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Research Article

The Study on Components of the Rural Structure in Turkey

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This study conducted the current state of the rural structure in Turkey. Primary data were obtained through face-to-face surveys with the target group in 2018, and secondary data were obtained from the State Institute of Statistics and State Hydraulic Works. In the last two decades' rural migration reached a level that adversely affects agricultural production. For the 15-45 age group, which is defined as an efficient labor force in agriculture, the city meant benefiting from better jobs, education, and health services. According to land size distribution agribusiness were concentrated in the range of 20-49 decares. It has been determined that the mechanization tendency is the most in this group. The ownership of 2-5 parcels is highest in this size group, and the 6-9 parcel range followed this value. The share of agribusiness that small from 50 decares in the total number of enterprises is 64.8% and the share of these enterprises in the total agricultural land has been determined as 21.34%. It is seen that 1.6% of the arable land is not used. Studies such as land banking can play a key role in improving on land tenure system. These applications require large investments and significant legal regulations.

Keywords: *Rural components, land tenure system, agricultural enterprises, parcel numbers, rural structure, Turkey*

INTRODUCTION

The fact that the need for agricultural production in the world is increasing, has brought up the agricultural structure disorders. Because structural defects in agriculture adversely affect agricultural production directly and indirectly. These effects manifest themselves in issues such as food security and social income distribution in the short term, and social development and population mobility in the long term (Ozturk and Menguloglu, 2008; Long and Liu, 2016).

To increase agricultural production, it is necessary to use the soil efficiently, increase production, and evaluate it economically, and in terms of social aspects, regulate the land ownership and saving method according to the principles of social justice, create employment opportunities, ensure property security, improve the land regime throughout the country and develop the agricultural structure (Owen, 1998; Colakoglu, 2007).

Almost all of the people living in the villages (and rural neighborhoods) and a significant portion of the population earn their living directly or indirectly from agriculture. Increasing the standard of rural living and feeding people properly is possible primarily by increasing the yield per unit area in agriculture. (Kuslu *et al*, 2017a; 2017b). Increasing the yield is mostly achieved by eliminating the defects in the agricultural structure (Kuslu and Yaganoglu, 2007).

In order to evaluate the agricultural structure in terms of the current and the required situation, it is necessary to consider the population, land assets, capital, agricultural technique and production pattern. (FAO, 2018). In this case, when the agricultural structure is mentioned, the size of the enterprises, the land saving systems (tenantry, share-cropping farming and other land management systems), the width of the land, the fragmentation of the land, agricultural tax, credit, marketing and various services such as research, education and technical assist-

ance provided by the state to the agricultural population are understood. (Kuslu, 2019).

In this study agricultural structure and size of business that is in structural components scope, the numbers of the parcel owned by enterprises, and land usages are examined in Turkey.

Main Agricultural Structure Components in Turkey

The definition of the rural settlement and changes of the rural population over time, circumstance and classification of the lands, land use and tenure systems, the status of agricultural enterprises in terms of the land size they are cultivating, and agricultural infrastructure problems, in Turkey, were examined in this part.

The definition of the rural settlement and changes of the rural population over time in Turkey

The Republic of Turkey was proclaimed on 29 October 1923 and the definition of rural and urban was conducted by Village Law No. 442 of 1924. Accordingly, the settlements with a population less than 2000 were determined as "villages". The law states that "people who have common properties such as school, place of worship, pasture, grassland, coppice (forest area used for livelihood) and who live in collective or scattered houses form a village with a vineyard, garden and fields".

