

Changes in agricultural holdings structure during the transition period in Slovenia

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„What was expected, what we observed,

the lessons learned.”

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ABSTRACT

The paper presents the socio-economic restructuring of Slovene agricultural holding due to different transitional processes, such as denationalisation and privatisation, as the biggest property right transformation processes in Slovenia during transition period, as well as agricultural property transactions and will discuss other factors (loss of jobs, unemployment, accession etc) which influenced the recent development. At the end also the future possible development trends in agricultural holdings structure are presented.

Keywords: farm structure, transition, socio-economic types of farms, Slovenia.

1 INTRODUCTION

In this paper we present the socio-economic development of private family agricultural holdings in Slovenia in consideration of wider framework of structural change within the entire Slovene economy.

Slovenia was even during socialism a country with existing and implemented limited private property rights on agricultural land and forests. During the socialist time, although 80% of all agricultural land was privately owned, the structural changes in the agricultural sector were almost not present, as there was a size maximum of farms, and private owners were deprived on the land market in favour to state farms. Because of the similar property structure as in neighbouring Austria before the Second World War the 80% of all agricultural area and forests were all the time operated by private farmers, who also owned their land. The agrarian reforms, which happened after year 1945, first affected agricultural holdings which owned 45 ha of total land (agricultural and forests) or 25 ha of arable land. Later in 1953 the 10-hectare agrarian maximum of arable land was introduced. All these actions have resulted in compulsory expropriation for certain proportion of farmers as well as all landowners and Roman Catholic Church.

As already over 80% of agricultural land was always in private hands, the privatization of agricultural land wasn't an issue in Slovenia during the transition. The only important transition process regarding the land ownership was restitution of nationalized land used by the state farms to its original owners or their legal ancestors. The denationalisation and privatisation, which started in 1991, comprised only 17% of all agricultural land and forests of the country where forests represented approx. 70%. So those processes could not significantly influence the restructuring of Slovene agricultural holdings, but it definitely brought some important dynamics into the process.

2 STRUCTURAL CHARACTERISTICS OF SLOVENIAN AGRICULTURAL HOLDING

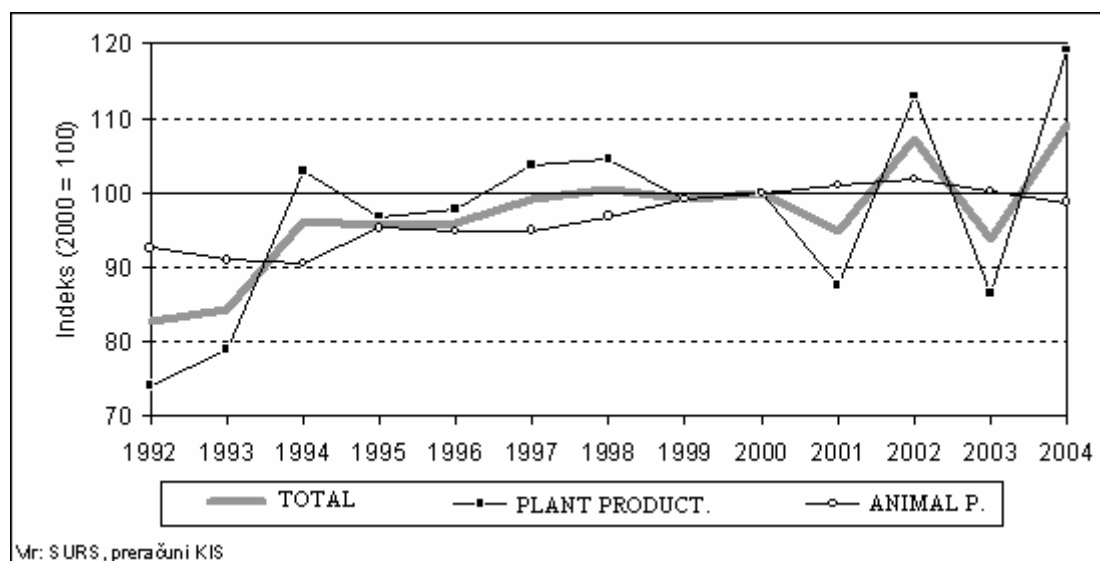
2.1 General characteristics of agricultural holdings in Slovenia

According to Agricultural census from 2005 (SURS 2006), in Slovenia there are 77,050 family farms and 133 agricultural enterprises. Average size of family farm is 6.3 ha of utilised agricultural area (UAA), what means that since last census, the size of Slovenian farms slightly improved (average UAA in 2000 was 5.9 ha of agricultural land per holding (SURS 2003)). The distribution of agricultural holdings by size classes of UAA is shown in figure 2.

