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A Research on Reasons for Participation of Producers to Agricultural Fairs

Tarımsal Fuarların Bilgi ve Teknolojiye Ulaşmada Yeri ve Önemi

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ABSTRACT

Agricultural fairs, giving a chance to farmers and agricultural suppliers to get together in a certain time and place, allowing direct and efficient information exchange, face-to-face interaction, are significant promotional activities. In Turkey like developing countries, agricultural fairs have a great significance in introduction of new technologies in agriculture. In Turkey, totally 456 fairs were organized in 2015 and 49 of them were related with agriculture and green houses. In this study, individual and enterprise characteristics of the producer visiting the "Field Day" fair held in Tekirdağ-Turkey in 2015, benefits and gains provided to producers, producer perspectives on fairs were assessed. The questionnaires made with 173 producers visiting the fair constituted the primary material of the study. Data were analyzed with Non-Linear Canonical Correlation Analysis (DOKKA). It was observed that the producers with high-level education visited more number of fairs and this producer group consider agricultural fairs as an effective tool in introducing agricultural innovations. In general, producers visited agricultural fairs to see new technologies, to gain a prestige and to reach economically available technologies.

ÖZET

Tarımsal fuarlar, üreticilerin ve tarıma girdi sağlayan firmaların belirli bir zaman ve mekan içerisinde buluştukları, katılımcılara doğrudan ve etkili bir şekilde bilgi sağlayan, yüz yüze iletişimin yapıldığı, üreticilerin bilgi toplamalarına ve araştırma yapmalarına olanak sağlayan önemli bir tutundurma araçlarıdır. Türkiye'de tarımsal fuarlara verilen önem günden güne artmakta ve tarımsal fuarlara katılım oranı yükselmektedir. Türkiye'de toplam 456 tane fuar gerçekleştirilmiş olup, bu fuarların 49 tanesi tarım ve seracılık konularında düzenlenmiştir. Bu çalışmada, Tekirdağ ilinde düzenlenen "Tarla Günleri" fuarına katılan üreticilerin bireysel ve işletme özelliklerinin belirlenmesi, üreticilere sağladığı fayda ve kazanımların neler olduğu, üreticilerin fuarcılığa bakış açılarının ortaya konması ve tarımsal fuarların artan önemini saptamak amaçlanmıştır. Tekirdağ'da düzenlenen fuara katılan 173 üretici ile yapılan anketler, çalışmanın ana materyalini oluşturmaktadır. Veriler doğrusal olmayan kanonik korelasyon analizi (Non-Linear Canonical Correlation Analysis) (DOKKA) ile analiz edilmiş ve yorumlanmıştır.

INTRODUCTION

Agricultural fairs are the places in which innovations, developments and new technologies in agriculture and food industry are exhibited. In other words, they are the places in which agricultural sector meets the producers. Although the primary target of the fairs is marketing and sales, they play a significant role in reaching sectoral

development and information. The origin of the agricultural fairs goes back to 18th century. There are several number of agricultural fairs organized every year and they have thousands of visitors in each time. However, number of studies investigating potential effects of such fairs on visitors is quite limited (Larsen, 2017). Traditional efficiency of agricultural fairs in

bringing the buyers and the sellers together decreased through the development of different agricultural marketing methods, rapid developments in urbanization and information technologies and thus visitor mass in fairs of developed countries turn from rural to urban population (Acharya and Lillywhite, 2016). The change in visitor profile then shaped the agricultural fairs upon different activities and expectations (Mitchell, 2007). Despite all these changes, agricultural fairs still maintain their importance as a meeting point of producers and consumers of the countries in which agricultural sector is still a significant demographic and economic industry.

Expectations of visitors from agricultural fairs and their reasons of visit may provide significant contributions to fair organizers. Therefore, shaping such fairs based on visitor demands and expectations will improve the job success of sellers participating in these fairs. Agricultural fairs should think of consumer-oriented while presenting goods and services to visitors and they should know about the factors playing a role in their decision processes. The primary factor to be considered is to offer or design marketing programs providing consumer satisfaction. In this way, fair can be kept alive and better success can be achieved than the other marketing canals. Through reaching greater number of visitors and consumers, they will have higher reorganization probabilities.

