

Investigation of Organizational Responsibility and Satisfaction Level of the Cattle Producers in Turkey

Mehmet Ferit CAN ¹  Cengiz YALÇIN ²

¹ Mustafa Kemal University, Faculty of Veterinary Medicine, Department of Animal Health Economics and Management, TR31001 Campus, Hatay - Turkey

² Ankara University, Faculty of Veterinary Medicine, Department of Animal Health Economics and Management, TR06110 Diskapi, Ankara - Turkey

KVFD-2015-13229 Received: 24.02.2015 Accepted: 27.04.2015 Published Online: 13.05.2015

Abstract

The aims of this study were to determine organizational responsibility and satisfaction levels of cattle producers according to different organizations and geographical regions of the Turkey, and to analyze the relationship between socioeconomic variables and above mentioned levels. The study was conducted with a total of 197 randomly sampled producers living in six different regions of the Turkey, between the years of 2013 and 2014. For overall Turkey, median responsibility and satisfaction values were found to be 2 (0-6) and 42% (20-100), respectively. Responsibility and satisfaction levels of the East-Southeastern region and the Milk Producers Association were significantly lower than other groups (<.01). Only eleven percent of the producers know important laws and regulations related to their own organizations. "Visiting frequency" and "meeting arrangements" components were given the lowest scores for satisfaction. Seven and four socioeconomic variables out of 11 were significantly positively correlated with the responsibility and satisfaction levels, respectively. In order to change the cattle producers' perception and attitudes farm visits and regular periodic meetings should be arranged by both livestock organizations and government. Those cattle producers, living in the East and Southeastern regions of Turkey and having low socioeconomic status, should be given priority in training programs.

Keywords: *Producer, Organization, Cattle, Responsibility, Satisfaction*

Türkiye'de Sığır Üreticilerinin Örgütsel Sorumluluk ve Memnuniyet Düzeylerinin İncelenmesi

Özet

Bu çalışmanın amaçları, farklı örgütlere ve Türkiye'nin farklı coğrafik bölgelerine göre sığır üreticilerinin memnuniyet ve sorumluluk düzeylerinin belirlenmesi ve sosyoekonomik değişkenler ile ifade edilen düzeyler arasındaki ilişkilerin analiz edilmesidir. Çalışma, Türkiye'nin 6 farklı bölgesinde tesadüfi olarak örneklenmiş toplam 197 üreticiyle 2013-2014 yılları arasında yürütülmüştür. Türkiye geneli için sorumluluk ve memnuniyet düzeylerinin medyan değerleri sırasıyla 2 (0-6) ve 42% (20-100) olarak bulunmuştur. Doğu-Güneydoğu Bölgesi ile Süt Üreticileri Birliği için sorumluluk ve memnuniyet düzeyleri diğer gruplardan anlamlı biçimde daha düşük bulunmuştur (<.01). Üreticilerin yalnızca %11'i kendi örgütleriyle ilgili yasa ve yönetmelikleri bilmektedir. En düşük memnuniyet skorlarını "ziyaret sıklığı" ve "toplantı düzenleme" bileşenleri almıştır. Toplam 11 sosyoekonomik değişkenin sırasıyla 7 ve 4 tanesi sorumluluk ve memnuniyet düzeyleriyle anlamlı pozitif bir ilişki içindedir. Sığır üreticilerinin algı ve davranışlarını değiştirmek için hayvancılık alanındaki örgütler ve kamu tarafından çiftlik ziyaretleri ve periyodik toplantılar düzenlenmelidir. Türkiye'nin Doğu ve Güneydoğu bölgelerinde yaşayan ve düşük sosyoekonomik statüdeki üreticilere eğitim programlarında öncelik verilmelidir.

Anahtar sözcükler: *Üretici, Örgüt, Sığır, Sorumluluk, Memnuniyet*

INTRODUCTION

Organizations can be defined as a group of people consciously and systematically gathered for collective goals or a particular purpose. In particular, they emerged as a result of the destruction of feudalism, the industrial revolution, and urbanization ^[1,2]. Many types of agricultural

and livestock organizations have been established worldwide to serve the interests of members around the world. They founded by the state or by civil society for social, technical and economic reasons, and have played an important role in sustainable production. Through agricultural organizations, livestock producers increase their competitive power, and are able to provide more healthy



İletişim (Correspondence)



+90 326 2455845



feritcan@mku.edu.tr

and sufficient food to customers ^[3,4]. Also, better integration of the production and livestock-based industries can be achieved by the cooperatives ^[5].