40 % of all country's surface is used for agriculture and two thirds of all agricultural land is located in less favoured areas – LFA (hilly and mountainous regions, Carst regions and other LFAs). Agricultural holdings in Slovenia use slightly more than 950,000 ha of agricultural land. Family farms operate 96.7% of total utilised area, on average they manage total of 10.6 ha of land and. Average size of agricultural land managed by agricultural enterprises is 304.5 ha of total land and 288 ha of utilised agricultural area per agricultural enterprise (SURS 2006). This statistical data show that average size of agricultural holdings in Slovenia is practically incomparable to the size of agricultural holdings in EU. With average size of 5.6 ha of utilised agricultural area, holdings in Slovenia are 5.3 times smaller than the average of EU Member states, and even 12 times smaller than in the UK, which has on average the biggest holdings in the EU. The size structure is similar only in some Mediterranean EU Member States, i.e. Greece, Italy and Portugal, where production on smaller farms is more specialised and aimed at intensive production (horticulture, wine growing, fruit growing) (SURS 2002).

Intensity of livestock breeding on family farms is also low. On average they breed 5.7 livestock unit (LU) per family farm. Almost two thirds of family farms breeds less than 5 LU and over a half of them breed less than 2 LU. Despite the fact that the number of large farms engaged in animal production has been growing, their share in the size structure is still low. Only about 5 % of farms have over 20 LU.

Figure 1: Indices of agricultural production for period 1992 – 2004 (MAFF 2006)



The first preliminary analysis of agricultural situation after Slovenia's accession to EU shows that the accession had even some favourable influence on the sector. As we can see from the figure 1 the production on aggregate level even increased (with significant increase in plant production and some decrease in animal production). In comparison to EU agriculture, Slovene agriculture produce 10 % lower gross domestic product (GDP) on hectare of agricultural land or 2.2 times less on employed person in agriculture. Decreased number of employed in agriculture appears to be a general national trend.

As many as 31.9 % of holders of family farms declared that for them farming is the only activity, for 14.8 % holders farming is a principal activity.

Average age of holders of family farms is 56.7 years, 84 % of holders is without agricultural education with only practical experience. At least secondary or upper secondary education has only 2.5 % of holders of family farms.

During the transition the number of farms decreased around 2.7 % yearly (table 1 and 2). This continuing process was unsupervised and for this reason, the effects of improved agrarian structure too small or in some cases even negative. In many region causes continuing depopulation, overgrowth and decline and not improvement of agrarian structure (KOVAČIČ UDOVČ 2003). Surprisingly this process somehow stopped with the accession (table 3) what results in the average size of agricultural land and utilized agricultural land per farm to stay unchanged, only structure of farms per size classes minor change towards bigger farms (see figure 2).

Table 1: Number of farms and their size structure in period 1991-2005
(KOVAČIČ UDOVČ 2003, SURS 2000, SURS 2006)

Year:	Number of farms	Average size (ha)	
		Agricultural land	UAA
1991-ECF*	111,951	7.8	4.1
2000	86,336	5.9	5.3
2003	77,138	6.8	6.3
2005	77,173	6.8	6.3

* ECF = European comparable farms; according to population census 1991

Table 2: Number of family farms by utilised agricultural area, Slovenia 1991, 1997 and 2000 (SURS 2003)

