Journal of Environmental Science and Engineering A9 (2020) 255-265
doi:10.17265/2162-5298/2020.06.005

The Rural Women Participation in Small Scale Livestock Management Decisions

Serap Göncü[1], Cahide Dede[2], Özgül Anitaş[1], Sibel Bozkurt[1] and Mustafa Güçlü Sucak[3]

1. Department of Animal Science, Faculty of Agriculture, University of Cukurova, Adana 01330, Turkey

2. Diyarbakır Bağlar District Directorate, Ministry of Agriculture and Forestry, Diyarbakır 21000, Turkey

3. Vocational School of Kahta, Adiyaman University, Adıyaman 0200, Turkey

Abstract: In the Turkish society, family is accepted as the basic element of social structure. However, the role and importance of women in the family is mostly neglected. Thirty-three percent of women state that their primary duties are child care and domestic task. Besides duties of women in the house, the participation of women to both agricultural production and activities outside the house is quite high. On the other hand, only 5% of women accept income generating activities as the main duty of women. The percentage of women who accept all above-mentioned responsibilities as women's duty is 60%. This high ratio shows that a great deal of women can participate indoor or outdoor activities depending on the family needs, however, their responsibilities stemming from being a mother or wife always have thepriority. However, in rural areas women are involved in agricultural production activities as a labor, in adition to housework, care for children and the elderly. In small and medium-sized enterprises, labor-intensive work is mostly undertaken by women, and workloads are often higher than men. In this study, face-to-face surveys with 84 women in small-scale livestock farming in villages in the central province of Diyarbakır yielded results. It has been understood that women do not make decisions on domestic affairs in their own family, that they can not decide on their own behalf, they give more opinions on decisions taken, and even some families do not even report opinions on decisions. It may be possible to improve and increase the living standards and social and economic structures of women living in rural areas by increasing their knowledge of animal care.

Key words: Animal production, livestock activities, women's influence.

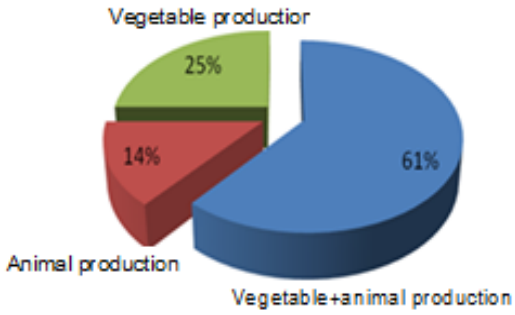
1. Introduction

As of 2013, it has a total of 6,015,174 decares of agricultural land in Diyarbakır, located in the TRC22 region. In the 5,469,928 decare area of this total area, it is seen that grains and other crops are planted, 120,766 decares of land is left to fallow, vegetable cultivation in 169,481 decares and fruit and spice plants in the 254,999 decare area are considered as production areas [1]. As is the case in many parts of our country, it is seen that the two important activity branches of agriculture in Diyarbakır and its districts are made together with the production of plant and animal. In 25% of the agricultural enterprises in Diyarbakır, only vegetable production, 61% in vegetable and animal production, and 14% in only animal production activities are observed [2] (Graph 1).

Cattle breeding; cattle, buffalo, horses, donkeys and mules breeding livestock branches covering. In our country, milk and fattening cattle through various products that provide human nutrition and health, as well as providing raw materials to various industries in the country's economy plays a significant role. Animal husbandry has a great role, especially in terms of sustainability of livestock-based industry and development of rural areas.

In Diyarbakır province, this is a little more important for a province whose economy is still based on agriculture. For this reason, it is necessary to accurately determine the existence of animal in the province, mode of production, general characteristics of enterprises, nutritional status, sales-marketing

Corresponding author: Serap Goncu, Ph.D., main research field: animal science.



Graph 1 Distribution according to areas of activity agricultural enterprises of Diyarbakır.

status, mechanization leves, current production amount, employment they created, future expectations and problems. This is possible with field study.

In recent years, there has been a significant increase in the number of new farms and the number of milk processing plants in Diyarbakır. In a study carried out by Denli, et al. [3] which was submitted to the Karacadağ Development Agency and supported by the Agency in accordance with the needs of the cattle breeding in Diyarbakır; general characteristics of cattle farms in Diyarbakır current production status, maintenance-management conditions, animal feeding techniques, use of feed sources, mechanization status and labor use were determined and reported.

