# THE ECONOMIC AND SOCIAL ROLE OF PRIVATE FARMS IN HUNGARIAN AGRICULTURE

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***Abstract:*** The situation and importance of private farms in Hungary have significantly changed and are still changing due to the political and economic regime change of 1989-90 and subsequent events. The *aim* of this study is to provide – unlike the practice of the last two decades – an impartial review of the social and economic role of Hungarian private farms. To demonstrate the changes occurring in private farms, we rely on the data of the *Hungarian Central Statistical Office (HCSO-KSH)* such as the General Structure Surveys, the Farm Structure Surveys, and tables from the online stADAT database.
From the point of view of *methodology,* time series analyses (2000–2010) were performed in the framework of this *secondary research*. Our *hypothesis* that private farms in Hungary deserve much more attention than previously, from the perspective of the output of Hungarian agriculture, food consumption and, last but not least, employment (the environmental factor was not examined this time) has been clearly confirmed. The role and significance of this group have also been exceedingly important since EU accession, particularly in the fields of horticulture and animal husbandry, and the strengthening of these positions is indisputably a national economic interest.

***Keywords:*** private farms, agricultural enterprises, EU accession, outputs, employment

## 1. Introduction

As was pointed out by the co-authors *Burgerné* and *Szép* (2006), several studies were prepared in the 1990's on the domestic and foreign assessment of *private farms*.

However, in considering the time horizon of the examination, we only explore the viewpoints presented in publications published in the last decade.

In his book about family farms, *Dobos* states that 'the main question is whether Hungarian agriculture should be based on family farms or on large estates which are mainly interested in the production of, and the continuous increase in, capitalist profit' (*Dobos,* 2000:12).

This question has been answered by the events of the last decade, yet the Hungarian professional community and political leaders are still sharply divided about the role of private farms and agricultural companies and partnerships in social labour distribution (*Fertő,* 2011).

We would like to start by admitting that we agree with the opinion that 'efficient agricultural production can be conducted with various farm sizes. Small-scale and large-scale farming can both have advantages under certain circumstances and human resource conditions. This is why the diversity of farms must be accepted in agricultural policy in order to be prepared for future challenges' (*Csáki ed.,* 2010:18).

We also share the view, which was expressed a few years ago but is still current, of the researchers at the Research Institute of Agricultural Economics (AKI) which states that providing a description of, and public information about, the real condition of private farms is a vital and important task for the sake of clear-sightedness, and in forming the basis for decisions made in the context of agricultural and rural development policy and in order to effectively utilize the EU resources provided for rural development (*Hamza – Tóth,* 2006: 69).

However, it has to be mentioned that the *economic dimension* of agriculture is one-sidedly overemphasised as opposed to the social (employment, subsistence farming) and environmental dimensions.

The co-authors *Burgerné* and *Szép* conducted an inquiry-based questionnaire survey at the end of 2003 and the beginning of 2004 involving 613 private farms in Western Hungary and the Southern Great Plain. One of their major findings was that the situation of agriculture worsened in the years prior to the EU accession, and that younger farmers with larger holdings and a higher level of education could produce more efficiently and with greater profitability than the others.

In 2010 *Burgerné* published her book – entitled 'The Economy of the New Member States and the Candidate Countries of the European Union' (*Burgerné,* 2010) – which examines the economy, especially the agriculture, of 15 countries from the beginning of the regime change until 2007. It is divided into two parts, a general section and a detailed section consisting of a description and evaluation of

each country. It is the most comprehensive study in Hungarian on the agriculture of the examined countries. One of the author's important conclusions is that 'the development of agriculture lagged behind the development of general economies. The ownership and farming structure created by agricultural reforms after the regime change did not assist in increasing efficiency' (*Burgerné,* 2010: 323).

Unfortunately, the statistics of the European Union do not distinguish between private farms and agricultural companies and partnerships. The author considered the farms with a land area below 50 hectares as predominantly private farms, while farms with a land area above this value included the larger agricultural companies and partnerships. Considering productive land area, it was ascertained that the number of farms under 5 hectares is high in all the countries. In Hungary, both agricultural companies and partnerships over 50 hectares in size and private farms with a land area under 5 hectares can also be found in considerable numbers.

As reported by *Burgerné*, mini-farms – i.e. farms below 1 ESU (European Size Unit) – were created in a large numbers by the new agrarian reforms. In spite of their small size, in 2006 these farms employed 40% of the agricultural employees and 24% of the total full-time employees (*Burgerné,* 2010).