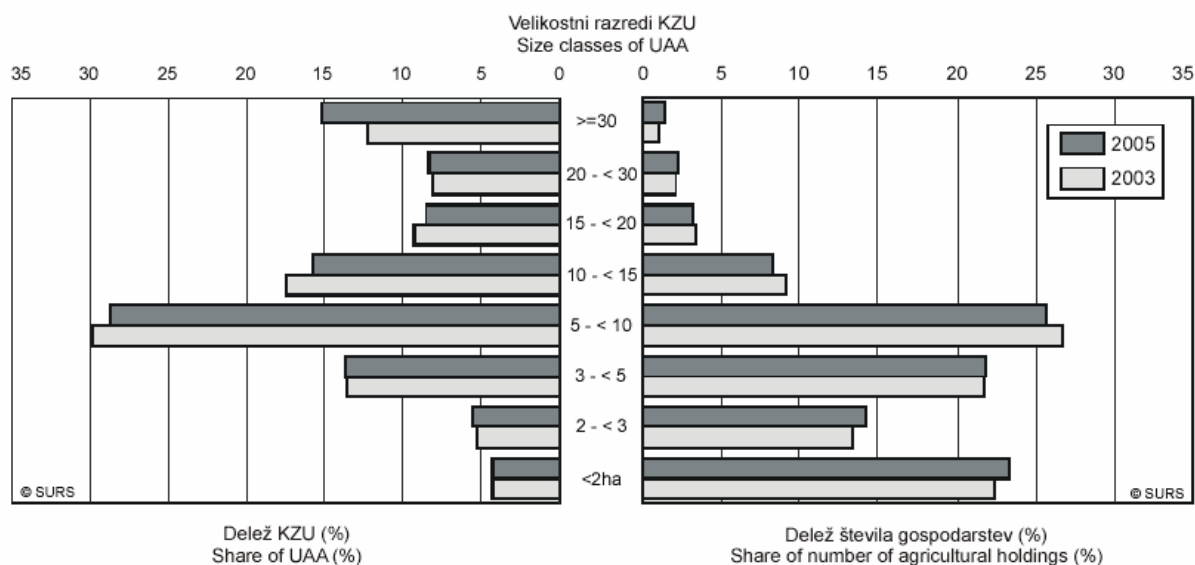
	Number of family farms			Share (%)		
	1991	1997	2000	1991	1997	2000
TOTAL	111951	90611	86336	100,0	100,0	100,0
Without UAA	20	34	16	0,0	0,0	0,0
up to 1,00 ha	15576	8448	7998	13,9	9,3	9,3
1,01-3,00	41062	31040	27251	36,7	34,3	31,6
3,01-5,00	22868	20073	18128	20,4	22,2	21,0
5,01-10,00	24251	22469	22053	21,7	24,8	25,5
10,01-20,00	7251	7619	9158	6,5	8,4	10,6
over 20,00 ha	923	928	1732	0,8	1,0	2,0

Table 3: total and agricultural area of agricultural holdings, Slovenia 2003 and 2005 (SURS 2006)

2003			2005			
površina area		kmetijska gospodar- stva agricultural holdings	površina area		kmetijska gospodar- stva agricultural holdings	
ha	delež share %		ha	delež share %		
926821	100	77138	921312	100	77173	Total utilised area
526247	57	77126	526660	57	77143	Total agricultural area
486473	52	77126	485432	53	77141	Utilised agricultural area (UAA) ¹⁾
38021	4	15758	38524	4	21089	Abandoned agricultural land
1753	0	1627	2705	0	1945	Other non-cultivated agricultural land
385934	42	68659	376741	41	68935	Forest
14640	2	74863	17911	2	75070	Barren land

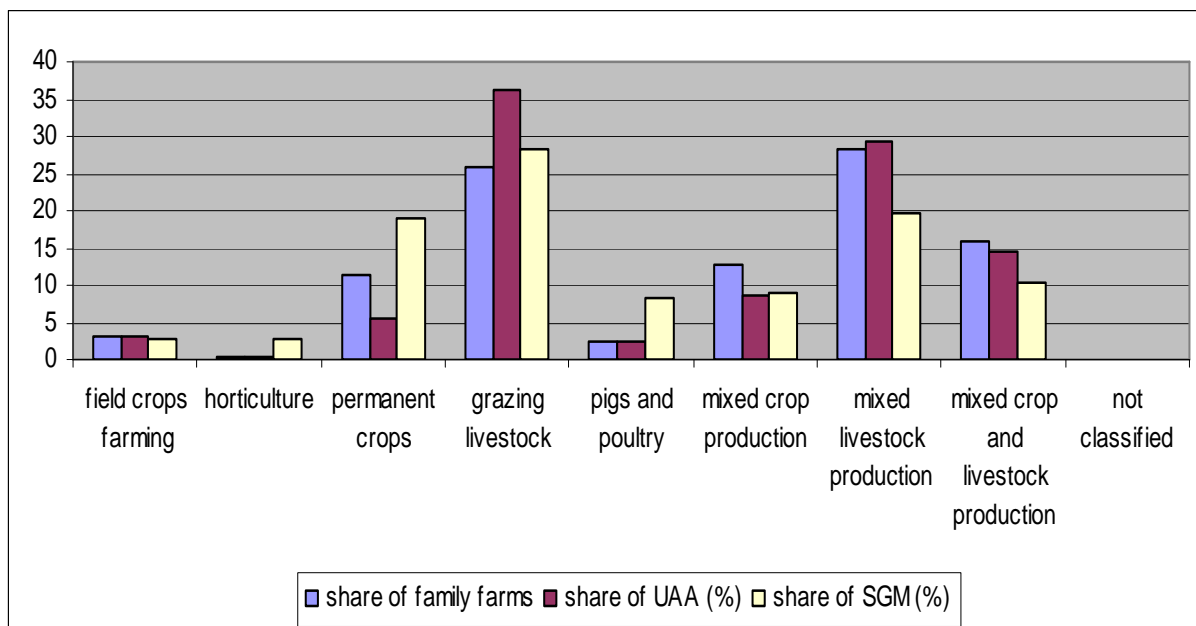
1) Common grassland is not included (22,786 ha)