While the village and the urban area distinction until the beginning of the 2000s were done clearly in Turkey, in 2004, the Metropolitan Municipality Law No. 5216 was enacted. While the village and the urban area distinction until the beginning of the 2000s were done clearly in Turkey, in 2004, the Metropolitan Municipality Law No. 5216 was enacted. In this law, the concept of the village has gained a different dimension. Because the villages within the boundaries of the metropolitan municipality are named as neighborhoods. Normally, "neighborhoods" are sub-settlements of cities and that are not required to have agricultural occupation. Villages are agricultural settlements whose statuses are determined by law. When the villages turned into neighborhoods, the population living in the villages was removed from the agricultural population category and included in the urban population.
It is necessary to determine the usage status of the agricultural land and the people living in the agricultural place correctly. In the world in general, agricultural space should not be considered only as the living space of people working in agriculture. (Kuslu and Ertem, 2019). Those who live in rural areas can be listed as below; those who engaged in agricultural activities such as floriculture, livestock, vegetable and fruit production for additional income, who live in this area for a short or long time since the natural quality of the agricultural space is not damaged and there is no environmental pollution, who come to the agricultural area for tourism during holidays, and who only carry out agricultural production. (Kutuk, 2015).

Referring to Turkey Demographic data shows that over the years the rural population gradually decreased. (Figure 1). In 1929, when the first census was made, the rural population constituted 75.77% of the total population. According to data from 1990, the village is 40.40% of Turkey's population lived in the village, rural hamlets, and kom settlements, this proportion has dropped to 35.09% in 2000 (TURKSTAT, 2020). In 2004, this value was determined as 14%. Considering the data of TURKSTAT, it is observed that there is a sharp decrease in the rural population after this year. It is certain that the agricultural population is decreasing today, but it is difficult to estimate its full value. Steps need to be taken to redefine rural neighborhoods (with agricultural occupations) within the boundaries of the metropolitan municipality. The rate of the population living in rural areas and engaged in agriculture is around 4.7% in the European Union (EU) countries and around 2.4% in the United States (USA) (FAO, 2018).

The most important reason for the decline of the rural population over the years is the population shift to the city or other countries (especially the worker migration to Western European countries in the 1960s). The migration movement gained momentum in the 1980s (Kutuk, 2015; Yilmaz, 2017). In fact, the gradual decline of the rural population is seen as a measure of a country's industrialization. According to general acceptance, as the labor shortage occurs in the industrial centers, the rural population is shifted to this area (Hayli and Canpolat, 2018; Tu *et al*., 2018). The continuous transfer of excess labor force in the agricultural sector to the industrial sector helps to withdraw small and uneconomic agricultural enterprises from production and increase the income of farmers. But in this case, uncontrolled migration to urban areas in the 1980s in Turkey (especially in big cities like Istanbul and Izmir) has emerged in the form (Yilmaz, 2017; Guler and Kahya, 2019). The main reason for this unhealthy migration in rural areas is the low income due to inadequate production in agriculture (Kuslu, 2009).

Circumstance and classification of the lands in Turkey

In Turkey, the refugee problem emerged in recent years in addition to population growth, urbanization, and industrialization, negative effects on the soil "population-food balance" disrupt. Prevention of pressure on agricultural land seems to be the main problem. (FAO, 2018; Yologlu and Zorlu, 2020). The use of agricultural lands for non-agricultural purposes tends to increase all over the world. Therefore, the conservation of land resources is not only an ecological problem but also an economic and social problem.

Agricultural lands must be grouped according to their land use capability classes and used by their capability. Lands

suitable for agricultural cultivation classes are I, II, III, and IV classes.

The lands between I and IV classes are in suitable conditions for cultivated plants, meadows, pastures, and forests. Class V lands are not used in agriculture because they are swampy lands.

The lands of VI and VII classes can be cultivated and used in agriculture, but it is not appropriate to cultivate these lands technical and economic aspects. The VIII class lands are used as natural life and water collection basins. It is not right to use other lands for agricultural purposes, and it is also very wrong to use agricultural lands for non-agricultural purposes.

According to the land use capability classification, Turkey's soil conditions are shown in Table 1.

