for male and female farmers are high in general. This indicates the clear need for extension and training, and this requires from agricultural extension planning the training programs aiming at their capacities and enriches their information.

2- During analyzing the training needs for farmers in different training fields, was clear that these needs are differed from field to another, these differences might refer to the technical development in many agricultural fields, which makes the farmers very far from following up every new invention or measure.

3- When ranking the training needs for each field from the study fields according to the training needs, the farmers were vary in their personal experience, this might refer to lack of knowledge and skills, While the reason behind the selection of priorities might indicate to the large number of farmers working in these activities compared to the other activities in the same field.

4- The study shows variations in needs according to sex due to the training opportunities which are un-equivalent between males and females.

5- Most of male and female farmers in the study regions are full time workers in the farm; this indicates the importance of agricultural sector as one of the main works for most of farmers.

6- The Study pointed out that most of the farmers are in need for the agricultural extension activities , in addition to the needs within each field from study fields, this indicates that training and extension should deal with all mentioned needs according to the farmers' priorities that have been identified in this study.

7- Most of farmers are not convinced of the farmer's organizations, this might conclude the importance of special efforts to activate the group work, and explaining importance of such organizations in the benefit of farmers.

8- Most of farmers have Televisions and radios and this means the increasing importance for extension programs through those means.

9- Most of farmers prefer meeting the extension workers in one of the farms either as individuals or in groups. So, field visits for those farmers should be the base for extension activities.

Recommendations: **On light of the study's results and conclusions, there are following recommendations:**

1- The training center in Extension Administration in Ministry of Agriculture should develop a scientific and practical plan, depending on the results of this study.

2- More regular field surveys aiming at specifying the needs of farmers for different training programs to be satisfied from through planning the training and extension programs.

3- This study should be repeated on intervals to evaluate the change in training needs of farmers and classify them in groups according to needs.

4- Agricultural extension administration should be providing the extension workers for the fieldwork in different fields for the study.

5- More attention should be paid to the farmers in order to participate in farmers' organizations and some efforts should be directed toward these organizations, to activate performance and maximize the benefits for members in order to set a good example for other farmers.

Table (10): Training needs of men and women farmers in sheep and goats sector.

Fields \ Sex	men		women	
	Mean*	**Rank**	**Mean***	**Rank**
1- Plant production	1.84	1	1.46	2
a- Vegetables	1.68	1	1.42	3
Preparing land for planting	1.80	5	1.36	6
Timing of Planting	1.44	7	1.08	8
Method of planting	1.68	4	1.24	7
Fertilizing	1.84	6	1.44	3
Irrigation methods	2.24	3	1.72	2
Crop service	1.82	1	1.40	5
Control of pests	2.26	2	1.74	1
Harvesting	1.83	3	1.42	4
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b- Fruits	1.84	4	1.49	1
Preparing land for planting	1.72	6	1.36	4
Timing of Planting	1.52	5	1.16	6
Method of planting	1.54	1	1.27	5
Fertilizing	2.38	2	1.90	2
Irrigation methods	2.36	3	2.00	1
Pruning	1.96	7	1.68	3
Harvesting	1.44	-------2	0.96	7
----------	--------	4	----------1.47	------
c- Crops	1.85	7	1.36	2
Preparing land for planting	1.68	6	1.16	4
Timing of planting	1.56	2	1.18	6
Method of planting	1.58	3	2.08	5
Fertilizing	2.28	1	1.48	2
Crop service	1.88	5	2.12	3
Control of pests	2.40		0.96	1
Harvesting	1.60			7
2- Animal production	1.74	2	1.48	1
a- Cattle	1.58	3	1.38	3
Constructing shelters	1.12	6	1.08	6
Cleaning shelters	1.56	5	1.32	4
Milking of Conditions	1.64	4	1.10	5
Testing the udder before milking	1.80	1	1.48	3
Nutrition for better milk yields	1.72	2	1.64	2
Precautions for infection	1.66	3	1.72	1
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b- Sheep	1.81	2	1.56	1
Suitable place for constructing shelters	1.36	5	1.13	5
Farm management	1.72	3	1.33	3
Feed mixtures in different stages	2.20	2	2.18	1
Sheering dipping and pruning	1.56	4	1.21	4
Health and protection	2.24	1	2.08	2
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c- poultry	1.82	1	1.51	2
Poultry feeding	1.92	2	1.56	2
Poultry watering	1.88	2	1.28	4
Precautions for infectious	1.76	4	1.60	2
Vaccination	2.20	1	1.96	1
Poultry management	1.36	5	1.16	5