The total labor force participation rate in Turkey is 49.2% and 68.8% for men, while for women it is 29.8%. In rural areas, the labor force participation rate is 56.2% and this rate is 73.8% for males and 39.1% for females [1]. This rural area in both male and female labor force participation rate of the population according to the results indicates that Turkey is higher than the general population.

Alkan and Toksoy [4] found that 44.6% of the women interviewed in the study on women and rural development in forest villages in the province of Trabzon stated that they were largely responsible for the care of animals.

Özbay [5] found that 83% of the women living in the villages of Elmadağ district of Ankara participated in livestock activities. According to the data obtained from women in animal husbandry in the beginning of milking is coming.

Most women living in rural areas work as cheap labor without any charge. In general, these women, who are unpaid family workers and do not have social security, do housework, elderly-child care, baking bread, water transport and laundry. In addition to these works, they also carry out daily works such as field and vineyard-garden works, animal care, and stall cleaning [6].

Gülçubuk and Yasan [7] found that males had gradually abandoned the agricultural sector due to the decrease in agricultural income and women increased the participation rate in agricultural production activities. According to the research, it is seen that the woman has no say on her labor.

Şahin and Terin [8], in the study where women in two villages of Van province have different socio-economic characteristics, their participation in agricultural activities and their opinions on agriculture were determined and it was determined that women participated in animal production activities more than plant production activities. In the examined enterprises, 88.4% of the women participate in feeding the animals, 84.1% in the water, 79.7% in the barn cleaning, 78.3% in the feeding, 72.5% in the milking. The participation of women in decision making process in agricultural production was 47.8% in plant production and 72.5% in animal production. It was determined that 90.91% of women in rural areas participated in agricultural activities, 62.03% of the shareholders decided on monetary issues together with their spouses, and 65.09% decided on non-monetary matters together with their spouses [9].

The aim of this study is to determine the role of women living in rural areas in the field of livestock in cultural life as well as the socio-economic factors affecting the participation of women living in rural areas in labor force and decisions. Several studies have been carried out in rural areas on how effective women are in decision-making and labor force participation in different provinces. The main reason for focusing on women in particular is that women are

actively involved in agriculture and stockbreeding as well as domestic work.

2. Material and Methods

The main material of the study was the data obtained from the face-to-face surveys with the women engaged in animal husbandry in the villages of Diyarbakir center and it's near districts. Diyarbakir is a city and the twelfth most populous city in Turkey. According to TURKSTAT data, it has a population of 1,756,353 as of the end of 2019 [10]. In terms of gender, the difference between the male and female population was 18,540. The male population was recorded as 875 thousand 468 and the female population as 856 thousand 928.

In Diyarbakır, the largest district in terms of population, 388,387 people were again the Merkez Bağlar Municipality, followed by Kayapınar and Yenişehir districts, respectively. The area of the province is 15,272 km². The Governorship is 674 meters above sea level.

Diyarbakır has a total of 6,015,174 decares of agricultural land and 5,469,928 decare of this area, it is seen that grains and other crops are planted, 120,766 decares of land is left to fallow, vegetable cultivation in 169,481 decares and fruit and spice plants in the 254,999 decare area are considered as production areas [1]. There are the two important agriculture activity in Diyarbakır and its districts are made together with the production of plant and animal. In 25% of the agricultural enterprises in Diyarbakır, only vegetable production, 61% in vegetable and animal production, and 14% in only animal production activities are observed [2] (Graph 1). 40 percent of the city's gross income comes from agriculture and 10 percent from industry. Located in Southeastern Anatolia Adiyaman, Sanliurfa, Mardin, Batman, Muş, Bingöl, Elazığ and Malatya 930 thousand population of the neighboring Diyarbakir is one of our city's most long-standing history with Turkey. Located in the Southeastern Anatolia Region, Diyarbakır is located at 37.52 north latitudes and 40.13 east longitudes. A harsh continental climate prevails in Diyarbakır. Summers are very hot and dry, winters are cold and rainy. It is also very suitable for animal husbandry with its meadows and pastures approaching 350 thousand hectares.The way to economic development is to identify and mobilize the potential of cities. Women have constituted an important aspect of economic and social life in every period. Agriculture is the sector in which women are employed the most proportionally in our country. In this context, a face to face survey was conducted with 83 women. In the survey, questions were asked about the social and demographic structure of women engaged in animal husbandry, working conditions, etc.. Chi-square test was used to evaluate the data obtained in the study. Statistical analysis was performed using IBM SPSS STATISTIC 20 program.