In Turkey, located in Southeastern Europe and South-western Asia, various types of agricultural and livestock organizations have served cattle producers, such as the Cattle Breeders Associations (CBA), Beef and Lamb Producers Associations (BPA), Milk Producers Associations (MPA), Chambers of Agriculture (CA) and Agricultural Credit and Development Cooperatives (C). CBA, BPA, MPA, CA and C have served their members since 1996, 2005, 2007, 1957 and 1860, respectively. The Law of Animal Breeding (No.4631), The Law of Agricultural Producer Unions (No. 5200), The Law of Cooperatives (No. 1163), The Law of Chambers of Agriculture and Unions (No. 6964) constitute legal framework of the above-mentioned organizations ^[6-10]. In spite of the existence of many livestock organizations for producers in Turkey, they have not been regarded to be successful in terms of economics and policy point of view. It is pointed out that some of the important reasons for these failures are managerial weaknesses in organizations, lack of collaborations and organizational awareness amongst the members. Moreover, low levels of organizational commitment and responsibility among producers have been considered other possible reasons that may adversely affect their products quantity and quality ^[7,8].

Producers' organizational responsibility and their satisfaction about the services provided by the different organizations should be evaluated to better understand the current problems in a national-scale. Until now, there is no nationwide study in the literature, despite the well-known economic and political importance of the livestock organization. Previously, a similar study regarding small ruminant producers was performed by Can ^[8] in Hatay, Turkey. The present study is clearly different from the previous one due to following reasons: (I) it was conducted in national level, (II) it was focused on the cattle producers, and (III) its methodology was slightly changed.

The aims of the study were to determine organizational responsibility and satisfaction levels of cattle producers according to different organizations and geographical regions of the Turkey, and to analyze the relationship between socioeconomic variables with responsibility and satisfaction levels. The results of the study would be off useful for the livestock organizations and policymakers in the Ministry of Agriculture when investigating the problems and seeking the solutions about the issue.

MATERIAL and METHODS

Study Area, Sample Size and Data Collection

This study was conducted in six different geographical regions (Marmara-I, Aegean-II, Central Anatolian-III, Black

Sea-IV, Mediterranean-V and East and Southeastern Anatolian-VI Regions) of the Turkey. There were a total of 12 cities (Edirne, Kırklareli, Denizli, Isparta, Hatay, Amasya, Samsun, Sinop, Çankırı, Ankara, Malatya and Gaziantep) which were represented the socioeconomic characteristics of the above mentioned regions. The minimum number of sample size ^[11-13] was calculated as follows;

$$n = \frac{N t^2 p (1 - p)}{d^2 (N - 1) + t^2 p (1 - p)}$$

where p = possibility of the events' occurrence of 85%, which was obtained from the from the pre-questionnaires and previous studies, N = total number of livestock enterprises in Turkey (nearly 3 million), t = 1.96 for a 95% confidence interval, d = 0.05 sampling error. Using the formula, the minimal estimated sample size was found to be 196. Then, the calculated sample size was distributed according to the number of livestock enterprises in above mentioned regions ^[7,8,13].

Before starting the field work, the questionnaire was pre-tested in order to remove some of the possible deficiencies and revise of the questions. Data were obtained via a questionnaire completed by 197 producers between May 2013 and November 2014.

The Items Used to Determine Producers' Satisfaction and Responsibility

The items used to determine producers' satisfaction and responsibility were modified from the study of Can ^[8]. Currently, Turkish livestock organizations have been working in different fields of the livestock sector and, therefore, some of the satisfaction items regarding the services were differ from each other according to the organizations. In the current study, 8 satisfaction items were expanded to 11, but nevertheless all of the six responsibility articles were same with the above mentioned study.

