

Investigation of the Effects of Rural Land Arrangements on Rural Development

Sabahattin AKKUS and Tayfun CAY, Turkey

Key Words: land management, land arrangement, land consolidation, rural development

SUMMARY

The lands where rural population whose production activities based on agriculture live and work are called rural lands.

The importance of rural lands has increased much more than in the past when changing economical and social conditions in the world and in our country is taken into consideration.

For that reason the rural lands should be arranged in a plan. These arrangements are important not only for our country but for the whole world. One way to reduce the density of population in urban areas is to make rural lands more liveable and preferred places. In this sense, it is very important to arrange and expand the village settlement areas, construction of the sub-structures in villages and agricultural lands, agricultural modernization, making recreational areas, forestation and land consolidation works.

Acceleration of land consolidation, strengthening producers' organizations, improving education and communication activities play important role in rural development in reducing the problems of agricultural sector. In this paper, the issue of the land consolidation work and development of people in rural lands are evaluated in social and economical aspects by using questionnaires.

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1. INTRODUCTION

The increase of population and reduction of natural resources in our country as it is in the world have forced human being to arrange rural lands in a plan and find solutions for the problems of rural residents.

Effective use of rural areas and to increasing the productivity may be possible by the investments to be done on people and the environment. The investments will raise the living standards of people's life in social, cultural and economical sense.

Rural land arrangements have differed in time in the frame of technological developments and socio-economic conditions. However, the arrangement and development of rural lands would be more suitable with an integrated approach was handled in the European Union Rural development Policies. Land improvement, re-subdivision (Land Consolidation), farmer subventions, good quality agricultural products, village renewal and development, diversification of agricultural activities, agricultural water resource management, improvement of substructure, incitement of tourism activities and craftsmanship, protection of environmental and agricultural production, precautions against natural disasters, etc. in rural lands are collectively called integrated approach (**Magel, 2005**).

Changes related to rural development in the world closely concerned Turkey since the 35% of the population live in rural areas. General socio-economic status and identifying the problems of rural dwellers and finding permanent solutions are primary issues of the agenda of Turkey. Therefore, the efforts of investigations on the effects of rural land arrangements on rural development have been accelerated.

National Rural Development Strategy has been implemented since 2006 to solve the problems occurred from the rapid transformation of agricultural structure and to form rural development projects in the frame of EU accession process considering international responsibilities of Turkey.

The studies on establishing rural development agency and paying unit where related institutions took place in the process of decision is foreseen within the scope of legal and institutional regulations have continued for increasing the effectiveness of rural development policies.

The issues of acceleration of land consolidation work, strengthening of producer organizations, and activation of education and communication activities for reducing the rational productivity problems in agriculture sector which is one of the most important economical activities were dealt with primarily.

The tasks related to settlement of closed KHGM (General Directorate of Village Services) were given to the Ministry of Public Works and Settlement. The other tasks related for villages were given to the Metropolitan Municipalities in Istanbul and Kocaeli, and in other cities these tasks were given to Provincial Special Administrations. In parallel, in order to improve the substructures of villages, the source was directly assigned to Provincial Special Administrations and the local administration unions in 2005 and 2006, and Substructure Support Project of Villages (KOYDES) was put into practice.

However, the forms of fragmented and scattered settlements of rural areas have effectively and widespread limited the physical and social substructure services.

Economic and social substructure work has continued for our citizens that want to return their villages who had to abandon their villages due to terror in East and Southeast Anatolia Regions in the past (URL 1).

Considering that 40 % of people in the world will live in rural areas by 2025, the importance of developing rural areas especially in developing countries will be understood once again. (URL 2).

Technical problems of agricultural structure have still been continuing, on the other hand 65% of production has been taking place in dwarf-sized farms which are 1 to 50 acres however, downsizing and fragmentation in farms due to inheritance law has been still continuing. In addition since the population of living and working people is too many and their education level is low, the labour productivity is very low. Because of the technical failure of agricultural structure, population feature, low income and the pressure of unemployment, migration to towns has been seen and the problems of rural areas have been transported in this way (Dernek, 2006).

Turkey is approximately 78 million hectares. The 28.5 million hectares of these lands are agricultural lands. 14.5 million hectares of these lands are irrigable lands, but economically irrigable lands are 8.5, million acres. About 5 million hectares of the lands are under irrigation so far. Consolidation is applied on only 1 million hectares of lands. As a country, we are in the early stages of land consolidation (Sert, 2006).