Figure 2: Distribution of agricultural holdings by size classes of utilized agricultural area (UAA), Slovenia 2003 and 2005 (SURs 2006)



On family farms in Slovenia two types of farming predominate: mixed livestock production with three tenths of family farms, which is closely followed by breeding grazing livestock with a quarter of family farms. Over a half (57 %) of family farms belong in one of the types of mixed production, either mixed livestock production, mixed crop production or a combination of both (figure 3). Within crop production permanent crops predominate with over a tenth of all family farms. Among rarer types are field crop farming, breeding of granivores (pigs and poultry) and horticulture. Together they represent only 6 % of family farms.

Figure 3: Family farms, share of UAA and SGM in Slovenia by types of farming. (SURs 2002)



2.2 Socio-economic structure

Socio-economic type of farm is an indirect indicator used for estimating the share of income, which the farm family members are getting from primary agricultural production.

The socio-economic status of a farm is determined based on the information on the farm family members activities. For this purpose the so called members of family core are considered. To the farm's family core are assigned farm's manager, his partner and if present the farm's successor. All considered farm members must be of age between 15 and 64, what is considered as active working period.

Based on this definition, the following socio-economic types of farms are defined:

Full-time farms are those, where no member of family core is employed outside the farm. It is anticipated, that the farm family is creating more than 75% of its income from farming. For potentially full-time farms are considered also all those farms where some farm family members are employed in off farm jobs, but the total working commitment to farming of the farm family members is exceeding the 2.5 man power units (MPU). This presumption is used, as the statistical data show, that in Slovenian conditions, for average farm family, the optimal working commitment are just around 2.5 MPU, so it is realistic to expect, that if some of already active members of the farm family finishes his agricultural activity, an other member will replace him, with quitting his/hers off farm job.

Part-time farms are those farms, where the farm family income is combined with income from farming and off farm jobs. On such farms at least one member of farm family core is full time employed on the farm and at least one member of farm family core has full-time off farm job. From the same reason as in case of full-time farms, we also have considered as potentially part-time farms where all active members are employed in off-farm jobs, but their total commitment to agricultural activities on the farm exceeds 1.5 MPU.

Supplementary farms are those farms, where all members of the family coer have off farm jobs and theirs total commitments to agricultural production doesn't exceed 1.5 MPU.

Beside the described “classical” socio-economic types of farms, we also have defined the **aged farms** type. Typical for this farm type is, that all farm family members (and not only members of family core) are older than 64 years. This type is important, because it shows the farms which have a high potential for ceasing to exist, when the family members grow tired because of age.

Results based on described methodology are shown in tables 4 and 5. Comparing to other analysis (KOVAČIČ 1996) we can observe the shift from more intensive socio-economic types (i.e. full-time farms) to less intensive ones (i.e. supplementary farms). On the other hand the aged farms show a certain stability over time.