Agricultural fairs are organized either for sales and publicity or for both. Bringing the companies providing inputs to agricultural sector and using the sector outputs together may offer significant opportunities in gaining more information about competitor activities of the sector, in identifying consumer behaviors and tendencies. Therefore, participants use fairs as a strong and effective marketing tool for company introduction, direct sale of goods and services or for finding new business partners. Since there is a chance for quick comparison of goods and services in fairs, visitors, buyers and exhibitor firms are intense interactions and such interactions may then provide great contributions to development of agricultural sector. Such interactions also allow oral interactions of buyers who haven't had a previous chance for a direct contact with the seller firms and may allow them to see how the price of the goods and services, which were previously thought to be high or unavailable, were quite available (Dwyer and Tanner 1999). Fairs are also the places in which the goods and services are presented for the first time, in which visitors can see and test them and buy them from quite available prices since the sales are direct sales in fairgrounds (Ivkov et al. 2015). Fairs allow the buyer to examine the products before to decide, to gather information for their future purchases and to provide

an ambient for sale of goods and services. Gaining information about new products and meeting with expert staff are two important motivations attracting the attentions of the visitors. Therefore, organizers of such activities should always consider informing while creating new marketing strategies.

Agricultural fairs also visited by urbanite as a cultural or training activity in their spare times or to discover new activities with their friends and families. Such visitors mostly are not buyers or not interested in buying the goods and services. In this sense, agricultural fairs have different function in creating rural and urban connection and in informing urbanite about production processes of foods.

In this study, producer perceptions and perspectives of agricultural fairs, their expectations from these fairs were investigated. The study was designed to find out the role of fairs in introduction and acquaintance of innovations, to put forth the producer expectations from agricultural fairs and to determine the efficiency of agricultural fairs in dissipation of innovations in Turkey. The validity of significance of agricultural fairs organized in developing countries in introduction of new technologies in agriculture was assessed for Turkey.

MATERIAL and METHOD

The questionnaires made with producers of Tekirdağ province visiting the 'Field Days' fair organized in Tekirdağ in 2015 constituted the primary material of the study. Questionnaires were made with 173 farmers accepting to participate into the study during the fair.

Non-Linear Canonical Correlation Analysis (NLCCA) was used for data analysis. NLCCA is based on Classical Linear Conical Correlation Analysis (CLCCA) (Özer 2013). Linear conical correlation analysis (CCA) requires other assumptions of the parametric methods like multivariate normal distribution assumption. Linear CCA analyzes the relationships between two variable sets of which one is dependent and the other is independent and defines two new variables called as conical variables for these two variable sets. For conical correlations to be tested, variables should fit to multivariate normal distribution (Sertbarut 2010). Since the majority of data to be analyzed in this study had nominal (intermittent) characteristics, they were not able to fit to normal distribution; therefore NLCCA was used in data analysis. The analysis does not have any assumptions about the distribution of the variables or linearity of the relationships. Besides numerical variables, categorical variables can also be included into analysis and graphical display of analyzed data is possible in two-dimensional maps (Saraçlı 2006), therefore this method was preferred for data analysis.

Data categories and optimal scales are provided in Table 1.

Table 1. List of variables and optimal scales

Optimal Scaling and level	Category	
Age (Ordinal)	20-30 years	31-40 years
	41-50 years	50+ years
	Province	
Place of residence (Nominal)	Village	
	Town	
	Province	
Level of education (Ordinal)	Primary school	Secondary school
	High school	University
	University	
Professional experience (Nominal)	1-10 years	21-30 years
	11-20 years	30+ years
	University	
Land size (Ordinal)	10-50 decare	101-200 decare
	51-100 decare	201-500 decare
	>500 decare	
	University	
Annual agricultural income (thousand TL) (Nominal)	10-50	101-250
	51-100	>250
	University	
Reason of visit (Nominal)	To tour	
	To decide about purchasing after visit	
	To get input from the fair	
Effect of fairs (Nominal)	Insufficient	Efficient
	Satisfactory	Highly efficient
Number of fair visits (Ordinal)	For the first time	4-5 times
	1-3 times	Several times
	University	
Role of fairs (Nominal)	Insignificant	Highly significant
	Significant	

In DOKKA test results, there aren't any test values except for conical correlation coefficient (Özer 2013). Non-linear conical correlation analysis is a technique used to investigate the relationships between two or more variable sets. As it was in several other multi-variate analysis techniques, the method does not have any assumptions and can be applied to categorical data (Filiz 2012).