Table 1: The land capability classes in Turkey

Land use capability	Land use classes	Area (ha)	Percentage
Suitable for cultivation	I	4 973 162	6,53
	II	6 705 943	8,81
	III	7 532 049	9,89
	IV	7 163 439	9,41
Subtotal		***26 374 593***	***34,64***
Unsuitable for cultivation	V	165 076	0,22
	VI	10 189 857	13,39
	VII	36 232 151	47,59
Subtotal		***46 587 084***	***61,20***
Unsuitable for agriculture (natural life)	VIII	3 163 654	4,16
Subtotal		***3 163 654***	***4,16***
Total		**76 125 331**	**100**

A portion of the agricultural lands has become unavailable for reasons such as erosion, pollution, etc. in Turkey. Since the land use planning studies in the country have not been completed yet, regardless of their capable class, the agricultural lands are misused in a way that cannot be recycled with public and private sector investments and zoning plan applications. Similarly, besides natural disasters such as earthquakes, landslides, and floods, there is also a waste of resources. The transformation of the irrigated areas into industrial and residential areas are examples of this.

Land use and operating systems in rural areas

Considering all villages (and rural neighborhoods) and provinces that less than 25000 inhabitants it is seen that the total number of enterprises and agricultural holdings show significant differences in terms of agricultural regions in Turkey. (Figure 1).

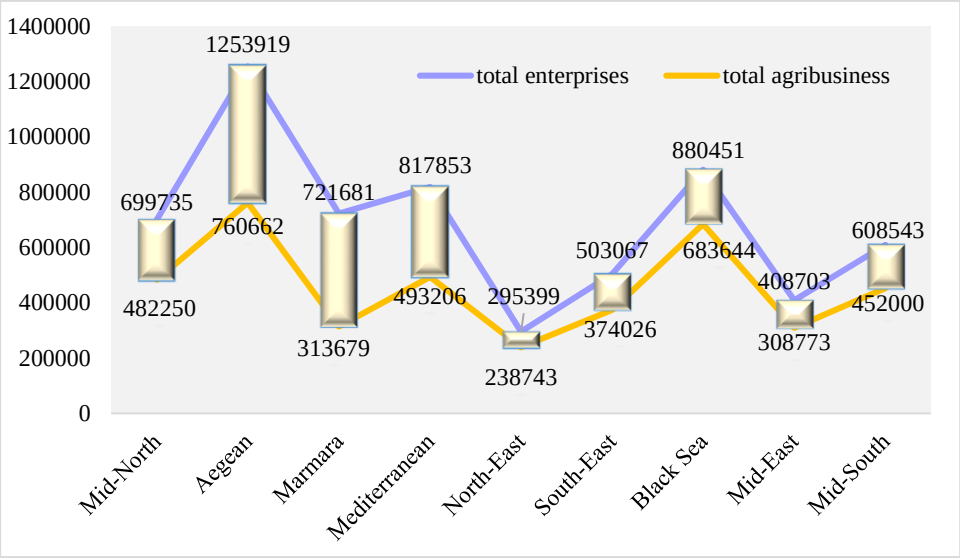


Figure 1: The numbers of businesses and agricultural businesses by region in Turkey

As can be seen in Figure 1, dependence on agriculture is less in the Aegean, the Mediterranean, and the Marmara regions. The values of dependency on agriculture are the lowest in the Aegean Region and the highest in the North-East Region.

According to statistics, the land of 37 472 rural settlements in Turkey is 33.13% of the arable land. (TURKSTAT, 2020). The distribution of these areas according to the usage patterns is given in Figure 2 As can be seen from the figure, there is unused land of 1.6%, although it is suitable for agriculture. Field agriculture has the largest share in the utilization of agricultural land with 69.3%. This is followed by fruit and other permanent plants with 11.9%, the fallow area with 9.7%, the permanent meadow area with 2.4%, and the vegetable-flower gardens with 2.2%.