Law No. 5403 Land Law in our country gave a significant place on land consolidation and regulations were prepared. The most important part of the regulation is an application that is defined as land consolidation. The application allows people and institutions who need land consolidation to appeal, and if their demand is reasonable the consolidation service is carried out by the Ministry of Agriculture.

There are also serious difficulties in producing a healthy food because when a small parcel is poeticised by chemicals, the neighbouring parcels are seriously affected.

A new concept is the protection of natural areas. Biodiversity in the project area, i.e., product variety can be protected. The area that will be separated for all kinds of living creature's in nature to avoid losing can be estimated, and you can leave natural area when you apply land consolidation in a place and you can let nature to continue its balance. In Turkey, the Lower

Seyhan Plain in Adana province was totally opened to irrigation from 50s to 70s. Once opened to irrigation, not even a square centimetre of empty space is left; every part is used for agriculture. Today, there are no birds perching, no insects or snakes can be seen. In 1972, white flies gave a serious damage on agriculture and, 10 percent of the country's budget was spent for this and it took at least 6-7 years (**Erdogan and Ceyhan, 2010**).

2. THE IMPORTANCE OF RURAL AREA ARRANGEMENTS

Long-Term Development Strategy covering the period 2001–2023 identified its basic aim on Turkey's European Union accession process as economical and social re-establishment and its transformation into the information society, and to increase its effectiveness as a regional power in 2010s and become a globally effective state in the world in 2020s. The following matters have importance related with the long term development strategy of Turkey in rural area arrangements:

- Increasing the contribution of rural areas to the national economy, and reducing the development difference between the regions and rural-urban areas by means of increasing the living quality of rural society,
- Attaining a consistent dynamic of migration trends, reaching a population structure that aiming balanced and sustainable development,
- Reducing the negative socio-economic and environmental conditions that may arise in the process of agricultural re-establishment,
- Protection, development and sustainable use of environment and natural resources,
- Ensuring economic and social convergence and acquis alignment with the EU

In Turkey where 75 % of the population lived in villages in 1950, this proportion dropped to 56 % in 1980, and dropped to 35 % in recent years. However, despite such a rapid change in the population, an important part of the population about 23 million people currently live in village settlements status. In recent years, although there is slowing down acceleration of migration from villages to cities, individuals in the age group of working age has continued the tendency to leave the villages. The effects of migration on rural economic and social structure vary considerably among regions.

While the villages in the Marmara region, the province of Ankara, the Aegean and Mediterranean coasts receiving immigration, the rest of the country is giving migration (**URL, 3**).

The heart and the soul of countries are located in rural areas. Therefore, everything all we can do should be done to prevent people to migrate to the cities. If this does not happen, the cities will not be beautiful places anymore, and they will drown. If all the people live in cities, cities would not be alive, and have a terrible image. The real reason behind Europe's decision on making more things on rural areas is this (**Magel, 2005**).

The work of the following are required to make rural land arrangements:

1-Personal Information

2-Substructure and general condition of rural settlement

3-Degree of soil productivity

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- 4-Topographical structure and land levelling suitability
- 5-Land irrigation availability and management
- 6-Diversification of agricultural activities and agricultural products suitable for the land
- 7-Marketing of grown products
- 8- Social and cultural activities in rural areas (villages),
- 9- Protection of historical places and tourism and encouraging craftsmanship activities
- 10-Protection of environmental and agricultural production, preparing opportunities for organic farming
- 11- Measures to be taken against the natural disasters
- 12- Making comparison before and after the arrangement and making the statistical data.

This work will give us important bases on developing rural areas. In general, rural-urban migration will largely be prevented by the implementation of these substances. Social disparities between people living urban and rural areas will be prevented. Happiness and peace of the people living in rural areas will bring the food security. Therefore, the regulations in rural areas have great importance.

3. APPLICATION

3.1. Introduction of the Application Area

Tarsus (Tarsos) which is located 10 km away from Mediterranean coast of Turkey has 129 villages. The survey on the effects of investments made by the State on people living in rural areas was conducted in the villages of Yanıkkısla, Çavuslu and Kocomerli. These villages of Tarsus in a distance of 27 km to the north. All kinds of fruit, vegetables and grain products are grown in these lands. Tarsus is the largest province of Mersin and it is also one of the largest districts of Turkey. The population is around 330 thousand. It has a very rich history and an important city for divine religions.

A cave in Tarsus is one of a number of places claiming to be the location of the Seven Sleepers which took part in Khef Sura of Koran. Muslims have been visiting this important centre.

Tarsus has a great importance since it is the birth place of Saint Paul, one of the founders of Christianity. Saint Paul lived in Tarsus. This centre is considered as a place of pilgrimage for Christians. There is Church of Saint Paul and Saint Paul's Well in Tarsus.