When Table 1 is examined, it is seen that the average age of the women who are active in family businesses where the field study is conducted is 42.82. Accordingly, it can be said that women who participate in the labor force are individuals of middle age group.

When the education levels of the surveyed women are examined in Table 1, it is determined that 53.6% of the surveyed women are not literate, 34.5% are primary school graduates and 7.1% are secondary school graduates. It was observed that only 4.8% of women were high school graduates, but this rate was quite low. According to the analysis, the differences between women's educational status and livestock experience were statistically significant ($p < 0.05$). Khan, et al [11] studied the educational situation. They found that the majority of the participants (66.0%) were illiterate and that the literacy rate was below the National average (54.0%). Moreover, 34% of the participants are literate. Altunpıçak [12] found in his study that 70.7% of the women working in agriculture in Ankara were illiterate, 21.52% were literate and 8.1% were primary school graduates.

Fig. 1 Diyarbakır and its districts.

Table 1 Women's Answers related on Livestock.

General features	Respond	N	%
Age	20-30 age	11	13.1
	31-40 age	28	33.3
	41-50 age	27	32.1
	>= 50	17	20.1
	No answer	1	11.2
	Total	84	100.0
Education	Uneducated	45	53.6
	Primary education	29	34.5
	Secondary education	6	7.1
	High school	4	4.8
	Total	84	100.0
Labor Force Existence	Working in Non-Agricultural Business	26	31.0
	Child	15	17.9
	Old	6	7.1
	Other	15	17.9
	Child+old	8	9.5
	Working in Non-Agricultural Business+child+old	8	9.5
	Working in Non-Agricultural Business+old	6	7.1
	Total	84	100.0
Number of households	02-06	35	41.7
	07-12	39	46.4
	13-22	4	4.8
	No answers	6	7.1
	Total	84	100.0
Livestock Experience	There is	68	81.0
	There isn't	12	14.3
	No answers	4	4.8
	Total	84	100.0

Table 1 to be continued

Any of Union or Cooperative Membership Status in Women	There isn't	84	100.0
	Total	84	100.0
Labor and Factors Affecting Participation in Decisions	Itself and husband	53	63.1
	Itself	2	2.4
	Husband	18	21.4
	Husband's Family Elders	7	8.3
	Non-Family Reasons	2	2.4
	Itself and husband +Husband's Family Elders	1	1.2
	Not responding	1	1.2
	Total	84	100.0
Receive Training Related to Livestock	Neighbor	3	3.6
	My family	47	56.0
	Other	15	17.9
	Cooperative +My family	2	2.4
	Neighbor +My family	6	7.1
	My family+Other	5	6
	Neighbor +My family +Other	6	7.1
	Total	84	100.0

Table 1, when it is examined, it is more effective to work in non-agricultural work with a ratio of 31.0% as the reason for not being able to participate in the labor force, 17.9% of women who could not join the workforce due to child, while those who could not participate in the labor force due to elderly care were 7.1%, women who could not participate in the labor force due to all these reasons and other factors were found to have a total of 44%.

When Table 1 is examined, it is observed that6 people the maximum number of household members is 41.7%, the number of people between 7-12 was determined as 46.4%, the number of household members was 22, which corresponded to a rate of 4.8% and the number of women who did not respond was 7.1%. Rahman [13] and Rahman and Naoroze [14] stated that in Bangladesh that the family size is 5.4 persons per household. These results are similar to the above study. Khan, et al [11] studied in family system reflects an important relationship between women participation and agriculture activities. About 66.25% of respondents were living in nuclear family system while 33.75 belong to joint family system.

Based on this information, the number of women who stated that they had a livestock experience was 81.0% so that the animal husbandry experience already exist and it was observed that only 14.3% of women who had no previous experience in animal husbandry.