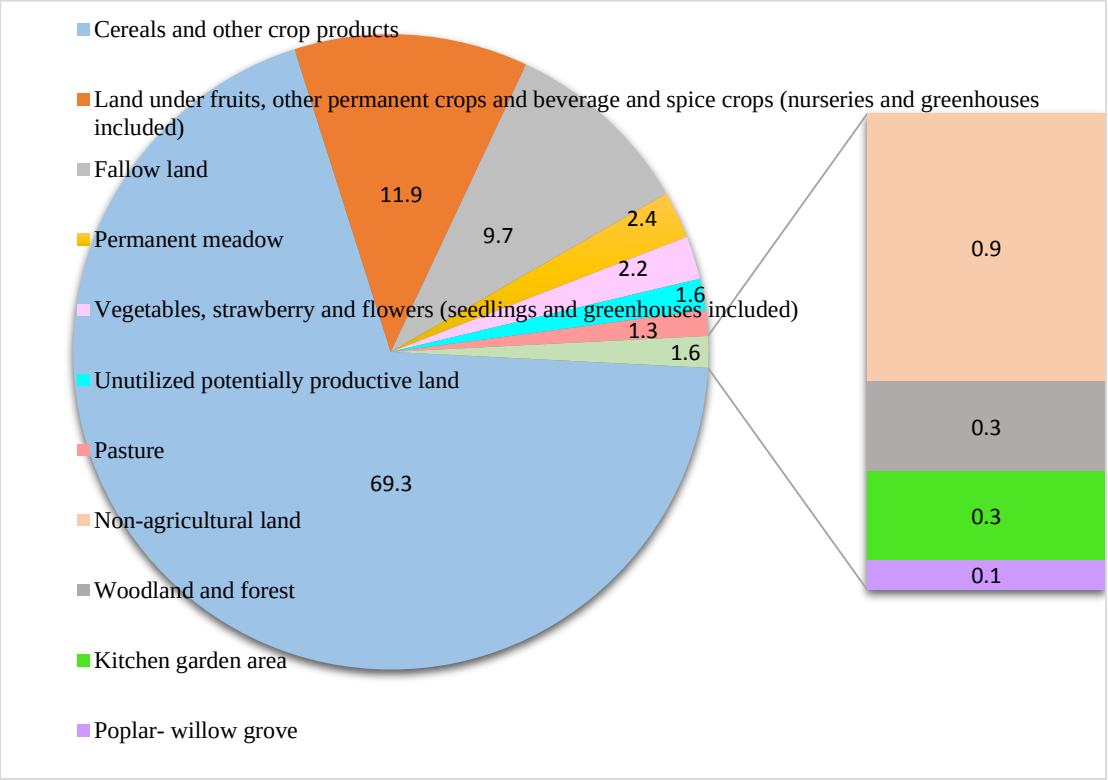


Figure 2: Proportional distribution of rural land in terms of usage patterns (%).

According to TURKSTAT data, in Turkey, there has been a change in 0.9% of the total land in terms of usage in the last decade. 64% of the total land subject to change consists of agricultural land and 7% of it consists of woodland and forest land. 29% of the altered agricultural land and 16% of the total woodland and forest land altered have been transformed into a settlement and tourism area.

The status of agricultural enterprises in terms of the land size they are cultivating

The numbers of rural settlements and agricultural enterprises in Turkey have increased continuously (TURKSTAT, 2020). While the number of rural settlements was 36371 in 1991, it increased 3.03% to 37 472 in 2001, and the number of agricultural enterprises increased 4.15%, from 3943340 to 4106983 for the mentioned years. Since the definition and status of the village have changed due to Law No. 5216 enacted in 2004, today these values cannot be estimated precisely. Studies on this issue are still being carried out within the framework of the State Planning Organization (SPO) and National Rural Development Strategy (UKKS) plans (SPO, 2020; UKKS, 2020).