RESULT

The socio-economic data about the producers participated into the agricultural fair are provided in Table 1. About 77% of the fair participants (producers) were over 40 years of age. Of participant producers, 26% were living in city center. The ratio of university-graduate producers was 16.2%. Almost half of the participant producers had an annual agricultural income of less than 50 thousand TL.

Table 2. Demographic characteristics of households

Variables	Category	Number	Percentage	Variables	Category	Number	Percentage
Age	20-30	19	11	Professional Experience (year)	1-10	24	13.8
	31-40	21	12.1		11-20	27	15.6
	41-50	40	23.1		21-30	47	27.2
	>50	93	53.8		>30	75	43.4
	Total	173	100		Total	173	100
Residence	Village	107	61.8		Land Size (decare)	10-50	49
	Town	21	12.1	51-100		57	32.9
	City	45	26.1	101-200		35	20.2
	Total	173	100	201-500		22	12.7
Annual Agricultural Income (thousand)	10-50	95	54.9	>500		10	5.8
	51-100	50	28.9	Total		173	100
	101-250	23	13.3	Educational Level	Primary School	91	52.6
	>250	5	2.9		Secondary School	22	12.7
	Total	173	100		High School	32	18.5
					University	28	16.2
					Total	173	100

Of the participant producers, 48.6% indicated that they heard about the fair through mass media, 20.2% through chamber of agriculture, 17.9% through leader farmer associations, 13.3% through other farmers. While majority of the producers (72.4%) found the fair successful in terms of fair arrangement, plan and product diversity, 11.6% were found the fair insufficient. While 56.1% of the visitors visited the fair just tour around, 27.2% indicated that they wish to purchase fair products following their visits, 16.8% indicated that they visited the fair since they have some products to purchase. About 25% of producers indicated that this was the first time they participated in a fair. Of these first time participants, 80% indicated that they were quite impressed by the fair.

Participant producers indicated that they will tell about agricultural technologies and production techniques they saw and learn in the fair to other producers. The ratio of producer thinking that the information they share about the fair will be quite effective on the other producers was 51.4%, the ratio of the ones thinking moderate effects was 46.8% and the ratio of the ones thinking slight effects was 1.7%. Of the participant producers, 41% found the fairs quite effective in introduction of agricultural innovations, 50.9% found them effective, 4.6% satisfactory and 3.5% insufficient.

The issues or topics attracting the attentions of the producers the most were also tried to be identified. Agricultural tools and machines attracted the attentions of the participant the most. Tools and machinery were followed by breeding animals, seed/seedling and agricultural chemicals. Of the participant producers, 67.1% found the prices of the products exhibited in the fair reasonable, 19.1% expensive and 13.9% highly expensive.

Of the producers participated in a fair before (129 producers), 40% expressed their satisfaction about the products they purchased from the fairs and about the technologies they applied in their facilities, 60% expressed that the products they purchased from the fairs were not able to meet their expectations. The ratio of the producers indicating significance of participation into further fairs to follow new technologies was 96.5%. About 98.3% of producers also indicated the significant role of agricultural fairs in informing about innovations and being competitive in agricultural sector and recommended all producers to participate in such fairs.

Non-linear conical correlation analysis was performed to assess the relationships between individual characteristics of participant producers (age,

place of residence, educational level) and their opinions about the fair (reason to visit, effect of fairs on introduction of innovations, number of participation, role of agricultural fairs). The seven variables were converged though 86 iterations and object scores were determined and the best solution was achieved through minimizing loss function. Mean loss value for variable sets was calculated as 0.28 for the 1st dimension and 0.36 for the 2nd dimension. The eigenvalue was 0.712 in the 1st dimension and 0.638 in the 2nd dimension. Total compliance value was identified as 1.349. Since the greatest value can maximum be 2, the value found herein (67%) was within acceptable limits.

For the first dimension, place of residence yielded the greatest coefficient (0.616) and it was followed by their ages (0.418) and educational levels (0,06). For the second dimension, number of participation had the greatest coefficient (0.388) and it was followed by the role of agricultural fairs (0.364).