When Table 1 is examined, it was determined that none of the women participating in the survey was a member of a cooperative or any association. According to this ratio, it is determined that women do not have enough knowledge about this issue and the reason for this is that they do not participate in the work force of men but they play an active role in the cooperatives and unions. Kutlar, et al [15] found that only 28.1% of women in the enterprises they studied were members of any union or cooperative. Kaur and Sharma [16] reported that the care of livestock is a female domain but as dairy work is becoming modernized, women are losing control of both management and economic returns.

When Table 1 is examined, it was determined that the majority of the women who stated that their spouses had an influence on their own decisions were 63.1%, only 21.4% of those who said that their spouses had an influence, the percentage of those who said that their parents and grandparents were effective in making decisions was 8.3%. It was observed that the reasons other than this were at a low rate. When the table is examined, it was observed that half of the women were worried about the deterioration of the family peace as

the reason for not participating in the decisions. 27.4% of those who stated that they could not participate as a result of the environment were in second place, while those who did not respond were 16.7% and they were generally afraid of the risk of conflict with adults within the family.

In the table, it is seen that the number of those who stated that they received education from their family in the area of animal husbandry was 56.0% and that the number of those who stated that they received education by the neighbor and the cooperative in addition to the family factor constitute a total of 44%. The chi-square test showed that there was a relationship between the educational status of women and the training related to animal husbandry ($p < 0.05$).

In addition, differences between livestock education and women's influence level in decisions related to animal husbandry were found to be statistically significant ($p < 0.05$).

When Table 2 is examined, it is observed that the number of women who reach the information on livestock subjects via their family is 59.5% and there is also a small number of people who say that they have reached the information through the cooperative and neighbor. 52.4% of women were found to have solutions to their families and 48.6% to the institutions and organizations belonging to the regions where they are affiliated, to consult with the cooperative, neighbor and other places.

It is determined that the products obtained in Table 2 are taken by the collectors by 50%, 6.6% of the respondents who were sold to the cooperatives and1.2% did not answer this question, the rest is consumed by the family, taken by neighbor, collector, cooperative. 53.6% of the products of the surveyed women's animal products delivery by a high percentage of the spouse, while 14.3% of the ones reported that the delivery itself. In addition, the percentage of those who stated that they only sell milk was 16.7% and 20.2% of them stated that they were producing milk and yoghurt. It is seen that milk is mainly used in production according to other animal products.

When Table 3 is examined, yoghurt comes with 22.6% of the products sold daily, followed by milk with 17.9%.

It is seen that 20.2% of those who help with all animal production+milking+barn cleaning+feeding works. In Chi-square analysis, the difference between the participation of family members in the labor force and the effect level of women in livestock decisions was found to be statistically significant. Pal [17] in their study, more than 71% of women took part in milking. They also stated that women were responsible for stall cleaning (25%) and animal feeding (28%). Patel, et al [18] reported that women were generally responsible for milking sheep, processing and selling dairy products, providing feed/feed and water, and maintaining newborn lambs and sick animals. Rahman [13] stated that the share of female labor input in total labor force is 28%. In the following ratios, while stall cleaning and feeding were important, it was stated that marketing factor was also effective. In addition, in the survey, it is stated that the km range for animal product sales is 1-15 km, which is 48.8%. In Pakistan most of women of agriculture families work along with men on the farm as well. Women are very active in livestock management activities as well [13].

Table 2 Information on livestock.

General features	Responds	N	%
Information	Neighbor	6	7.1
	My family	50	59.5
	Other	7	8.3
	Cooperative + My family	2	2.4
	Neighbor + My family	8	9.5
	My family + Other	5	6.0