As in many countries, in Turkey, the land size is the most widely applied method of the agricultural holdings classification. Although the size of the agricultural enterprises naturally varies according to the regional climatic conditions, soil characteristics, crop pattern, market conditions, the amount of land cultivated is accepted as the most important factor in this classification (FAO, 2018; Tas, 2016). The number of agricultural holdings, parcels that agribusinesses owned, and the agribusiness sizes in Turkey are given in Table 2.

Table 2: Number of enterprises, number of parcels, and land size distributions according to the size of the agricultural enterprises in Turkey

Enterprises size groups (da)	Owned parcel number groups											
	1			2 – 5			6 – 9			9+		
	A	B	C	A	B	C	A	B	C	A	B	C
< 5	109908	109908	268491	66144	168999	207521	1771	12713	5490	67	751	107
5 – 9	106281	106281	673205	171639	469102	1188561	11449	77 61	82 900	964	10830	7004
10 – 19	127000	127000	1596963	348942	1036362	4823240	53356	371732	791987	10211	114616	162322
20 – 49	141821	141821	3992568	694323	1916357	1830398	162582	114941	5443253	51808	622985	1793549
50 – 99	62494	62494	3990636	304717	1024813	2044754	131736	945986	215509	61048	802574	4469589
100 – 199	26804	26804	3388659	167413	555762	2216319	80861	585617	1099998	52265	712887	7329892
200 – 499	11689	11689	3046850	72501	244519	1933166	37599	268821	1031688	31810	472025	9381940
500 – 999	1967	1967	1350336	6747	23219	4136452	3931	28194	2650085	404781	82609	3081684
1000–2499	492	492	632313	1517	4885	2000096	1134	8572	472245	1057	18810	1372276
2500+	27	27	825912	128	39338	1057319	93	788	1941393	29	453	497092
Total	**588483**	**588483**	**1976493**	**1734161**	**5444449**	**9355946**	**484512**	**344965**	**4290968**	**214040**	**2838544**	**2809545**
A: Number of enterprises B: Number of parcels C: Total area (da)												

In Turkey, the agricultural holdings according to land size divided into five classes as dwarf (< 20 da), small (21–500 da), medium (501–1000 da), large (1001–5000 da) and very large (>5000 da) agricultural holdings. Small agricultural enterprises (family enterprises) are also classified among themselves as small (21–50 da), medium (51–100 da), and large enterprises (101–500 da) (Kuslu and Yaganoglu, 2007).

The production unit in the agricultural sector is agricultural enterprises. Therefore, the economic growth of the agricultural sector depends on the growth of these enterprises in production. The most important disorder preventing productivity increase in my agricultural sector is "small enterprises". These businesses, smaller than the economic unit size, generate a large part of agricultural holdings in Turkey (Kuslu *et al*., 2017b). As can be seen in Table 2.9, the distribution of agricultural holdings is concentrated in the group whose size is between 20 and 49 da with 29.33%. This value was followed by the size groups at 50-99 da and 10-19 da, respectively, with rates of 20.67% and 19.73% (Figure 3).