Relying on the results of the research 'Regoverning Markets' started in 2004, *Forgács* (2006) analyzed the vertical system of relations of two agricultural sectors in three Central and Eastern European countries (Hungary, Poland, Romania) in terms of the appearance of large food-retail networks, and has drawn important conclusions.

As far as we are concerned, among his conclusions the following are the most important:

- the large number of small farms formed in the region is not the outcome of a natural development but of a radical social transformation process taking place within a short time,
- the majority of these farms are not market-oriented but produce wholly or mainly for their own consumption, as a consequence of which they only face the unfavourable effects of food-retail chains indirectly,
- in the case of small-scale producers who want to market their products to obtain additional income or to earn a living for their families, significant changes are required. The tools of their successful adaptation might be to increase farm size, improve technology, and enhance compliance with demanding quality requirements and the willingness to cooperate.

In his later study dealing with the situation of small-scale Hungarian agricultural producers in a Central and Eastern European environment, *Forgács* (2008) emphasized that the triple (economic, social and environmental) approach was justified. He convincingly explains his statement – which as yet has not been duly acknowledged -that 'economic competitiveness cannot be the sole criterion for the survival of agricultural small-scale farms during the period of the establishment of a market economy' (*Forgács*, 2008: 17).

The author mentions three main reasons for the decreasing number of small-scale agricultural producers:

- the intensive spread of multinational companies,
- the drastic curtailing of the highly social Common Agricultural Policy (CAP) in the case of the EU-10 countries, and
- the lack or low level of self-organization among agricultural producers.

*Forgács* also explains that 'the fate of the majority of small-scale farms was mainly decided during the period between 2004 and 2010, not only in Hungary but also in most of the EU-10 countries (op. cit. p. 34).

The author is one of the few to expressly state that rural development programmes 'did not provide an escape route for small-scale producers who got into a hopeless situation to solve their employment and income earning problems (op. cit. p. 35).

Another remarkable statement is that 'the reduction in the number of small-scale producers has not only economic and social effects but also environmental consequences' (op. cit. p. 36).

*Nagy's* (2006) PhD thesis examines the conditions of the viability of family farms.

In the last decade, several of the researchers at the Research Institute of Agricultural Economics have dealt with the economic and social problems of private farms. (Here we will not assess the analyses related to the Farm Accountancy Data System, FADN).

Several studies (*Hamza et al.,* 2002*; Hamza et al.,* 2001*; Tóth,* 2000*; Tóth ed.,* 2000*; Dorgai ed.,* 2004) investigated the issues connected to agricultural employment. In their study 'The changing role of agriculture in rural employment with special regard to Hungary's EU accession', *Hamza et al.* (2002) made several proposals with regard to the changing circumstances:

- it is very important to establish new workplaces which offer either main or supplementary income, and to mitigate, or stop, the process by which rural areas lose their capacity to sustain and retain population and to provide employment,
- an employment policy which prepares the way for EU accession is needed,
- an education system meeting the requirements of the market economy should be established,
- agriculture which has a primarily social function and agriculture which can be exposed to market influences are to be treated differently,
- instead of full-time employment, flexible and combinable solutions (self-employment, part-time employment, etc.) complying with the guidelines and practice of the EU's employment policy are required.

After EU accession, the researchers of the Research Institute of Agricultural Economics (*Hamza-Tóth,* 2006) made extensive investigations in connection with the private farm's capacity to maintain its role in providing a livelihood by analyzing the databases of the Hungarian Central Statistical Office (HCSO) and the Research Institute of

Agricultural Economics and relying on the results of empirical research.

Forming appropriate alliances is an essential condition for the prosperity of domestic small- and medium-scale farms (typically private farms), the necessity of which has been pointed out by many domestic and foreign experts. The theoretical and practical potential for, and obstacles to, this are discussed in the book by *Gábor G. Szabó* published in 2011 under the title 'Co-operatives in a Food Economy', which is based on a comprehensive review of specialized literature and international experience (*Szabó G. G.,* 2011).