In addition, the world's first sewage, Roman Road and a Roman Bath are in Tarsus.

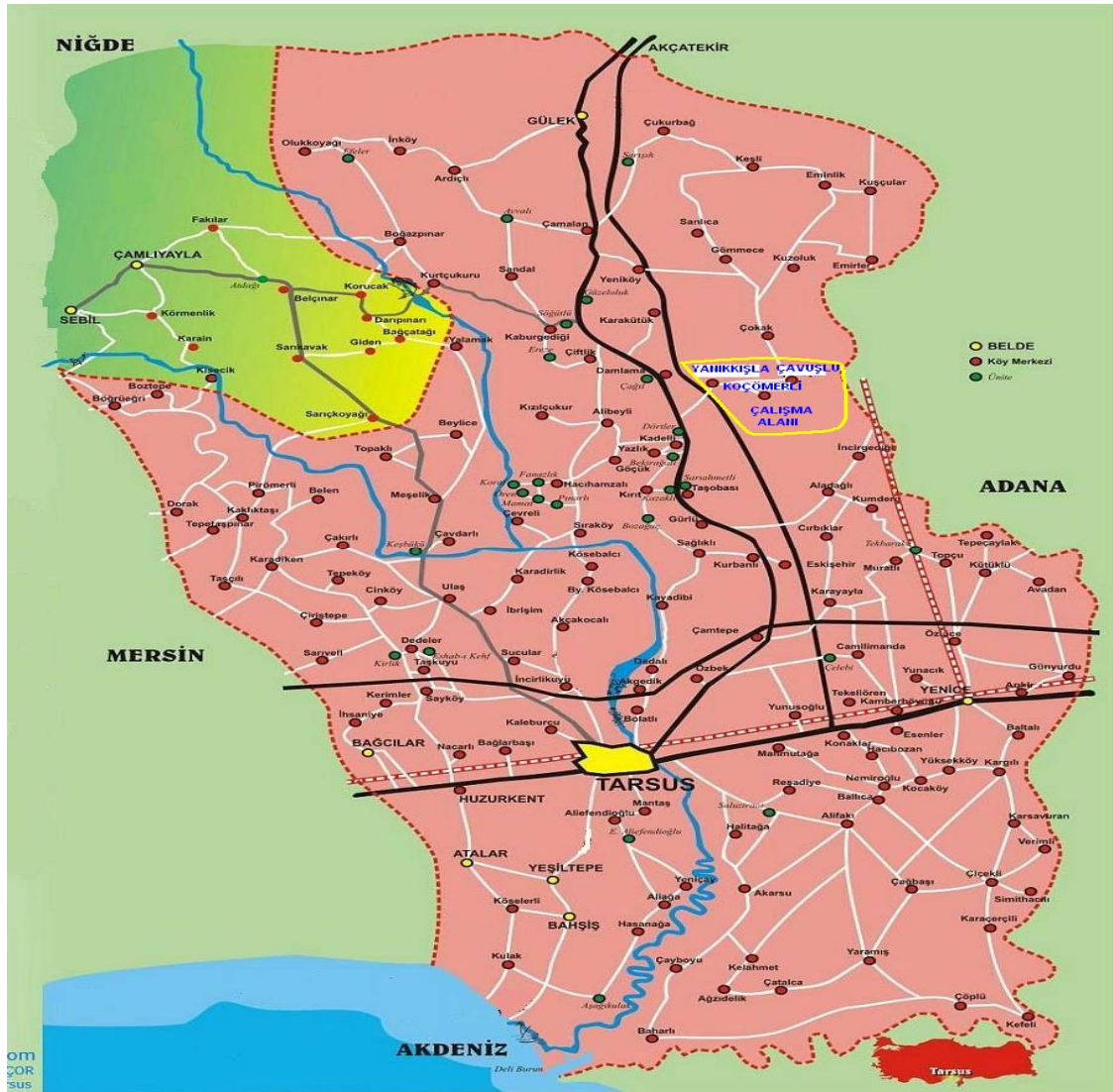


Figure 1. Tarsus and its villages



Figure 2. Irrigation area

All kinds of agriculture products from these fertile lands and the abundance of raw materials for industry, has played the most important role in development of the industry.

The vast majority of goods sold abroad from Tarsus are agro-based industrial products. Textile products cover 65% of total exports. The advanced sectors are food, construction and metal. France, the Netherlands and the United States are countries which Tarsus has been exporting its products.