Table 4: Number of farms by socio-economic types of farms, Slovenia 1981, 1991, 1997 and 2000 (KOVAČIČ 1996, SURS 2003, UDOVČ ET AL. 2005)

Number of family farms					
year	total	full-time farms	part-time farms	supplementary farms	aged farms
1981	148886	27976	54077	53794	13048
1991	111546	23765	55585	21412	10784
1997	90459	13843	27452	39473	9691
2000	86336	14902	30333	32570	8531

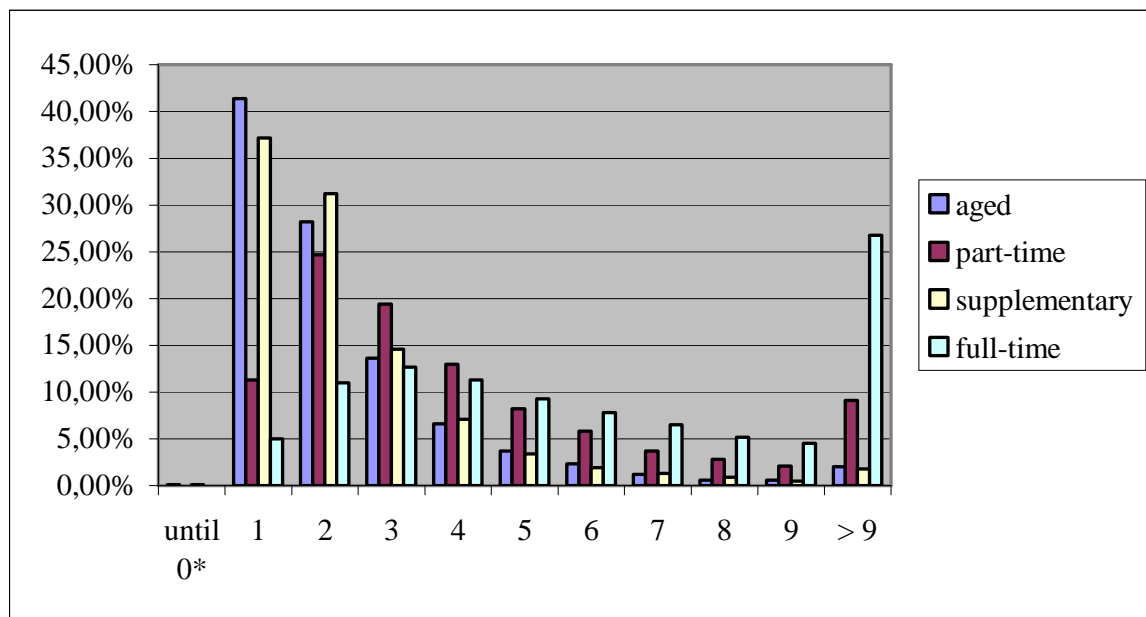
Table 5: Share of farms by socio-economic types of farms in %, Slovenia 1981, 1991, 1997 and 2000 (KOVAČIČ 1996, SURS 2003, UDOVČ ET AL. 2005)

year	full-time farms	part-time farms	supplementary farms	aged farms
1981	18,8	36,3	36,1	8,7
1991	21,3	49,8	19,2	9,7
1997	15,3	30,4	43,6	10,7
2000	17,3	35,1	37,7	9,9

Comparing socio-economic type of farms and their European size units (ESU) (Figure 4) shows some correlation. General trend shows that the aged farms are the most economically weak type, what can be partly explained with the advanced age of owners, why such farms don't have further interest for farming.

By full-time farms we can observe a bi-modal distribution, where the biggest part is represented by professional full-time farms with more than 9 ESU. But still we can see that more than 1/3 of full time farms is classified in smallest size classes (up to 4 ESU), what is result of small size of Slovene farms, but it also conveys the shortage of job opportunities in rural areas. That the job opportunities in the rural areas play an important role, by the decision, whether to engage with agriculture on a full-time or part-time basis, can also be seen from the data for 1991, as at that time the transition started, and a lot of so called worker farmers lost their jobs.

Figure 4: Distribution of socioeconomic types of farms by ESU, Slovenia 2000 (UDOVČ ET AL. 2005)



* class includes upper limit

3 THE FUTURE EXPECTATIONS FOR SLOVENIAN FARMS

In Slovenia small size farms are representing the biggest share of all farms and are an important factor both in agriculture and especially rural development. And among them supplementary and part time farms are most numerous and it is realistic to expect that they will prevail also in the future, with supplementary farms as leading socio-economic type. The main driving forces for their future existence are tradition, farming as source of additional family income and lack of other job opportunities in rural areas (especial for people with lower level of education). Due to small size of the farms, in many cases the dual occupation of farmers is representing the optimum use of their resources in an effort to maximize household income. In pluriactive farm households it is also not uncommon to use non-farm income to support the farming activity, what indicate the commitment of those farmers to their farm.