In the volumes (*Csáki-Forgács, eds.,* 2008) compiled from the lectures delivered at the joint IAAE-EAAE seminar (Agricultural economics and transition: What was expected, what we observed, the lessons learned) held in 2007, and published by IAMO, several studies examine the economic structure of new EU member states from various perspectives. Data and analyses of the private farms of various countries were published: Italy was analysed by *Liefert*, Hungary by *Burger – Szép*, *Hubbard*, *Szabó G.* and *Szabó G. G.*, Romania by *Turtoi et al.* and *Luca*, the CIS countries by *Lerman*, and Poland by *Paloma* et al. It is apparent that private (mainly small- or medium-scale) farms have a significant role in production and especially in employment in the agriculture of all the countries, although to various extents.

In the volume of essays and studies entitled 'The Changing Landscape of European Agriculture – Essays in Honour of Professor *Csaba Csáki'* (*eds., Fertő – Forgács – Jámbor, 2*010), several noteworthy studies strongly related to the topic of this paper were published. *Koester* and *Petrick* seek an explanation for why it is that in Russia giant agricultural holdings were developed. The authors mention mental characteristics rooted in the historic past as the main reason. *Lerman* investigates the improvement of the agriculture of Central Asian countries, with special regard to the very important role of private farms. *Ballman* and *Schaft* analyse the transformation process of East Germany's agriculture, a typical characteristic of which is that, unlike in the western provinces, legal entities with large average land holdings (co-operatives, limited liability companies, joint-stock companies) play a very significant role in agriculture. Private farms manage only about one quarter of agricultural lands, as opposed to 90% in the western provinces. The authors remark that agriculture is one of the few sectors where productivity exceeds that of the westerns provinces.

*Baráth* (2009), when studying the development of Hungarian and German agriculture after 1990, paid special attention to the different trends in farm structure.

The book edited by *Liu and Luo* (2004) from the studies of several Chinese scientists and published with the title 'Can China Feed Itself?' gives an excellent review of the achievements and problems of Chinese agriculture, which is based on the household responsibility system. The articles primarily discuss the difficulties of cereal supply (production and trade) and identify crop fluctuations and poor agricultural infrastructure as the main problems. (It is a little known fact that the basic idea of the multi-stage – but in the final analysis – successful Chinese agricultural reform begun in 1978 was inspired by the effective operation of Hungarian farm households).

In their study, the editors of the proceedings volume (Perspective of the Agri-food System in the New Millennium) of the Bologna conference in 2001 of the International Association of Agri-food Economics (Association Internationale d'Economie Alimentaire et Agroindustrielle, AIEA2) examine the economic and social structure of the Chinese agricultural sector, and provide a remarkable typology of family farms on the basis of the data of the First National Agricultural Census in China in 1997. Their review greatly facilitates the understanding of the success of the Chinese agrarian reform of 1978 (*Fanfani – Brasili,* 2003).

We would like to highlight that the enhanced support for small-scale farms is included in the new objectives of the 2013-2020 Common Agricultural Policy (CAP) (*Jámbor,* 2011*, Popp,* 2011).

Overall, it can be stated that the importance of private farms increased after the completion of the land restitution process. Numerous small-scale farms were formed in Hungary after the regime change, however, their number began to decrease around the millennium and is still decreasing today, which is the result of concentration and the gradual disappearance of non-viable small-scale farms. In Hungary, most private farms are managed by older people, mostly over the age of 55. At the millennium, 49.9% of private farmers were over the age of 55; today this rate exceeds 50%, which predicts the senescence of the agricultural community. The age structure of farmers did not change significantly between 2000 and 2010. Only 1.8% of private farmers have a college or university degree. 70-80% of farm leaders do not have any agricultural qualifications; they perform their work on the basis of the experience gathered over time. Although the primary task of agriculture is food production, we should not forget the fact that it also ensures the rural areas' capacity to create and maintain job opportunities, and play a role in landscape and environment protection. Accordingly, private farms play an important part in Hungarian agriculture in spite of the fact that they usually have less favourable output and efficiency indicators than agricultural companies and partnerships.

## 2. Databases and methods

There are *two databases* in Hungary that provide an opportunity for the comprehensive examination of the social and economic role of private farms: data collected in the Farm Structure Surveys of the Hungarian Central Statistical Office and the Farm Accountancy Data System (FADN) database maintained by the Research Institute of Agricultural Economics. The latter limits the examinations to private farms above 2 ESU (European Size Unit), as a consequence of which the number of farms surveyed in 2010 by the

Research Institute of Agricultural Economics did not reach 90 thousand, unlike the 567 thousand farms kept on record by the Hungarian Central Statistical Office. In this study, we do not analyse the Farm Accountancy Data System (FADN) database of the Research Institute of Agricultural Economics, as this will be assessed in our next paper.