Table 2 to be continued

	Neighbor + My family + Other	6	7.1
	Total	84	100.0
Supervising	University	1	1.2
	Neighbor	9	10.7
	My family	44	52.4
	Other	8	9.5
	Cooperative + My family	3	3.6
	Neighbor + My family	9	10.7
	My family + Other	6	7.1
	Neighbor + My family + Other	4	1.8
	Total	84	100.0
Marketing way	Cooperative	3	3.6
	Collector	42	50.0
	Neighbor	5	6.0
	My family	7	8.3
	Other	20	23.8
	Cooperative + Collector	1	1.2
	Collector +neighbor + my family	1	1.2
	Neighbor + My family	2	2.4
	Collector + Neighbor	2	2.4
	Not responding	1	1.2
	Total	84	100.0
Animal Products selling	Husband	45	53.6
	Herself	12	14.3
	Family elders	6	7.1
	Children	6	7.1
	Cooperative	1	1.2
	Husband + Herself + Family Elders	1	1.2
	Husband + Herself	3	3.6
	Husband + Family Elders	3	3.6
	Husband+children	5	6.0
	Husband+herself+children	1	1.2
	Not responding	1	1.2
	Total	84	100.0
Animal Products	Milk	14	16.7
	Milk+Yogurt+Cheese	10	11.9
	Yogurt + egg + cheese	1	1.2
	Milk + Egg	10	11.9
	Cheese+Egg+Milk	2	2.4
	Milk+ Yogurt + egg	1	1.2
	Milk +Yogurt + egg + cheese	1	1.2
	Yogurt	5	6.0
	Egg	1	1.2
	Yogurt+ Cheese	9	10.7
	Milk+Yogurt	17	20.2
	Yogurt +Milk + Butter	8	9.5
	Honey	1	1.2
	Cheese + Butter Milk Yogurt	3	3.6
	Not responding	1	1.2
	Total	84	100.0

Table 3 Animal products sold daily and the role of family members.

General features	Responds	N	%
Animal Products Sold Daily	Milk	15	17.9
	Milk+ Yogurt +Cheese	4	4.8
	Yogurt + egg + cheese	1	1.2
	Milk + Egg	4	4.8
	Milk+ Yogurt + egg	4	4.8
	Yogurt	19	22.6
	Egg	1	1.2
	Yogurt Cheese	9	10.7
	Yogurt +Milk + Butter	6	7.1
	Milk+Yogurt	10	11.9
	Honey	1	1.2
	Cheese	3	3.6
	Not responding	7	8.3
	Total	84	100.0
Labor Force Participation	Animal Product Making	5	6.0
	Milking	6	7.1
	Barn Cleaning	5	6.0
	Marketing	3	3.6
	Marketing + Feeding	10	11.9
	Animal Product Making + Milking + Barn Cleaning + Feeding	17	20.2
	Animal Product Making + Barn Cleaning + Feeding	2	2.4
	Barn Cleaning + Feeding	5	6.0
	All	10	11.9
	Animal Product + Milking	3	3.6
	Barn Cleaning + Feeding + Marketing	11	13.1
	Animal Product Making + Milking + Barn Cleaning	1	1.2
	Milking + Barn Cleaning	2	2.4
	Milking + Barn Cleaning + Feeding + Marketing	2	2.4
	Milking + Barn Cleaning + Feeding	2	2.4
	Total	84	100.0
Saling distance (km)	11-15	41	48.8
	16-30	18	21.4
	31-50	14	16.7
	Not responding	11	13.1
	Total	84	100.0

The daily working hours of women were 16.7% of the total 3 hours and the number of those who did not respond was very high. According to this, working hours vary between 3-4 hours in a day. Kara (2005), in Şanlıurfa Province, it is found that women do almost all jobs in animal production and work for 2-3 hours a day on average.According to the results of this study, it is seen that the working hours of the women working in livestock production in Diyarbakır are higher than those working in Şanlıurfa. Kaur and Sharma [16], reported that Bangladeshi women spent an average of 3.1 hours per day (4.4 hours per day during peak season) in agricultural work.

The effect level of women in decision-making is observed to be moderate with a rate of 66.7%. The ratio of those who stated that they were very effective in the decisions was very low with 13.1%. Özkan [19], Özçatalbaş [20], Kutlar [21], Özer and Taluğ [22] Oğuz and Kan [9] and Kulak [23] also found that women living in rural areas participate in almost every

Table 4 The roles of women.

General features	Responds	N	%
Women's Working Hours and Times	2 hours	6	7.1
	3 hours	14	16.7
	4 hours	8	9.5
	5 hours	4	4.8
	6 and above	3	3.6
	Not responding	49	58.3
	Total	84	100.0
The Effect of Women on Decisions on Livestock	No	17	20.2
	Intermediate Level	56	66.7
	Very Effective	11	13.1
	Total	84	100.0
The Effect of Women in the Decisions on the Use of the Obtained	No	16	
	Intermediate Level	58	19.0
	Very Effective	10	69.0
	Total	84	11.9
Resources	Agriculture	8	100.0
	Support for Small Animals	5	9.5
	Agricultural Support	1	6.0
	Milk	2	1.2
	Calf Support	28	2.4
	Support for buffalo	1	33.3
	Diesel + Fertilizer	2	1.2
	Rootstock Sheep Support	4	2.4
	Calf+ Beef + Mandate	2	4.8
	Livestock Support	2	2.4
	Made for themselves	2	2.4
	Beekeeping Support	1	2.4
	Calf + Milk Support	4	1.2
	Sheep-Goat Support + identification Support	1	4.8
	Calf + identification Support	1	1.2
	Not responding	20	1.2
	Total	84	23.8

stage of agricultural production activities but are often not effective in making decisions.