Although the number of landowners with other gainful employment is likely to increase, following the trend of decreasing numbers of employed in agriculture, no large-scale move away from the land is expected and because of this also no significant growth in farms size is to be expected in next ten to twenty years.

For the future development it is realistic to expect, that supported by adequate agricultural policy the certain number of farms will quickly increase their size of operations and introduce the technological novelties into it. And the rest of the farms shall remain cultivating their land for more non-economical reasons (especially if supported from second pillar of the CAP), but will gradually die away, as there will be no real incentive to enter the new investment cycle. So the expected developments scenario is division of Slovenian farms in four clearly differentiated groups:

- In the first group will be farms whose aim will be to increase the farm to the size, which will enable the employment for all active farm family members. Some of them might even star to employ non family workers. Such farms are expected to be formed in the areas where the land concentration and intensification of the agricultural production is possible, as they'll have to be highly competitive, sa farming is going to be their only source of income. We estimate that in Slovenia it is possible to create about 1000 of such farms.

- The second group of farms will try to develop such volume of production, which will enable a full employment for one member of the family. These are classical part-time farms. Also these farms will have interest to follow the technological development and will try to achieve the optimal income. Also these farms are going to be professional farms. We estimate that around 10,000 to 15,000 Slovenian farms will try to choose this development, but not all will be successful.
- The third group of the farms will try to get a parity income for at least one family member with the combination of agricultural production and supplementary activities. We estimate that the number of such farms will be approximately the same as the number of the farms in the second group. This will strongly depend on the rural development measures to support the development of supplementary and additional activities on the farms.
- In the fourth group we classify the farms, which don't have nor possibility nor the interest to increase the size of their production and to modernize the production processes. For these farms the agriculture will represent a supplementary source of income or a possibility for self sufficiency or they will keep on farming for non-economical reason. It is expected that this group is going to be the biggest, but will gradually die away. The interest for farming on such farm is expected to be upheld as long as the non-economic motivation shall be present, or shall be possible to master the production with existing working force and/or the agriculture shall contribute at least some income to the family budget. We think that in the future it is very unlikely to expect, that the farmers will be prepared to finance their agricultural production and development from nonagricultural financial sources, as it was happening in the past.

Based on described prediction we predicted the future socio-economic structure of Slovenian farms (table 6).

Table 6: Estimation of socio-economic farm structure by the year 2020 (KOVAČIČ. UDOVČ 2003)

Socio economic type	No	%
Full -time	3.000	5
Part-time	15.000	25
Diversified	12.000	20
Supplementary	30.000	50
Total	60.000	60

4 CONCLUSIONS

The analysis of socio-economic structure of Slovenian farms shows that the transition influenced the structural changes in the agriculture., where We can observe a changes from less intensive production types (supplementary farms) to more intensive (full-time type) in the period of socio-economic change of the political system. But the subsequent improvement of the socio-economic conditions is then not tied with corresponding change in size structure. One would expect that decrease in the share of full-time farms would also mean an increase in the farm size structure, as the remaining could acquire the freed land. Fro this we can speculate that the farming can be seen as a kind of back-up survival strategy

for compensating impacts of unfavourable economic developments and from these reasons the agricultural land is not put on the market.

Based on the previous assumption the future projection shows that we can expect a bidirectional development of future agrarian structure in Slovenia. The smaller number of farms shall develop in explicit professional direction, as the bigger part of them shall combine agricultural activity with other sources of income. But it is this part of farms that shall secure the cultivation of agricultural land in less favoured areas (LFA) and continuation of settlement in such areas.

We also notify the polarisation in the technological development and economic power as well as polarisation of interests among these two groups. Professional farms are trying to modernise and rationalise their production and increase size of their holdings, while the smaller farms remain by the production technologies, which don't demand bigger capital investments, and they don't strive after significant increase of their holdings. We expect this process to be in the future even more intensive as it is today, so it would be wise to differentiate the agricultural policy measure to meet the needs of both groups. For professional farms, the support should be given to enable their technological development and optimisation of their production to make them compatible. This means first of all support by their investments.

For farms where the agricultural production will represent the additional source of income the support should keep up their interest for continuing to cultivate their land, to preserve the production potential of agricultural land and cultural landscapes.

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