For the interpretation of the data, we note that the databases of the Hungarian Central Statistical Office referred to below consider households reaching or exceeding the *minimum farm size* applicable at the time of survey as private farms. This minimum farm size for the General Structure Survey of 2010 was as follows: a productive land area of at least 1500 $m^2$ (arable area, kitchen garden, fruit orchard, vineyard, grassland, forest, reed and fish pond separately or together), or at least 500 $m^2$ of orchards, or vineyards together, or at least 100 $m^2$ of glass-house or other covered land area, or for farm animals, at least one larger specimen of livestock (cattle, pig, horse, sheep, goat, buffalo, ostrich), or 50 head of poultry (chicken, goose, duck, turkey, guinea-fowl), or 25-25 rabbits, furry animals or pigeons for slaughter, or 5 beehives, or the provision of agricultural services in the last 12 months (*KSH*, 2011a)

From the point of view of *methodology,* time series analyses were performed in the context of this *secondary research*. The results of our investigations are supported by tables, pie charts, line charts and trend computations.

reaches or exceeds the defined minimum farm size. has continuously and greatly reduced (*Figure 1)*. This process also continued after EU accession, and by 2010 there were about 1 thousand more agricultural enterprises (+13%) and 200 thousand fewer private farms (-24%) than in 2003. This process is verified by the result of a trend calculation as well. The regression equations are presented in Figure 1. The values of the coefficient of determination ($R^2$) were calculated for both legal forms, which was 0.56 for agricultural enterprises and 0.93 for private farms. In accordance with this, the data in the first case fit the trend line with lesser accuracy, while in the second case with great accuracy.

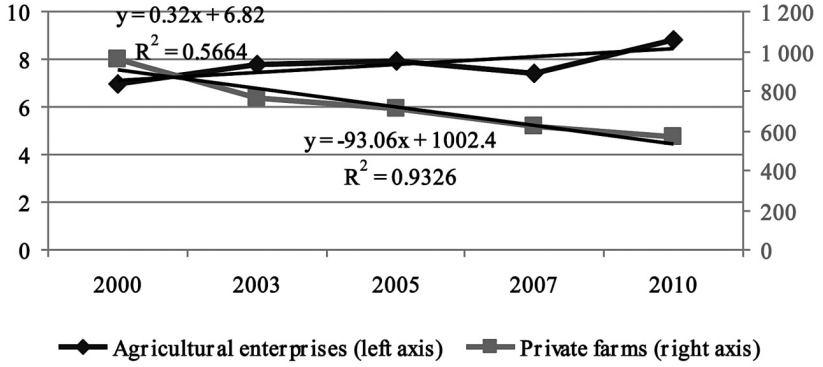



Figure 1: Changes in the number of farms between 2000 and 2010 (thousand farms)
*Source: Authors' own construction based on KSH, 2010*

## 3. Results

### *3.1. Changes in the number, land area and livestock of agricultural enterprises and private farms*

#### *3.1.1. The changes in the number of farms between 2000 and 2010*

Hungary has a different farm structure than most EU member states. Hungarian agriculture can be characterized by a bipolar farm structure consisting of larger enterprises and small-scale farms. The importance of medium-scale farms started to grow after the regime change; however, they have not become a determining factor even today. On the basis of the data of the General Structure Survey 2010, it can be stated that the number of agricultural enterprises has, apart from occasional downturns, increased slightly since the millennium, while the number of private farms[1] Private farm: a farm operated by a household engaged in agricultural activity, or by a private entrepreneur with a tax number, that

On the basis of the preliminary data of the 2010 General Structure Survey, 8.8 thousand agricultural enterprises and 566.6 thousand private farms were surveyed in the summer of 2010. This latter data indicates that very low values were defined for the minimum farm size when evaluating private farms, at the same time, almost 1.1 million households also performed some kind of agricultural activity (in gardens belonging to houses or holiday homes). Here we would like to note that the affected population in the Farm Accountancy Data System (FADN) of the Research Institute of Agricultural Economics is limited to 80–90 thousand private farms above 2 ESU (European Size Unit).

In accordance with the above, it can be stated that a considerable number of Hungarian households are involved in agricultural production; therefore, their social role is not negligible either (*Kapronczai*, 2010).