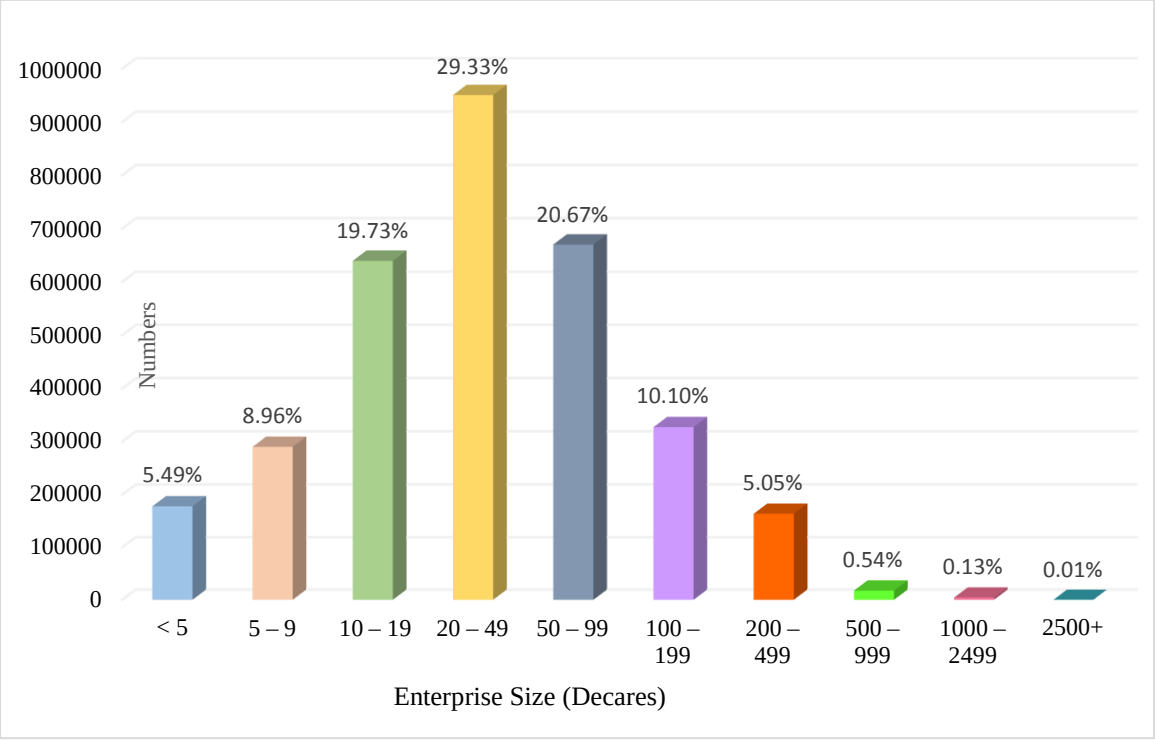


Figure 3: The general state of company size in Turkey

It can be seen from Figure 3 that as the number of parcels increases, the parcel size decreases. According to the values calculated from the same chart, the rate of agribusinesses cultivating a single parcel to the total number of the enterprises is 19.48%, the share of these parcels in the total parcel is 4.78% and the ratio of the corresponding agricultural lands in the total area is 10.72%. Similarly, for enterprises that cultivated 2-5 parcels, the mentioned values were found to be the highest with 57.40%, 44.19%, and 50.76%, respectively. The enterprises that cultivated with more than 9 parcels, constitute 7.08% of the total enterprises. The number of parcels owned by these enterprises is 23.04% of the total number of parcels, and they cultivate 15.24% of the total agricultural lands. The average parcel size is 33.59 da in the first group of enterprises operating a single parcel, and 17.18 in the second group of enterprises that process 2-5 parcels, and in the third and fourth group enterprises these values are 12.44 and 9.89, respectively (Figure 4).