According to the analysis differences between livestock education and women's influence level in decisions related to animal husbandry were found to be statistically significant ($p < 0.05$). Furuta and Salway [24] found a significant association between women's level of education and their decision making ability. In a parallel study conducted in two districts of Bangladesh, Rahman and Naoroze [14] revealed the existence of a significant relationship between education of women and their empowerment.

It is moderately effective at a rate of 69.0% in decisions on the use of the products obtained. It is seen that the rate of women who stated that women are very effective in decisions is very low (11.9%).

The percentage of women who stated that they benefited from the support was 76.2% and the rate of non-beneficiaries was 23.8%. 33.3% of the respondents stated that they benefited from the support of the calf and 9.5 % from the agricultural support 23.8% of those who did not respond found that other areas of support remained low. The number of people who did not respond to the support was quite high at

98.8% and the remaining 1.2% stated that the number of animals was insufficient.

5. Conclusions

According to the findings of the study, it was found that women from family members, participated in the labor force in Diyarbakır province but they are moderately effective in decisions and product selling. geenrally women are effective in the labor force participation, man is dominant in money use, marketing and external negotiations. Women, who constitute the basic threshold of development in rural areas, need serious help in education, as in every other issue. Since female farmer training is more difficult than male farmers in the family and participation level, care should be taken to ensure that female farmertraining is carried out in certain places with appropriate timing and cooperation.

Authors' Contributions

All authors were responsible for designing the research, implementing it.

Competing Interests

The authors declare that they have no competing interests.

References

[1] TÜİK, 2014. Türkiye İstatistik Kurumu, Tarımsal Üretim İstatistikleri 2013 Verileri. (in Turkish).

[2] DTİM, 2012. Diyarbakır Gıda, Tarım ve Hayvancılık İl Müdürlüğü Verileri. (in Turkish).

[3] Denli, M., Tutkun, M. & Sessiz, A., 2017. Türk Tarım-Gıda Bilim ve Teknoloji Dergisi 5 (5): 476-483. (in Turkish,English abstract).

[4] Alkan,S. & Toksoy, D., 2009. Orman Köylerinde Kadın ve Kırsal Kalkınma (Trabzon İli Örneği). II. Ormancılıkta Sosyo-konomik Sorunlar Kongresi, 19-21 Şubat 2009, Süleyman Demirel Üniversitesi, Isparta,1-16. (in Turkish, English abstract).

[5] Özbay, L., 1995. Ankara İli Elma Dağ İlçesi Köylerinde Yaşayan Kadınların Tarımsal Faaliyetlere Katılım Düzeyleri Üzerine Bir Araştırma. Ankara Üniversitesi, Fen Bilimleri Enstitüsü (basılmamış-yüksek lisans ezi) Ankara. (in Turkish, English abstract).

[6] Öcal Kara, F., Aktaş, Y., 2007. Şanlıurfa İlinde Kadınların Tarımsal Yayım Çalışmasından Yararlanmasına Etki Eden Olumsuz Etkiler. *Tarım Ekonomisi Dergisi*; 13 (2): 71-83. (in Turkish, English abstract).

[7] Gülçubuk, B., Yasan, Z., 2009. 21.yy Eşiğinde Kadınlar. İşsizlik Yoksulluk ve Göç Kıskacındaki Kırsal Alanda Kadın Emeği. Syf: 90-97. (in Turkish, English abstract).

[8] Şahin, K., Terin, M., 2009. Van İlinin Sosyo-Ekonomik Özellikleri Farklı İki Köyündeki Kadınların Tarımsal Faaliyetlere Katılımı ve Tarımsal Yayıma İlişkin Görüşleri. Akdeniz Üniversitesi Ziraat Fakültesi Dergisi, 22 (1): 39-49. (in Turkish, English abstract).