#### *3.1.2. The changes in agricultural land by category of legal forms*

In our opinion, it is not the productive land area but the agricultural area that can be practically examined. Productive land area includes the area under forests as well, yet forestry in Hungary has an insignificant role in terms of both income production and employment.

Similarly to previous years, 99% of land-owner farms use

[1] Private farm: a farm operated by a household engaged in agricultural activity, or by a private entrepreneur with a tax number, that reaches or exceeds the defined minimum farm size.

agricultural areas, the average size of which in 2010 was 337 hectares for agricultural enterprises and 4.6 hectares for private farms *(KSH,* 2010*)*. Since 2000, the average agricultural area of agricultural enterprises fell by 37 percent, while for private farms it increased by 84 percent. The distribution of agricultural areas among the categories of legal forms is impeded by the fact that the Hungarian Central Statistical Office introduced the term 'area unidentifiable with holdings' as of 2003, as a result of which the land used by private farms dropped by 1268.2 thousand hectares from 2002 to 2003, but then in the following year it increased by 505.3 thousand hectares *(Table 1)*. This was accepted by the profession basically without raising any objections, and the issue of areas unidentifiable with holdings has been a perennial issue since then.

***Table 1:*** Changes in agricultural area by category of legal form (thousand hectares)

| | 2000 | 2002 | 2003 | 2007 | 2010 |
|---|---|---|---|---|---|
| **Agricultural enterprises** | 2 363.5 | 2 111.2 | 2 145.7 | 2 176.4 | 2 158.6 |
| **Private farms** | 3 121.1 | 3 484.3 | 2 216,1 | 2 541.5 | 2 514.3 |
| **Area unidentifiable with holdings** | | | 1 502.9 | 1 089.1 | 669.9 |
| *of which: not agriculturally utilized* | 369.3 | 271.7 | 288.2 | 273.9 | 116.1 |
| **Total** | 5 853.9 | 5 867.2 | 5 864.7 | 5 807.0 | 5 342.8 |

*Source: KSH, 2011b*

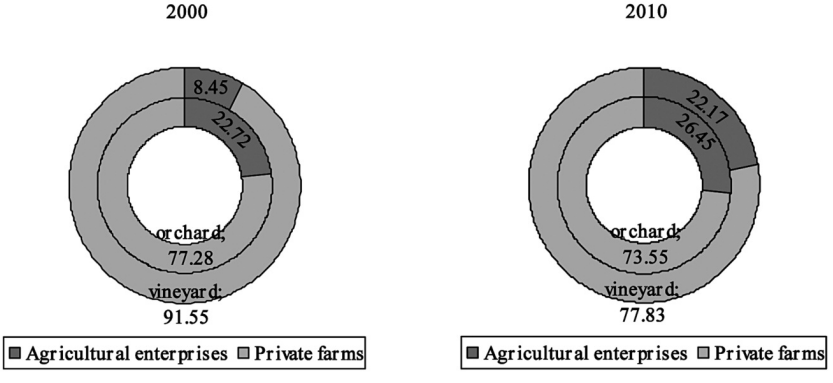
On the basis of the above, in can be stated that, on the one hand, the agricultural area decreased after the millennium for both categories of legal form, yet *the greater part of this area is used even today by private farms*. *On the other hand, within the agricultural area the whole area covered by gardens and the majority of vineyards and orchards are owned by private farms (Figures 2–3).* It is true that most of the vineyards and orchards possessed by private farms cannot produce products that are competitive in the world market; however, their role from the aspect of domestic consumption is very significant.

In 2010, arable land was used by 60% of agricultural enterprises and by 55% of private farms, which represents a 13 percentage point increase in the case of agricultural enterprises, and a 7 percentage point reduction in the case of private farms since 2000.

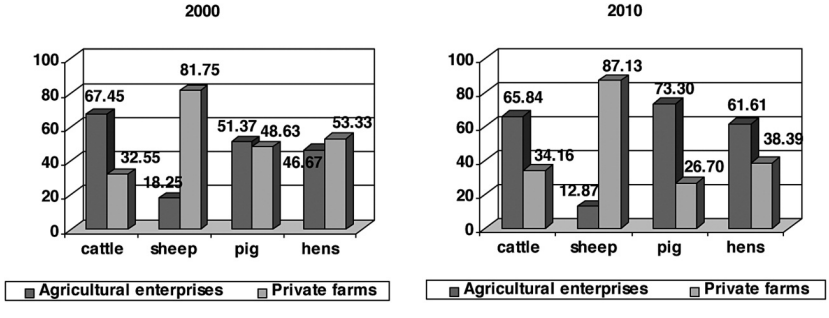
The usage of grasslands shows a reverse change regarding the two legal categories as compared to 2000: the number of agricultural enterprises using grasslands has risen by 17 percent, and the area of grassland per enterprise has reduced by a quarter, while the number of private farms using grasslands has decreased by almost a third, and the area of grassland per farm has expanded by 65 percent (*KSH*, 2010).