104,902 hectares of agricultural land, 62,786 hectares of forest and heath, 4080 acres of meadows and pastures, 30,632 ha of non-agricultural land of total 202,400 hectares of the district. The production of the soil has increased by means of irrigation, fertilization and application of new techniques. The most efficient and the vastest agricultural plain lands of the Mersin province are in Tarsus region. However, the climate of this land allows every type of farming. In the spring first, vegetables and fruits, then vegetables, cherry and grape are taken from the plain.

In winter, orange, tangerine and lemon and other winter vegetables are planted. Every kind of field products like cotton, sesame, and soybean crops such as cereals oilseed cultivation can be done in these fertile lands. Some very productive Holstein-type cattle are raised in

breeding cattle stations in the villages of Tarsus. Our study area is 27 km. the north side from this plain land.

According to a legend, Tarsus was established by Triptolemos, the son of Demeter the Goddess of Agriculture. Tarsus was an important agricultural centre in ancient times, and this feature is depicted on the coins of ancient Tarsus (URL 4).

4. EXPLANATION OF THE SURVEY CONDUCTED ABOUT RURAL AREA ARRANGEMENTS IN YANIKKISLA AND CAVUSLU POND AREA

The evaluation of the survey about rural area arrangements in Yanıkkısla and Cavuslu Pond Area selected as an application place is conducted in respect of personal information of farming enterprises, status of using the property and products.

4.1 Personal Information Of Farm Owners

Table 1: Personal Information

PERSONAL INFORMATION	AVERAGE AGE	EDUCATION STATUS			PROFESSION(%)				AVERAGE CHILDREN	EMPLOYED MEMBERS OF FAMILY(%)	FARM WORKERS (%)	URBAN DWELLERS (%)	RURAL DWELLERS (%)
		PRIMARY	HIGH SCHOOL	UNIVERSITY	FARMER	TRADESMEN	RETIRED	OFFICIAL, WORKER					
	44	67	27	6	58	20	16	6	3	41	42	27	73

As shown in table 1 above, educational status of people living in this region have 67% of primary school graduate, 27% of high school graduate, 6% of university graduate. Only 58% of the population engaged in agriculture is farmers. 20% of those work as a farmer and on the other hand work in other jobs at the same time. 16% of those are retired and dealing with agriculture at the same time. 6% of those engaged in agriculture and work as a civil servant or working in a factory.

The average number of children in families is 3. The rate of workers that work in the field and in different areas is 41%. The rate of people work only in fields is 42%. The rate of people live in a city and deal with agriculture is 27%. The rate of the residents of the village is 73% . The average age of field owners in this region is 44.

4.2 Property Use Status Of Agricultural Enterprises

Table 2: Status of Property use

STATUS OF LANDS	NUMBER OF PLOTS			PLOT SHAPE	LAND SIZE (1 Acre:1000 m ²)			HIRED LANDS	PARTNERSHIP	LEVELLED LANDS (%)	UNLEVELLED LANDS (%)	FERTILE LANDS (%)	LESS FERTILE LANDS (%)
	(1-2) %	(3-4) %	(5-10) %		REGULAR SHAPE(%)	(1-10) %	(11-20) %						
	24	20	56	80	2	24	74						

When we consider agricultural enterprise owners in this region in Table 2, 56% of those have 5 to 10 parts of plots in different places. 44% of those have 1 to 4 parts of plots in different places. 80% of lands have regular shape (square, rectangle, etc.). 2% of owners have lands from 1000 m² to 10000 m². 74% of owners have lands from 1000 m² to 20000 m² or more.

In addition, 38% of those use hired land and 18% of those cultivate with partners. 48% of the lands are levelled whereas 52% of the lands are unlevelled. 70% of the lands are productive whereas 30% are less productive.

4.3 Crops Grown In Agricultural Enterprises

Table 3: Crop Types

CROP TYPE	GRAPE %	GRAIN %	OLIVE %	FIG %	POMEGRANATE %	COTTON %	VEGETABLE %
	31	24	17	12	11	3	2

Crops grown in this region are 31% grape, 24% grain, 17% olives, 12% figs, 11% pomegranate, 3% cotton, 2% various vegetables (Table 3).

According to the surveys, the lack of substructure, no cultural activities, no training seminars were given on livestock farming was understood. Insufficiency of ponds in irrigation was seen.

Irrigation canals were made before but these canals are destroyed completely and farmers installed pipes instead of the former canals and they activated the irrigation by their efforts.

However, farmers irrigate by using water tanks where no irrigation canal or irrigation pipe exist.