[9] Oğuz, C., Kan, A., 2010. Kırsal Alanda Kadın Yoksulluğu: Yaylacık Köyü Örneği. Türkiye IX. Tarım Ekonomisi Kongresi. Syf: 427-435. (in Turkish, English abstract).

[10] TÜİK, 2019. Türkiye İstatistik Kurumu, Tarımsal Üretim İstatistikleri 2013 Verileri. (in Turkish).

[11] Khan, M. M., Sajjad, B., Hameed, M. N., Khan, A.&Jan, U., 2012. "Participation of Women in Agriculture Activities in District Peshawar." *Sarhad J. Agric.* 28 (1): 121-127.

[12] Altunpıçak, F. T., 2001. Polatlı İlçesine Gelen Gezici Kadın Tarım İşçilerinin Çalışma ve Yaşam Koşulları ile Sorunları Üzerine Bir Araştırma. Yüksek Lisans Tezi,

[13] Ankara Üniversitesi Fen Bilimleri Enstitüsü Tarım Ekonomisi Anabilim Dalı, 58s, Ankara (in Turkish, English abstract).

[14] Pal, M. S., 2001. Women in Bangladesh: Country Briefing Paper. Asian Development Bank.

[15] Patel, S. J., Patel, M. D., Patel,J. H., Patel, A. S., Gelani, R. N., 2016. "Role of Women Gender in Livestock Sector: A Review." *J. Livestock Sci.* 7: 92-96.

[16] Rahman, S., 2000. "Women's Employment in Bangladesh Agriculture: Composition, Determinants, and Scope." *Journal of Rural Studies* 16 (4): 497-507.

[17] Rahman, M. H., Naoroze, K., 2007. "Women Empowerment through Participation in an Aquaculture: Experience of a Large Scale Technology Demonstration Project in Bangladesh." *Journal of Social Science* 3 (4): 164-171.

[18] Kutlar, İ., Kızılay, H., Turhanoğulları, Z., 2013. Kırsal alanda kadınların işgücüne ve kararlara katılımını etkileyen sosyoekonomik faktörlerin belirlenmesi: Burdur ili örneği, Akdeniz Üniversitesi Ziraat Fakültesi Dergisi, 26(1): 27-32 (in Turkish, English abstract).

[19] Kaur, M., Sharma, M. L., 1991. "Role of Women in Rural Development." *Journal of Rural Studies* 7: 11-16.

[20] Özkan, B., 2000. Antalya ilinde sera sebzeciliğinde kadın üreticilerin rolü. Akdeniz Üniversitesi Ziraat Fakültesi Dergisi 13: 133-143. (in Turkish, English abstract).

[21] Özçatalbaş, O., 2001. Adana ilinin sosyo-ekonomik

özellikleri farklı iki köyünde kadınların tarımsal faaliyetlere katılımı ve yayımdan yararlanma olanakları. Akdeniz Üniversitesi Ziraat Fakültesi Dergisi 14: 79-88. (in Turkish, English abstract).

[22] Kutlar, İ., 2002. Antalya ili merkez ilçesinde süt sığırı yetiştiriciliği birliğine üye olan ve olmayan işletmelerde toplumsal cinsiyet analizi ve bilgi kaynakları. Yüksek Lisans Tezi, Akdeniz Üniversitesi Fen Bilimleri Enstitüsü, Antalya.

[23] Özer, D., Taluğ, C., 2008. Yeniden yerleşimin hayvancılıkla uğraşan kırsal hanelerde kadının toplumsal cinsiyet rollerine etkisi. Harran Üniversitesi Ziraat Fakültesi Dergisi 12 (2): 1-9. (in Turkish, English abstract).

[24] Kulak, E., 2011. Tarımsal üretim süreçlerindeki değişimin kırsal alanda kadın istihdamına etkileri: 1980 sonrası gelişmeler. BaşbakanlıkKadının Statüsü Genel Müdürlüğü Uzmanlık Tezi, Ankara (in Turkish, English abstract).

[25] Furuta, M., Salway, S., 2006. "Women's Position within the Household as a Determinant of Maternal Health Care Use in Nepal." *International Family Planning Perspective* 32 (1): 17- 27.