### *3.1.3. Changes in the stock of major farm animals*

It is well-known that the main structural problem of Hungarian agriculture is caused by the crisis of animal husbandry which has been continuing for two decades. In the last decade, the primary problem was caused by the drastic decrease in the number of pigs and hens, which mainly occurred on private farms, making the livelihood of numerous families impossible. The column charts below clearly illustrate these changes *(Figures 4–5)*. It can be seen that while private farms' share in cattle and sheep stock has grown slightly (nearly 90 percent of sheep stock is owned by private farms!), their role in the stocks of pigs and hens has reduced very significantly since EU accession. All this has had an unfavourable effect on both domestic consumption and export commodity supplies. There are several reasons for the significant decline in livestock feeding on fodder on private farms: on the one hand these sectors obtained considerable state subsidy before EU accession, while in the framework of the Common Agricultural Policy, grants could only be applied for to support ruminants. In addition, the demanding regulations in connection with manure management, manure disposal and animal welfare required investments that were impossible for smaller farms to carry out.




***Figures 2–3:*** The distribution of the land-use categories of vineyards and orchards by legal form, in 2000 and in 2010,%
*Source: KSH, 2011b*




***Figures 4–5:*** The distribution of livestock by legal form in 2000 and in 2010 (%)
*Source: KSH, 2011e*

## 3.2. The distribution of farms by type and purpose of production

### 3.2.1. The distribution of farms by type of production

The changes in the distribution of the categories of legal form by type of production are demonstrated in *Table 2*. Significant changes took place in the proportions of the types of production in the two legal forms during the period examined.

***Table 2:*** The distribution of farms by type of production, 2000, 2010 (percent)

| Type of production | Agricultural enterprises | Private farms |
|---|---|---|
| **In the year 2000** | | |
| **Crop farming** | 40.6 | 39.7 |
| **Animal farming** | 9.6 | 22.0 |
| **Mixed farming** | 36.3 | 38.2 |
| **Farms providing agricultural services** | 13.5 | 0.1 |
| **Total** | 100.0 | 100.0 |
| **In the year 2010** | | |
| **Crop farming** | 49.0 | 48.9 |
| **Animal farming** | 5.5 | 22.2 |
| **Mixed farming** | 39.6 | 28.8 |
| **Farms providing agricultural services** | 5.9 | 0.1 |
| **Total** | 100.0 | 100.0 |

*Source: KSH, 2011c*

The major conclusions that can be drawn from *Table 2*:

- the proportion of crop farming increased by about 10 percent among private farms in a decade,
- the rate of animal farming has decreased in the case of agricultural enterprises, but remains essentially unchanged among private farms,
- the proportion of mixed farming among agricultural enterprises has increased slightly, while in the case of private farms the proportion has decreased by about the same extent that the proportion of crop production has increased (it seems likely that some of those farms involved in mixed farming gave up animal husbandry and changed over to the more profitable crop production profile).
- The proportion of farms providing agricultural services is still minimal among private farms and has significantly decreased in the case of agricultural enterprises.

### 3.2.2. The changes in the distribution of private farms by purpose of production

The changes in the distribution of the purposes of production are demonstrated on the basis of *Figures 6–7* below.

On the basis of the General Structure Survey of 2000, it can be stated that a considerable number (almost 60%) of private farms were engaged in agricultural production with the sole purpose of providing for their own consumption. At the millennium, only 32% marketed the surplus. The proportion of farms producing mainly for the market was about 8% in 2000.