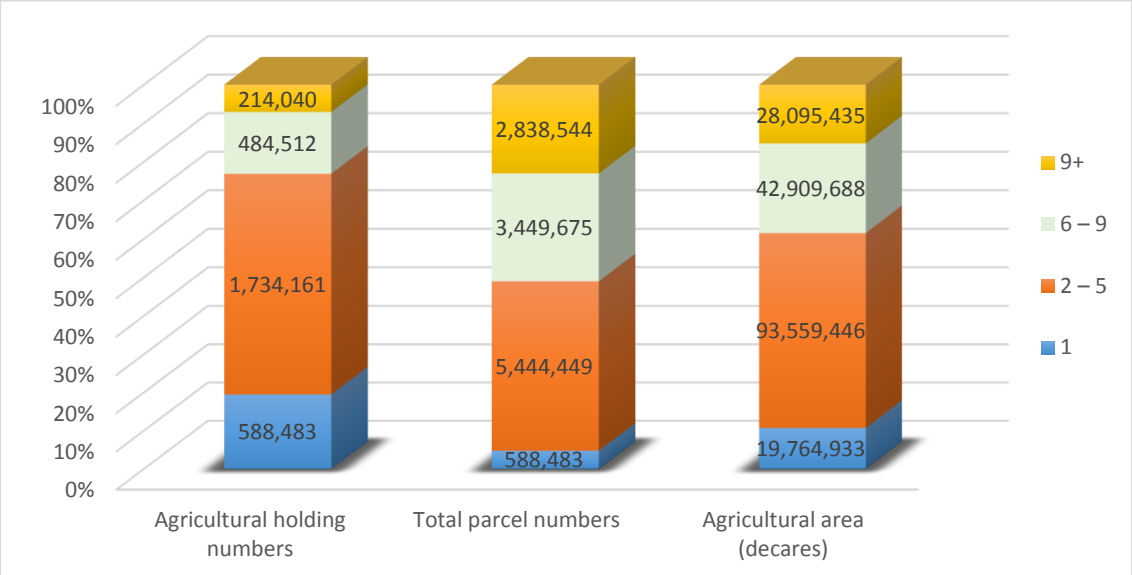


Figure 4: The status of agricultural enterprises based on the total number and size of parcels in Turkey

Agricultural infrastructure problems in rural areas

As in the world, in Turkey, small enterprises in agriculture, as well as large land ownership, also creates problems, which inhibits the rational use of land. In the large land ownership scheme, landowners do not need to apply intensive farming methods to increase soil productivity. Although soil fertility is low, there is no pressure to invest and change technology and increase soil productivity, as the width of the land can provide sufficient income for the owner. Some of them are operated by tenants, sharecroppers, splitters (Quadflieg 1997, Anonymous 2000d, Dijk 2002).

The fact that agricultural lands are fragmented, scattered and small makes it difficult to rearrange the enterprises, to improve heavy working conditions for farmers by increasing work efficiency, to construct cheap irrigation and drainage systems, and to take precaution for soil-water conservation (Kutlu 1984).

"Rural infrastructure arrangements" can all be called as all measures that ensure the utilization of land and water resources in the most economical way in agricultural enterprises, the protection and development of these resources, and the structural and physical development of agricultural enterprises. These measures, which affect production and productivity in agriculture, can be summarized as proper use and development of soil and water resources, irrigation and drainage services, provision of drinking and utility water, physical planning of rural settlements, planning of farmyards (Okuroğlu and Yağanoğlu 1998).

CONCLUSION

Factors affecting agricultural production directly or indirectly create the agricultural structure of a country. It is a scientific fact that infrastructural deterioration in agriculture is one of the causes of uncontrolled rural migration and irregular and unplanned urbanization and damages villages or rural neighborhoods, in Turkey as well as the world. In this study components of the rural structure in Turkey were discussed. Migration from rural areas to urban areas in Turkey began in the 1950s, it has accelerated since the early 1970s. In the last two decades' rural migration is reached a level that adversely affects agricultural production. Rural migration has increased the average age of the rural population. Implementation of projects for rural landscaping gains importance in preventing uncontrolled migration of rural population to the city. Especially, land, which is the main component of the agricultural structure, usage forms, land size of agricultural

enterprises, number of parcels per farm, land tenure systems, and land management models were examined in this study. The small size or dwarf of the agribusiness, the fragmentation of lands, and erosion are some of the undesirable reasons. The existence of these conditions significantly affects the rate of urbanization by reducing productivity in agriculture. The elimination of these disorders requires financially large investments and serious legal changes. The works should be started by clarifying the pending definitions (rural area, rural settlement, village, etc.). It is essential to activate the innovative thinking approach in all studies for rural areas. Under this heading, reconsideration of land management systems, effective use of agricultural lands, and protection at the same time should be discussed in detail.

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