Data Evaluation and Statistical Analyses

In this study, commitments of the cattle producers were evaluated with the responsibility items. Each question about responsibility was answered as either "yes" or "no", and total responsibility level ranged from 0 to 6 point. Cattle producers' organizations were evaluated by their services and each question about satisfaction was ranged from 1 to 5 point. Each individual score was divided by the maximum possible level of satisfaction.

Test of normality was performed using Kolmogorov-Smirnov test. Results were analyzed using Kruskal-Wallis H test and Mann-Whitney U-test. Scatter diagrams were used to investigate the possible relationship between variables. The relationship between responsibility and satisfaction

levels with the producers' socioeconomic/demographic characteristics were analyzed using Spearman's rho^[8,11,12]. All of the statistical analyses were performed with the aid of the SPSS-15.0 statistical software.

RESULTS

The distribution of the cattle producers according to different livestock organizations were presented in *Table 1*. It was found that only 15% of the producers were not member of any organization. According to the findings; majority of the producers were member of only one organization, however, very small number of producers were member of four organizations. CBA was still the most

preferred occupational institution (29.95%) and has the largest share of members.

In the present study, primary reason for "being a member of any organization" was asked to livestock producers. It was found that the most important factors affecting the producers' participation to any organization were "economic reasons" (54%) and "bureaucratic reasons" (23%), respectively. Other factors were as follows: "breeding and artificial insemination services" (11%), "occupational information" (7%), and veterinary services (5%). On the other hand, the reasons for "not being a member of any organization" were as follows: "to be seen as useless" (42%), "there is no sufficient information available" (37%) and "to be seen as expensive" (21%). Another finding of this study was that producers who are members of organizations had a significantly higher education level, income class, herd size and agricultural area ($P < .01$) compared to non-members.

A total of six responsibility components and their frequencies for five different organization are given in *Table 2*. It is understood that the majority of the producers have sufficient information about the management boards of their organizations. However, interestingly, only eleven percent of the producers know important laws and regulations related to the livestock organizations.

As it can be seen from the *Table 3*, none of the producers was "very satisfied" or "satisfied" about services provided by their organizations. The worst satisfaction scores were observed in following items: (X) "visiting frequency" and (XI) "meeting arrangements".

Producers' responsibility and satisfaction levels are summarized in *Table 4*. Considering the different organizations and regions in respect of responsibility and satisfaction levels, all of the differences are statistically significant. These levels were found to be lowest in Milk Producers Associations group and East-Southeastern region group. As a result of the statistical analysis, low level

Table 1. The distribution of the producers among different livestock organizations in Turkey

Tablo 1. Üreticilerin Türkiye'nin farklı hayvancılık örgütleri arasındaki dağılımı

The Distribution of the Producers	Frequencies	
	N	%
1. Producers who are members of "one" organization	115	58.38
a. Cattle Breeders Associations	59	29.95
b. Chambers of Agriculture	27	13.71
c. Agricultural Credit and Development Cooperatives	14	7.11
d. Milk Producers Associations	11	5.58
e. Beef and Lamb Producers Associations	4	2.03
2. Producers who are members of "two" organizations	32	16.24
3. Producers who are members of "three" organizations	15	7.61
4. Producers who are members of "four" organizations	4	2.03
5. Producers who are "not members of any organization"	31	15.74
All of the producers (the sum of the above numbers)	197	100.00

Table 2. Responsibility components and their frequencies for the five different organizations

Tablo 2. Sorumluluk bileşenleri ve bunların beş farklı örgüt için frekansları

Responsibility Components Taken into Account	Producers who Answered "Yes" to the Questions											
	CBA (N=110)		CA (N=74)		ACDC (N=50)		MPA (N=13)		BLPA (N=14)		All Organization	
	N	%	N	%	N	%	N	%	N	%	N	%
I. No. of producers knowing important laws related to their organization	19	17	13	18	10	21	1	8	4	29	47	18
II. No. of producers reading the agreement or contract	24	22	18	25	16	33	1	8	7	50	66	26
III. No. of producers regularly vote in elections	53	48	39	54	29	60	3	23	9	64	133	52
IV. No. of producers became candidate in the elections	10	9	6	8	7	15	1	8	4	29	28	11
V. No. of producers having sufficient information about management boards	76	69	54	75	37	77	8	61	11	79	186	72
VI. No. of producers being aware of the debate topics and decisions taken	48	44	28	39	20	42	3	23	9	64	108	42