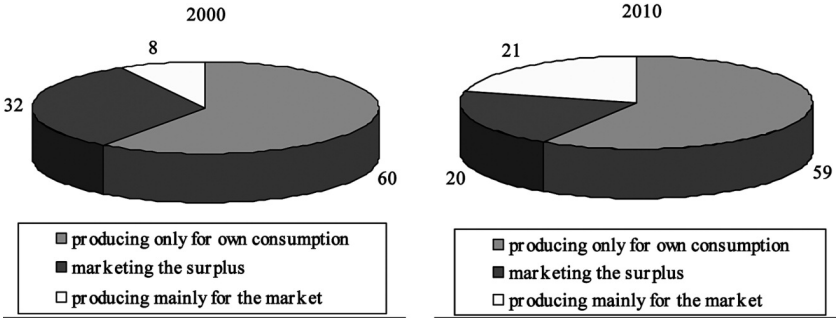
Today, examining *all the private farms*, it becomes apparent that besides the considerable reduction in the number of farms, the proportion of those *producing only for their own consumption* has scarcely changed, whereas the rate of those *producing mainly for the market* has more than doubled (21%), while the proportion of those *marketing the surplus* has fallen by 12 percent.

The proportion of farms *producing mainly for the market* has risen for all types of production. In 2010, 25% of crop producing farms, 22% of mixed farms and 4% of animal husbandry farms belonged to this group.

The proportion of those *producing only for their own consumption* has slightly increased among animal husbandry farms, reduced among crop producing farms and remained unchanged among mixed farms.

The proportion of those *marketing the surplus* has drastically decreased in all three groups, especially among animal husbandry farms where it dropped from 16% to 9%.

It is worthy of note that the proportion of those *producing only for their own consumption* is by far the highest among *animal husbandry farms* (in 2010 it was almost 88%), while the proportion of the other two groups is markedly low compared to the other two types of production.




***Figures 6–7:*** The changes in the distribution of private farms by purpose of production (%)
*Source: KSH, 2008b; KSH 2011a*

## 3.3. Changes in employment in agricultural enterprises and on private farms

When examining agriculture, it is difficult to specify the number of people working in the sector. This question is very hard to answer as there are several different verified data calculated in accordance with international methodology available in connection with the utilization of labour.

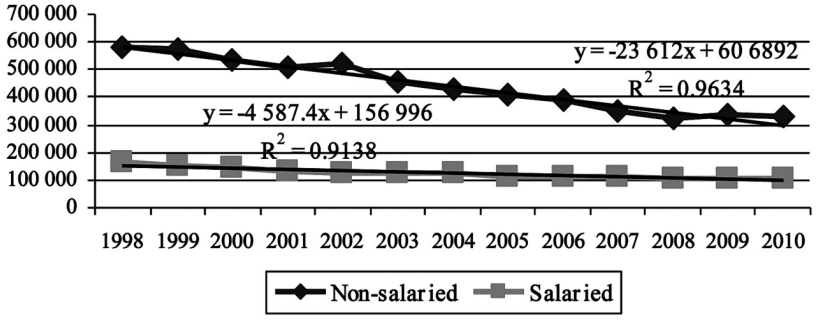



***Figure 8:*** Changes in agricultural labour utilization by salaried and non-salaried AWU
*Source: KSH, 2011d*

The introduction of the term Annual Working Unit (AWU) has provided a solution for this problem, enabling the conversion of several hours of work to full-time employment (1800 hours/year), making the work performed in agricultural enterprises and on private farms comparable.

EU practice distinguishes between salaried and non-salaried work, the latter signifying agricultural work performed by members of households on private farms.

This unit refers to agricultural work performed as a supplementary activity as a labour input, i.e. it takes into account the agricultural work of non-agricultural employees as well. It is not the number of workers but the amount of work that is considered. As of 1998 the Hungarian Central Statistical Office has supplied data on the value of agricultural labour input expressed in AWU.

Between 2000 and 2010, the total value of AWU decreased by almost 35%, where salaried AWU reduced by 27% and non-salaried AWU by 38% (These values in the base year of 2003 were: 25%, 15% and 28%). Non-salaried AWU was utilized typically at private farms, whereas salaried AWU was utilized predominantly at agricultural enterprises *(Figure 8)*. The graph below clearly illustrates that the value of non-salaried AWU in the period examined has decreased much more rapidly than that of the salaried AWU; however, *the majority (76%) of agricultural labour was still utilized at private farms* in 2010. Taking into consideration the permanent and salaried employees working at private farms, the proportion is obviously higher than this. The high values (0.96 and 0.91) of the determination coefficients of linear tendency indicate that data fit the trend line well, showing great accuracy.