The rate of the lands where irrigation made is 20% and there is no change in irrigation work because maintenance of irrigation pipes where they pass is done by real estate owners. Since there is no planned maintenance program, too much water is lost. The productivity on irrigated lands can be 2 to 5 times more than dry lands.

More than 50% of land owners can't use modern agricultural tools. 90% of products are sold to the merchant coming from outside, 10% are sold in a foreign market. Organic agriculture is made in the region in the rate 30%. 80% yes, 20% no are obtained from the villages of Yanıkkısla, Cavuslu and Kocömerli for land consolidation.

Main problems in this area are as follows:

- Insufficiency of field paths
- Irrigation
- Unemployment
- Marketing (being not able to sell crops in their real value)
- Lack of rural guards
- Lack of pasture
- Inappropriateness of rural settlement plans for living conditions.
- Education
- Animosity occurred from field borders
- Problems between the joint owners of land on land use
- Being not informed enough about agricultural activities in rural areas.

Investments done up to now by the state are as follows:

- Road, village drinking water, electricity
- Yanıkkısla and Cavuslu ponds
- Incentives given to poultry farms
- Agricultural Credit Cooperatives
- 2 classroom primary school
- planting trees

Expectations of the people of this region from the state;

- Dairy cooperatives
- Sheep and cattle sale-purchase areas
- Grape festivals and social activities
- Looms for women
- Being informed by the authorities on various topics
- Tax reduction in diesel fuel
- High school for this region
- Market for the crops
- Cadastre updating
- Construction of land routes

- Low interest rates, long-term incentive credits

5. EVALUATION

Rural land arrangements have been continuing in the villages where the survey was conducted as well as in other parts of Turkey. The investment plans of Rural Substructure Projects have been done in these villages according to the criteria like population size, importance of the needs, terrain conditions, and agricultural production capacities and so on. Rural road network is to be established in accordance with road network, the construction of new asphalt road according to priorities, repairing the existing ones, the elimination of deficiencies in the drinking water which is one of the basic needs, indoor network construction, investments in irrigation works. Priority will be given to projects to provide public services and citizen satisfaction. Physical arrangements and technological substructure work of this matter of public facilities are closely observed. On the other hand, KOYDES investment programs started in 2007 have been continuing (**URL 5**).

Considering that the rate of those living in rural areas in Turkey is 35%, as seen above in Table 1, 27% of people that should live in the village live in the city. The mean age of people work in Agriculture is 44. 70% of those graduated from primary school and 42% of the people are in other profession group due to the economic and social difficulties. Migration to the cities is continuing. The majority of young people do not want to live in villages. As in Table 2, land size of the owners is about 20-30 acres whose number of plots is more than 5 as it is in other parts of Turkey.

It is seen from the survey results that the necessity of land consolidation is understood and people reported that they would give permission for land consolidation work.

Authorities in this area left 300 partridges in Cavuslu village within the scope of biological control against agricultural pests. Because of the negative environmental conditions and unconscious hunting, the generation of partridge and other birds in the woods decreased. So, harmful animals that threaten human health and agricultural products sprung. Birds are very important for the preservation of natural balance. One of the works carried out for protection of natural habitats of wild animals is partridges. The partridges will be very effective in struggling harmful animals. Tick, grasshoppers and a variety of harmful animals, including bark beetles will be hunted by partridges (**URL 6**).

Housing projects for the seasonal workers was started in Tarsus. Application of "Modern Life Project" was started for agricultural workers and their families living in tents, in primitive conditions aimed to be accommodated in healthier conditions. Application area as a pilot village is Kargılı village. In this project is including tents for 48 families, each with 45 square meters with bathroom, resting and game units, toilet and study hall. The aim is to give better conditions for seasonal agricultural workers and their children, providing them to live in humane conditions (Tuncay, 2010)

6. CONCLUSION

The most important livelihood source of the villages in the foothills of the Taurus Mountains to the north of Tarsus is agriculture and livestock breeding.

The population of the villages of Yanıkkısla, Cavuslu ve Kocömerli where the survey was conducted is about 1350. Total of amount of agricultural land is about 40 thousand hectares. The 30% (1000–2000 hectares) in 4000 hectares of the lands of the villages where agricultural production is made can be irrigated. Some parts of the irrigated lands can be irrigated by water tanks 3–4 times a year. In this region, by increasing the rural development programs, in the framework of the programs, dry lands will be turned into irrigated farmlands, fragmented, scattered plots will be consolidated, the road and water network will be developed by this way, the income will be significantly increased, and this will provide high living conditions in rural areas. These work shows how rural land arrangements contribute to rural development.

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