The graph for variable categories revealed that (Figure 1);

- The producers visiting the fairs just to tour around; expressed fairs as an efficient activity in presentation of renovation, they were mostly living in villages and towns, participated in several fairs and mostly high school and university graduates.
- The producers to decide for purchasing the products they saw after visiting the fair; were living in city centers, mostly over the age of 50 years, visited agricultural fairs 4-5 times before, generally primary school graduates.
- The producers came to purchase a certain product; expressed the significant role of agricultural fairs in informing about innovations, participated a few fairs before (1-3 times), mostly secondary school graduates.

The relationships between the opinions of the participant producers and their facility characteristics were also investigated in this study. Object scores were determined with 33 iterations of non-linear conical correlation analysis on two data sets. Mean loss value was calculated as 0.29 for the 1st dimension and 0.34 for the 2nd dimension. Eigenvalue was identified as 0.702 in the first dimension and 0.652 in the second dimension. Total compatibility value for the analysis was 1.354. Since the greatest value can be maximum 2, the present value (68%) was within acceptable limits. Land sizes had the greatest contribution (0.786) to the first dimension. The producer opinions about efficiency and benefits of the fairs in introduction of innovations had the greatest contributions (0.585) to the second dimension.

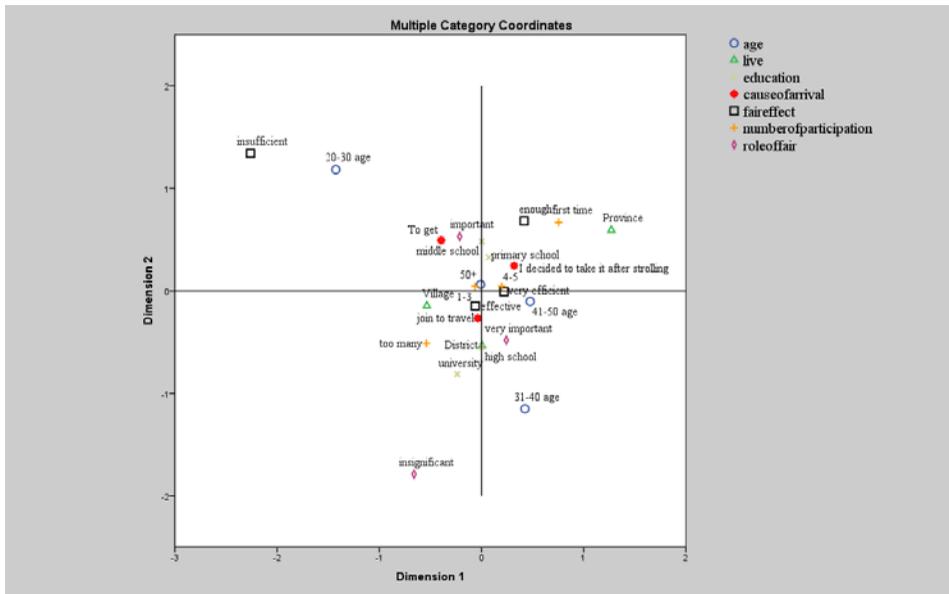


Figure 1. Graphical presentation of individual characteristics of participant producers and their opinions about the fair

The graph for variable categories revealed that; (Figure 2)

- The producers who participated in fairs several times, thinking that the fairs had a significant role in informing about innovations, with a land size of between 101-200 and between 201-500 decare, with annual average income over 250 thousand TL visited the agricultural fairs to purchase a product.
- The producers who indicates the efficiency of the fairs in introduction of innovations, with a small land

size (10-50 decare), with an annual agricultural income of between 10-50 thousand TL were thinking to decide for purchasing after visiting the fairs.

- Facility characteristics of the producers participating in fair just to tour around were not able to be estimated. These producers generally participated in a few fairs before or not participated in fairs before. However, these producers indicated that fairs were quite effective in introduction of innovations and played a significant role in informing about such innovations.