*Table 3* reveals that the labour utilization of private farms dominates in all types of production. It is especially notable that annual AWU utilization is 17-times higher in animal husbandry private farms than in agricultural enterprises. As compared to 2000, the volume of agricultural labour input has decreased, with non-salaried work decreasing significantly and salaried work decreasing to a lesser extent.

The considerable reduction in labour input and, at the same time, in non-salaried agricultural labour input can be attributed primarily to the rapid decrease in the number of private farms.

***Table 3:*** The value of agricultural labour utilization by type of production, 2010 (thousand AWU)

| | Crop farming | Animal farming | Mixed farming | Total |
|---|---|---|---|---|
| **Agricultural enterprises** | 14,8 | 3.7 | 59.0 | 77.5 |
| **Private farms** | 152.9 | 61.6 | 147.4 | 361.9 |
| **Total** | 167.7 | 65.3 | 206.4 | 439.5 |

*Source: KSH, 2011a*

## *3.4. Changes in output and gross value added by sectors*

This issue is assessed in a different way to customary practice. We wish to point out that the role of households – given the economic and social background of private farms – is outstandingly important in the output and gross value added of the sector involving agriculture, forestry, hunting and fishing.

***Table 4:*** Changes in gross output by agricultural sectors between 2001 and 2010 (at current prices, in million HUF)

| | Gross output | | |
|---|---|---|---|
| | **2001–2003** | **2004–2006** | **2007–2010** |
| **Enterprises** | 1 008 548.67 | 1 061 356.00 | 1 227 789.75 |
| **Households** | 927 160.67 | 993 599.00 | 983 540.75 |
| **State** | 11 516.33 | 9 045.33 | 3 865.00 |
| **Total** | 1 947 225.67 | 2 064 000.33 | 2 215 195.50 |

*Source: KSH, 2011f*

On the basis of the data in the table above it can be stated that – on average over the past four years – 55% of agricultural gross output was derived from enterprises and 44% from households, whereas the output share of the state was insignificant.

As compared to the base period (2001–2003), an increase of 22% could be observed in the case of enterprises, and an increase of 6% in the case of households (there was a slight decrease in comparison to the previous period).

***Table 5:*** Changes in gross value added by agricultural sectors between 2001 and 2010 (at current prices, in million HUF)

| | Gross value added | | |
|---|---|---|---|
| | **2001–2003** | **2004–2006** | **2007–2010** |
| **Enterprises** | 274 550.33 | 317 647.33 | 321 718.00 |
| **Households** | 456 077.00 | 537 967.00 | 527 772.50 |
| **State** | 7 687.00 | 6 263.34 | 2 088.00 |
| **Total** | 738 314.33 | 861 877.67 | 851 578.50 |

*Source: KSH, 2011f*

The national output of agriculture has risen by 14% overall compared to the base period.

As regards gross value added, there were different proportionate shares. In the time period examined, the proportion of the household share within the agricultural gross value added was much higher than that of the enterprises, the proportion being 60:40 on average over the past four years. In comparison to the period 2001-2003, a similar increase could be observed for households and enterprises, which was 17% and 16%, respectively.

## 4. Conclusions

- In spite of the significant reduction in the number of *private farms* in the last decade, they cultivate the *greater part of the agricultural area* and 70 and 80 percent of orchards and vineyards, respectively.
- It is a little known fact, not only by the general public, but also by professionals that in Hungary households produce *44% of agricultural output* and *60% of agricultural gross value added.*
- There is a higher proportion of labour-intensive plant production (vegetable-fruit) and mixed farming in the activities of private farms than in companies. A significant part of the country's livestock (primarily sheep stock) is still kept on these farms. As farms specialised for animal husbandry, the fodder consumption branches dominate.
- The products produced by private farms as *commodity supplies* are primarily crop farming products. At the same time, it is notable that 90% of animal husbandry private farms produce only for their own consumption. *Research on the goals of private farms reveals* that with the massive decrease in the number of farms, the proportion of *farms producing only for their own consumption* has slightly changed; however, the *proportion of farms producing mainly for the market* has more than doubled and the rate of *farms marketing the surplus* has dropped.
- In the past few years the fact that *more than 80% of agricultural labour utilization (AWU) occurred in private farms* has not been given appropriate attention. Unfortunately, labour utilization, particularly in the younger age groups, shows a declining tendency. This tendency predicts rather unfavourable processes in the rural areas and for the future of agriculture.
- As described above, we emphasize that the position of private farms should be reinforced as they make up a central role in the future prospects of the Common Agricultural Policy.

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