Table 3. Satisfaction components and their median values for the five different organizations**Tablo 3.** Memnuniyet bileşenleri ve bunların beş farklı örgüt için medyan değerleri

Satisfaction Criteria to be Taken into Consideration	CBA (N=110)	CA (N=74)	ACDC (N=50)	MPA (N=13)	BLPA (N=14)	All Organization	
	Median	Median	Median	Median	Median	Median	Scale ¹
I. Occupational information	2	1	3	1	3	2	D
II. Required input supply	Irrelevant	Irrelevant	3	1	1	1	VD
III. Marketing of products	1	Irrelevant	2	1	3	1	VD
IV. Veterinary services	2	Irrelevant				2	D
V. Breeding services	3	Irrelevant				3	NSD
VI. Official proceedings	3	3	3	1	4	3	NSD
VII. Meeting new breeders	1	1	2	1	3	1	VD
VIII. Level of trust	3	3	3	1	3	3	NSD
IX. Speed of services	2.5	3	3	1	3	3	NSD
X. Visiting frequency	1	1	1	1	1	1	VD
XI. Meeting arrangements	1	1	1	1	1	1	VD

¹ 1: VD (Very Dissatisfied), 2: D (Dissatisfied), 3: NSD (Neither Satisfied nor Dissatisfied), 4: S (Satisfied), 5: VS (Very Satisfied)

Table 4. Responsibility and satisfaction levels acc.to different livestock organizations and geographical regions of the Turkey**Tablo 4.** Türkiye'nin farklı hayvancılık örgütleri ve farklı coğrafik bölgelerine göre sorumluluk ve memnuniyet düzeyleri

Different Organizations and Regions	Responsibility Level (Number)			Satisfaction Level (%)		
	Mean ± Stand. Dev.	Mean Rank	P	Mean ± Stand. Dev.	Mean Rank	P
1. Livestock Organizations						
1.a. CBA	2.09±1.65	124.18	< .05 ¹	48.57±22.38	132.55	< .01 ³
1.b. CA	2.19±1.63	129.01		40.78±16.24	110.12	
1.c. ACDC	2.48±1.71	140.41		49.27±18.90	139.58	
1.d. MPA	1.31±1.44	88.04		32.38±18.18	72.04	
1.e. BLPA	3.14±1.99	165.75		51.15±25.43	138.19	
2. Geographical Regions						
2.a. Marmara	2.46±1.55	142.80	< .01 ²	53.97±25.90	144.72	< .01 ²
2.b. Central Anatolian	2.71±1.43	155.03		45.90±13.98	131.72	
2.c. Black Sea	2.41±1.75	136.60		48.23±19.94	134.76	
2.d. Aegean	2.03±2.07	114.76		45.47±24.66	117.24	
2.e. Mediterranean	1.93±1.39	120.02		43.46±15.84	120.82	
2.f. East and Southeastern	1.23±1.53	82.29		31.91±11.62	72.06	
Overall Turkey	Mean±Stand. Dev : 2.21±1.68 Median (Min-Max) : 2 (0-6)			Mean ± Stand. Dev : 46.04±20.46 Median (Min-Max) : 42 (20-100)		

^{1,2,3} By Kruskal-Wallis analysis, there were significant differences among the groups; ¹ Pairwise comparisons performed using the Mann-Whitney U test indicated that there were significant differences between the CBA and BLPA, between the MPA and BLPA, as well as between the MPA and ACDC; ² Mann-Whitney U-test indicated that there were significant differences between the Central Anatolian and Mediterranean Regions, as well as between the East-Southeastern region and rest of the other regions; ³ Mann-Whitney U test indicated that there were significant differences between the ACDC and CA, between the ACDC and MPA, between the CBA and CA, as well as between the MPA and rest of the other organizations

of responsibility and medium-low level of satisfaction were found for overall Turkey.

Correlations between socioeconomic variables with the responsibility and satisfaction levels along with *p*-values were presented in Table 5. Seven and four socioeconomic variables out of 11 were significantly positively correlated with the responsibility and satisfaction levels, respectively. Additionally, there was a significant

relationship between responsibility and satisfaction at the level of *p*<.01.

