An Investigation of Reallocation Model Based on Interview in Land Consolidation

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INTRODUCTION

Land consolidation studies, with the purpose of providing to develop land and water resources and to improve the agricultural structure in Turkey, have been done by rearranging possessions of lands in rural areas.

Land consolidation involves changing land ownership by redistribution so that individual farmers own fewer, more compact, contiguous and larger land parcels. The economic rationale for land consolidation has been recognised by many governments as the potential for improved efficiency and competitiveness has led politicians and planners to favour such schemes in many parts of the world. Many countries, including Turkey, enforce consolidation on farmers to mitigate the problems associated with the present spatial configuration of landholdings as a result of current inheritance laws.

In this study how preferences, which are taken from farmers, are evaluated to estimate and prepare the first distribution plan, according to size of parcels and has been tried to find the results which have been obtained.

TAKING PREFERENCES of FARMERS (INTERVIEW)

During the application of project, farmer's requests must be evaluated. During land consolidation projects which were done in the past and which are being done at present, taking farmer preferences and persuading farmers are phases which take long and have difficulty. *New parcellation* must be arranged according to farmer's preferences, holder of right, equal to total value of parcels and by taking into consideration important facilities like wells, buildings, vineyards and orchards...etc.

Farmers must be asked to choose parcel and there must be *at least three alternative preferences* for each parcel to choose to be performed healthily and to decrease farmer's objection to new parcellation, to provide the most suited and acceptable parcellation.

Subjects which must be paid attention during interview

Family members who have got lands in enterprise and to be determined the degree of relationship of them;

- Family members are asked to prefer jointly owner or self ownership deed of lands,
- Family members are asked that where and in how many pieces of lands of enterprise they want to gather,
- Family leaders are asked in which blocks, where, they want to gather parcels beside which parcels according to order of preference,

and order of preferences are determined.

Project engineers can provide to collect parcels at different places in a single parcel by persuading and directing the family leader as possible as they can. Binding conditions, like certainly parcels must be collected beside the greatest parcel or parcels are given wherever they want, parcels will be left at their place must not be constituted, because in the event that promises or wishes during interview are not executed faced objection of farmers beside lost of confidence. It must not be forgotten that ¾ of success is based on psychology and diplomacy, ¼ of success is based on technique.

Making distribution and new parcellation plan according to interview

First of all the project area are divided in blocks by the help of roads and channels. Parcel value number of all parcels and blocks are calculated by multiplying areas of cadastral survey parcels and blocks then dividing a hundred.

$$PDS= (PE*F)/100$$

F=Parcel area
PE=Land index
PDS= Parcel value number

By benefiting from these results the quantity of deduction is calculated.

Net quantity which will be given to enterprises after deduction is calculated. After these operations distribution is done according to the first preference of the enterprise number one the first appropriation is finished which based on the first preferences of all enterprises. After this operation appropriation column of the owner of enterprises must be zero. Naturally there are excess and absence in blocks. Excess and absence in blocks must be equal.

The second preferences of lined up interviews reexamined to finish blocks. The first preferences of farmers, who choose blocks that have great area, are cancelled. And if they request from the empty block in the second preference, these blocks appropriate to them. Even if there are excess an absence in blocks the third preferences of enterprises are examined and same operations are repeated, too After block distribution an output data of these studies are taken. By the help of these output data in virtual environment on the window which shows cadastral survey parcels, blocks and degrees, which collide with each other, transform PDS's to lands.

Parcellation operation block by block is finished by using parallel and perpendicular division of lands into parcels according to the transformed areas.