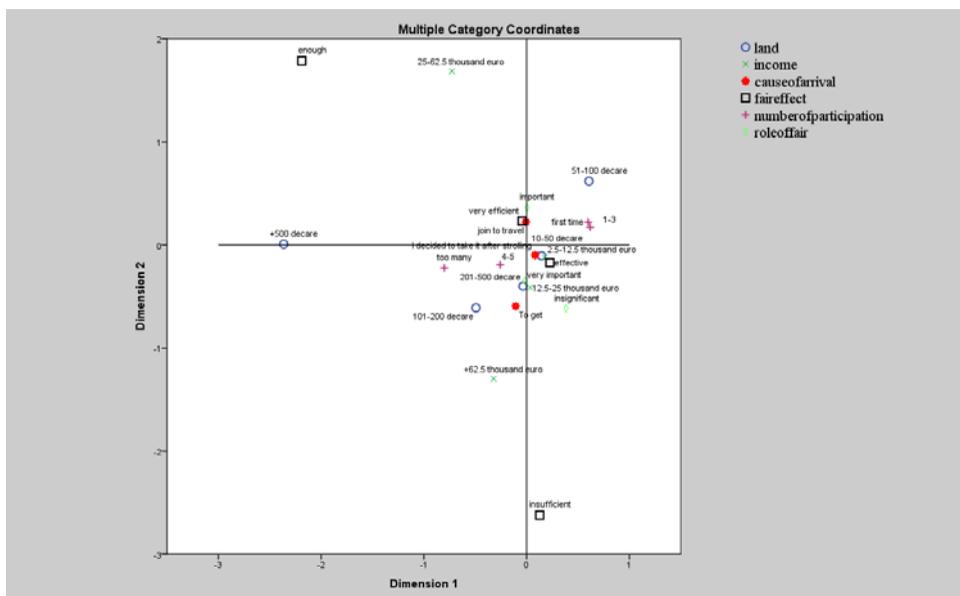


Figure 2. Graphical presentation of facility characteristics of the participant producers and their opinions about the fair

CONCLUSION and DISCUSSION

The present study was conducted to investigate perceptions, expectations and perspectives of producers participating in agricultural fairs. Various concrete outcomes were reached in this study. Present findings revealed how significant the fairs were in introduction of innovations and informing producers about such innovations.

Individual and facility characteristics of producers participated in "Field Days" fair organized jointly by German Agricultural Association (DLG) and Leader Farmer Project (ÖÇP) were determined, the contributions and benefits to producers were identified and producer perspectives about fair organizations were put forth.

It is possible to gather the producers participating into the fairs under 3 groups: The first group was composed of producers participating into fairs to be informed about innovations, living generally out of the city center, able to get into social contacts outside the environment they live in, with high levels of education. The producers in this group have participated into several fairs before. They usually pass the information they saw or learned from the fairs to the other producers of the place where live in and gain a social prestige in their regions. Such an outcome indicates that fairs could be used as an activity to gain a social prestige among the producers.

The second group was composed of the producers to decide about purchasing after visiting the agricultural fairs based on their economic and facility structures. This producer group is usually composed of individuals over the age of 50 and living city centers. They have limited land sizes (10-50 decare) and agricultural income levels of between 10-50 thousand TL. They were usually primary school graduates. These producers participate into different agricultural fairs and try to purchase technologies from which they believed to get economic benefits from these fairs. Besides informing small-producers

about innovations, agricultural fairs play a significant role also in providing economically available technologies to small producers.

The third group was composed of the producers expressing great significance of agricultural fairs in introduction and informing about innovations and visiting the fairs to purchase new technologies. They usually have large land sizes (100-500 decare) and proportionally to their facility size, they have quite high annual agricultural income levels (more than 250 thousand TL). These producers participate into several fairs in a single year.

Effects of agricultural fairs on producers can be gathered under 3 main headings:

- Acquiring technology,
- Gaining social prestige,
- Meeting small-producers with economically available technologies.

All findings revealed that regardless of individual and facility characteristics, majority of the producers indicated that agricultural fairs had a significant role in introduction of innovations and informing participants about these innovations. Present data and outcomes were subjected to on-linear conical correlation analysis to present them graphically. Since a test value was not achieved in this analysis, it should be noted that the analysis was a pre-assessment method. Insufficient number of national or international studies about the present subject matter also limited the discussion of present findings with the earlier ones.

Present findings may reveal significant guidance to the firms participating in agricultural fairs to develop marketing strategies for upcoming fairs based on individual and enterprise characteristics of visiting producers. In another perspective, organization of fairs in accordance with the expectations of producers will improve the visiting potential of the producers.

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