DISCUSSION

Organizational behaviors of the livestock producers are complex and multidimensional concept. In order to demonstrate organizational effectiveness of the producers

Table 5. Correlation coefficient and P-values for responsibility and satisfaction levels**Tablo 5.** Sorumluluk ve memnuniyet düzeyleri için ilişki katsayıları ve P-değerleri

Socioeconomic and Demographic Variables	The unit Used	Responsibility Level		Satisfaction Level	
		Spearman Rho	P	Spearman Rho	P
1. Producers' age	(year)	-0.044	> .05	-0.040	> .05
2. Occupational experience	(year)	0.047	> .05	0.065	> .05
3. Education level	(year)	0.283	< .01	-0.006	> .05
4. Income class	(US\$)	0.237	< .01	0.140	< .05
5. Herd size	(number)	0.326	< .01	0.086	> .05
6. Total number of memberships	(number)	0.193	< .05	0.195	< .01
7. The duration of membership	(year)	0.169	< .01	0.070	> .05
8. Total agricultural area	(acres)	0.374	< .01	0.291	< .01
9. Cultivated agricultural area	(acres)	0.422	< .01	0.356	< .01
Responsibility level	(number)	1		0.416	< .01
Satisfaction level	(ratio)	0.416	< .01	1	

and to understand which individual factors are correlated with the membership relations, a total of 6 responsibility and 11 satisfaction components and 9 socioeconomic variables were taken into consideration in the present study. The findings indicated that Turkish producers' responsibility and satisfaction were low and medium-low levels, respectively. It is clearly understood that responsibility of the producers is quite far from the desirable level. That is to say, they have behaved irresponsibly. Nevertheless, it should be indicated that, low level of responsibility can be also affected by the poor management and/or poor services provided by the livestock organizations.

In Turkey, majority of the producers still believe that organizational activities have not been performing effectively except providing some official documents or bureaucratic issues. In the current study, economic and bureaucratic reasons were found to be the most important factors affecting producers' decision whether membership participation in organizations or not. Indeed, the result is not surprised because producers' main purpose is already to make money and sustainable production. This result also consistent with the study of Can^[8] who worked on the sheep breeders. Özüdoğru and Tatlıdil^[14] determined that 93% of the farmers in member farms believe that the Cattle Breeders Association has a role in increased incomes. Another study was also reported that the most important expectations to be a member of the cooperatives were "economic reasons". Besides this, "reliable and accessible managers" was found to be important factor^[15]. In the present study, nearly one-tenth of the producers were not want to be a member of an organization. The main reasons of that is the beliefs that livestock organization are not useful or required. This small proportion of producers may be underestimated or even ignored. However, it should not be forgotten that, they can be convinced with the effective

training programs and/or small amount of financial support. Another finding of the study was that non-member producers had significantly lower socioeconomic status ($p < .01$) compared to member producers. Conversely, Can^[8] did not report significant differences between members and non-members with respect to income and education levels. Alambeigi et al.^[16] reported that the leading factors deterring farmer's participation were determined as lack of partnership culture and a lack of sufficient power in the cooperatives. Another noteworthy finding of the study is a lack of harmony between the objectives of villagers and the cooperatives^[16]. It is indicated that without compulsory membership, organizations must appeal to members and provide valued services and opportunities^[17].

The findings regarding the responsibility level clearly indicate that producers have not fulfilled their legal, democratic and/or social responsibilities. Considering the overall Turkey, forty-six percent of satisfaction may be seen as medium-low or moderate level for the organizations. Because of the fact that "visiting frequency" and "meeting arrangements" are the most negative aspects of the livestock organizations, the quantity and/or quality of these two services should be increased as much as possible. It was reported that nearly 53% of the producers were satisfied from extension services of the Livestock and Dairy Development Department, however, a majority of them indicated that extension workers never visited farms, which is the most important reason for dissatisfaction^[18]. In a study, professional competency rates of Extension Agents were found to be 2.26 and 2.99 (1=very low and 4=very high) from the view of farmers and Extension Agents' perspectives, respectively^[19]. Although it is indicated that agricultural organizations are not effective^[6], however, according to seventy percent of the Turkish producers agricultural cooperatives are successful in their activities^[15]. Another study indicate that the activities of Cattle Breeder's

Association of Manisa are generally good, but price and support policies are not sufficient ^[20].