APPLICATION

Agalar Village of Ilgın District of Konya city which has terrestrial climate is selected as application area (Figure 1). Wheat, barley and sugar beet are important crops. Sheep/goat and cattle are raised because of large postures in big proportions. Essential water resource is the channel system from the Lake Cavuscu, which is constructed by DSI (State Water Affairs). Watering method, is watering through open channels.
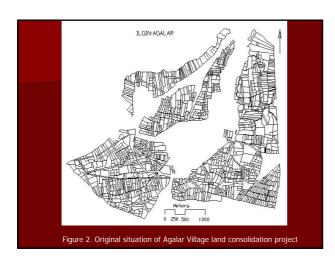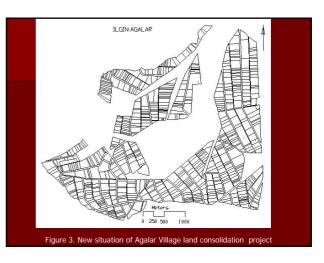

Figure 1. Study area

The area of land consolidation project in Agalar Village is 1403 hectares (Fig 2). 1114.2 hectares of this is agricultural area and 288.8 hectares is posture area. There are 748 enterprises (farmers)in land consolidation area. These enterprises have 1552 cadastral survey parcels.

After consolidation 728 parcels in 28 blocks are formed. Participation portion ratio to common facilities is 0.017 %.Consolidation ratio is 50%. The original of Agalar land consolidation project is shown in (Fig 2) and the new situation of Agalar land consolidation project is shown in (Fig 3).

Figure 2. Original situation of Agalar Village land consolidation project

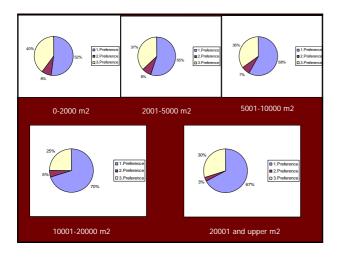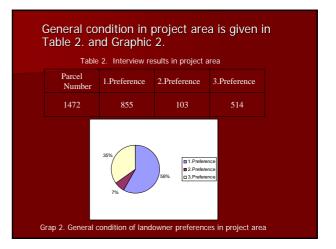Figure 3. New situation of Agalar Village land consolidation project

In Agalar village 704 of 748 farmers were interviewed. It is 95 % and over the criteria that is requested by government. Parcels in Agalar village classified into five groups according to their size and groups are evaluated in their class, 80 posture areas are left out of study in land consolidation area.

Values in Table 1 were obtained according to the interview results. Statistical evaluations are given in Graphic 1 .a,b,c,d and e.

Table 1. Interview Results According to Size of Parcels

Group Number	Size of Parcels(m²)	Parcel Number	1.preference	2.preference	3.preference
1	0-2000	313	163	25	125
2	2001-5000	430	237	34	159
3	5001-10000	441	256	31	154
4	10001-20000	197	138	10	49
5	20001 and upper	91	61	3	27

0-2000 m2   2001-5000 m2   5001-10000 m2

10001-20000 m2   20001 and upper m2

General condition in project area is given in Table 2. and Graphic 2.

Table 2. Interview results in project area

Parcel Number	1.Preference	2.Preference	3.Preference
1472	855	103	514

Grap 2. General condition of landowner preferences in project area

CONCLUSION

In Konya-Ilgın Agalar village which was selected as application area, The ratio of the first preference is increased as the areas of parcels get bigger, the small area parcels solely given their the third preferences. According to results, we guess that planner prefer to give the parcels, that have great area, from their blocks and planner did not take risks.

The secondary preferences of farmers are examined and it was determined that they are the most productive areas of project. It was examined that farmers were emotionally find land consolidation project as an opportunity. As it was understood from graphics the ratio of secondary preferences is very low.

The distribution of parcels which have small areas were done according to their third preferences because of this the most of objection petitions were written by owners of these parcels.

In this project totally 46 people objected to distribution studies. This is 6%. It is seen that 94 % of distribution which was done according to interviews. This ratio is 10 % in questionnaires which were done to evaluate the results of consolidation project with farmers. The satisfaction ratio of this project is 92 %. 23 objection petition were found suitable and their requests were done exactly, 4 of them were approximately done and 19 of them were rejected.

The owner of enterprises and administrative office were pleasure technically from the parcellation plan which was constituted according to interview basis.

THANK YOU VERY MUCH FOR YOUR ATTENTION

For more information

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