3- Bee keeping		1.72	3	1.32	3
	Establishing the bee hives	1.68	5	1.42	3
	Monitoring the bee	1.56	7	1.08	7
	Inspection of hives	1.76	4	1.16	6
	Honey harvesting	1.64	6	1.44	2
	Bee nutrition	1.84	3	1.20	5
	Disease and pests of bee	1.88	1	1.56	1
	Bees	1.85	2	1.40	4
4- Food processing				1.30	4
	Cheese making			1.64	1
	Tomato pumice processing			1.12	3
	Preparing of pickling			1.52	2
	Jam processing			0.88	4

*The highest degree is 3.

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دراسة وصفية للاحتياجات التدريبية للمزارعين والمزارعات في المناطق شبه الصحراوية - دراسة حالة في شرق الأردن-

أحمد نوري الشدايدة[*]

ملخـص

تهدف هذه الدراسة إلى تحديد الاحتياجات التدريبية للمزارعين والمزارعات في المناطق شبه الصحراوية في شرق الأردن ، وقد شملت الدراسة (100) مزارع ومزارعة ، وجمعت بيانات هذه الدراسة باستخدام استمارات استبانة اشتملت على جزأين: الأول يتصل بالمعلومات الشخصية والمهنية للمزارعين والمزارعات، والثاني يتضمن مقياسا للاحتياجات التدريبية في مجالات الإنتاج النباتي والحيواني وتربية النحل والتصنيع الغذائي، وتم التأكد من صدق الاستمارة بعرضها على عدد من الخبراء والمحكمين، وجمعت البيانات خلال الفترة من (نيسان – حزيران) 2005 , وحللت البيانات باستخدام برنامج (S.P.S.S) للعلوم الاجتماعية، وفيما يأتي أهم النتائج :

- جاء الإنتاج الحيواني في المرتبة الأولى ثم التصنيع الغذائي ثم تربية النحل، وأخيراً حقل الإنتاج النباتي للمزارعين؛ بينما بالنسبة للمزارعات فقد جاء الإنتاج النباتي في المرتبة الأولى ثم تربية النحل ثم الإنتاج الحيواني ثم التصنيع الغذائي.
- فيما يتعلق بالاحتياجات في الإنتاج النباتي، جاء إنتاج الخضار ثم المحاصيل الحقلية ثم الأشجار المثمرة بالنسبة للمزارعات. أما بالنسبة للمزارعين فقد جاءت الأشجار المثمرة ثم إنتاج الخضار وأخيرا المحاصيل الحقلية.
- فيما يتعلق بالاحتياجات في الإنتاج الحيواني، فقد جاءت تربية الدواجن ثم الماشية ثم الخراف بالنسبة للمزارعين، أما بالنسبة للمزارعات فقد جاء في المرتبة الأولى تربية الخراف ثم تربية الدواجن ثم الماشية.

أما أهم التوصيات فكانت:

- أن يعمل مركز التدريب للإرشاد على إعداد خطة علمية وعملية تتناول بشكل دقيق النتائج التفصيلية لهذه الدراسة وفقاً لمجالات التدريب المحددة والجوانب والمحاور المتصلة بها .
- إجراء مسوحات ميدانية دورية لدراسة احتياجات المزارعين والمزارعات قبل الولوج إلى تخطيط البرامج الخاصة بهم، فضلاً عن الوقوف على واقع معلوماتهم ومعارفهم ليتم تطويرها من خلال هذه البرامج.
- أن تعمل وزارة الزراعة على رفد الكادر الإرشادي الميداني في منطقة الدراسة بالمرشدين والمرشدات المتخصصين في الإنتاج الحيواني والإنتاج النباتي والتصنيع الغذائي.

الكلمات الدالة: الإرشاد الزراعي، الاحتياجات التدريبية، المستويات المعرفية، نساء مزارعات، رجال مزارعون، الأردن.

* كلية الزراعة التكنولوجية، جامعة البلقاء التطبيقية ، السلط، الأردن. البريد الإلكتروني: shadydeh2004@maktoob.com، تاريخ استلام البحث 2005/12/11، وتاريخ قبوله 2007/5/6.