It is a well-known reality that still East and Southeastern regions of Turkey has the lowest socioeconomic status and this study findings support this argument. The lowest responsibility and satisfaction levels were observed for these regions and differences were found to be significant. Although these levels are close to each other for the other five regions, it is remarkable that Marmara, Central Anatolian and Black Sea regions have the highest levels. MPA has the lowest score both for responsibility and for satisfaction. This may be due to small number of producers in this group. Another reason could be that MPA is a much younger organization than the others.

In this study, almost all of the socioeconomic variables except producers' age and occupational experience were significantly correlated with the responsibility level. Interestingly, only income class and total agricultural area were significantly correlated with satisfaction level. In general, it is normally expected that there are no close relationship between socioeconomic parameters and satisfaction because satisfaction are generally influenced by the services. Österberg and Nilsson ^[21] report that farmers' age has a significant effect on the organizational commitment and trust of the older producer less than younger ones. Producers who are satisfied with the profitability in their organization have a higher score than others ^[21]. Didier et al.^[22] point out that there is a relationship between member producers' commitment and their trust which plays an important role in successful membership. According to Fulton and Giannakas ^[23] member commitment is linked to the cooperative's ability and there is a feedback relationship between them. Gedara et al.^[24] indicated that the most influential factors of technical efficiency are membership of farmer organizations and the participatory rate in collective actions organized by farmer organizations. Ozcatalbas et al.^[25] reported that there was a relationship between family sizes, experience in dairy farming, raising high yielding dairy cows with the daily milk yield, among the variables considered social factors.

Although the results of this study and official statistics clearly reveal a great number of producers are members of any professional organization in Turkey, but livestock organizations' management and financial problems could not be solved properly until now ^[7]. There are many different types of conflicts in economic and political areas that have been observed amongst them. In order to achieve the desirable performance, they need to be complementary to each other, rather than serving as an alternative. Can ^[8] indicated that high rate of member's democratic participation can help to solve current marketing problems in the sector. Idrees et al.^[18] suggested that frequency of farm visits should substantially be increased and model dairy farms should be organized among the producers.

Training of the organization managers are also suggested both for management skills and for pedagogical skills ^[21].

Basing on the findings of the present study, following recommendation can be made; (i) to change the livestock producers' perception and attitudes farm visits and regular periodic meetings should be provided by both livestock organizations and government, (ii) both member and non-member producers should be encouraged to participate in seminars and workshops, (iii) those producers living in East and Southeastern regions of Turkey and having low socioeconomic status should be given priority in training programs.

ACKNOWLEDGEMENT

No conflict of interest was declared by the authors of this paper. Special thanks for important contributions to the Ministry of Food Agriculture and Livestock employees who collaborate with us and facilitate data collection.

REFERENCES

1. **Bernard C:** The Function of Executive. Harward University Press, Cambridge, Massachusetts, US, 1994.
2. **Aytaç Ö:** Organizations: A sociological perspective. *Firat Univ Sos Bil Derg*, 14,189-217, 2004.
3. **Ortmann GF, King RP:** Agricultural cooperatives I: History, theory and problems. *Agrekon*, 46, 40-68, 2007. DOI: 10.1080/03031853.2007.9523760
4. **Çetin B:** Tarım Ekonomisi. 1. Baskı. 209-219, Dora Yayınları, Bursa, Türkiye, 2010.
5. **Demir P, Aral S:** Kars ili süt sanayi işletmelerinde üretim ve sanayi entergrasyonunun ekonomik ve sosyo-ekonomik analizi. *Kafkas Univ Vet Fak Derg*, 16, 585-592, 2010. DOI: 10.9775/kvfd.2009.1179
6. **Yercan M:** Cooperation pattern of Turkish and European Union Agriculture and Agricultural Cooperatives. *Tarım Ekonomisi Derg*, 13, 19-29, 2007.
7. **Can MF, Sakarya E:** Dünya ve Türkiye'de tarım ve hayvancılık kooperatiflerinin tarihsel gelişimi, iktisadi önemi ve mevcut durumu. *Vet Hekim Der Derg*, 83, 27-36, 2012.
8. **Can MF:** A socio-economic analysis of small ruminant breeders' membership relations and organizational effectiveness. *Ankara Univ Vet Fak*, 61, 119-124, 2014.
9. **MPA:** Süt-Bir tanıtım. Milk Producers Associations. <http://www.sutbirlik.com/> Accessed: 28.01.2015.
10. **BLPA:** Birlik kurumsal yapısı. Beef and Lamb Producers Associations. <http://www.tuketbir.org.tr/> Accessed: 07.02.2015.
11. **Israel GD:** Determining sample size. Fact Sheet PEOD-6, Institute of Food and Agricultural Sciences, University of Florida, November, US, 1992.
12. **Karacaoğlu K, İnce F:** Pozitif örgütsel davranışın örgütsel sinizm üzerindeki etkileri: Kayseri ilindeki imalat sanayi işletmelerinde bir uygulama. *SDÜ İktisadi ve İdari Bil Fak Derg*, 18, 181-202, 2013.
13. **TSİ:** İşletme büyüklüğü ve işletme tipine göre işletme sayıları. www.tuik.gov.tr/PrelstatistikTablo.do?istab_id=290 Accessed: 11.12.2014.
14. **Özüdoğru T, Tatlıdil F:** Analysis of the economic impact of Amasya Province Cattle Producers Association on the local farms', *PhD Thesis*. Ankara Univ. Graduate School of Natural and Applied Sci., 2012.
15. **Şahin A, Cankurt M, Günden C, Miran B, Meral Y:** Türkiye'de kooperatiflere ortak olmada ve kooperatif başarısında etkili faktörlerin analizi. *Akademik Ziraat Derg*, 2, 23-34, 2013.

-
- 16. Alambeigi A, Zarifian S, Rezaei A:** Determinants of cattle farmers' participation in farmers organization in Hamadan province of Iran. *JASR*, 8, 125-133, 2008.
- 17. Rickenbach MG, Guries RP, Schmoldt DL:** Membership matters: comparison members and non-members of NPIV owner organizations in southwest Wisconsin, USA. *Forest Policy Econ*, 8, 93-103, 2006.
- 18. Idrees M, Mahmood Z, Hussain D, Shafi M, Sidique U:** General problems regarding extension services with livestock and dairy farmers of Peshawar district, Pakistan. *Sarhad J Agric*, 23, 527-531, 2007.
- 19. Washiun BN, Kwarteng JA, Okorley EY:** Professional and technical competencies of extension agents as perceived by male and female farmers and the extension agents themselves: The need for data source triangulation. *J Agric Biodivers Res*, 2, 11-16, 2013.
- 20. Koctürk OM:** The role and importance of cattle producers association on bovine breeding in Turkey: A case study in western part of Turkey. *J Anim Vet Adv*, 8, 2668-2674, 2009.
- 21. Österberg P, Nilsson J:** Members' perception of their participation in the governance of cooperatives: The key to trust and commitment in agricultural cooperatives. *Agribusiness*, 25, 181-197, 2009. DOI: 10.1002/agr.20200
- 22. Didier VB, Henninger MC, Akremi AE:** The relationship between members' trust and participation in the governance of cooperatives: The role of organizational commitment. *Int Food Agri Man Rev*, 15, 1-24, 2012.
- 23. Fulton M, Giannakas G:** Organizational commitment in a mixed oligopoly: Agricultural cooperatives and investor-owned firms. *Am J Agr Econ*, 83, 1258-1265, 2001.
- 24. Gedara KM, Wilson C, Pascoe S, Robinson T:** Factor affecting technical efficiency of rice farmers in village reservoir irrigation systems of Sri Lanka. *J Agr Econ*, 63, 627-638, 2012. DOI: 10.1111/j.1477-9552.2012.00343.x
- 25. Özcatılbas O, Akcaoz H, Fırat MZ, Kutlar I:** The analysis of socio-economic factors in the dairy farming of Antalya province of Turkey. *J Anim Vet Adv*, 8, 2692-2698, 2009. DOI: 10.3923/javaa.2010.20.26