

**RESULTS OF HUNGARIAN FADN FARMS  
2000**



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## Abbreviations and symbols

<i>AWU</i>	:	Annual Work Unit
<i>UAA</i>	:	Utilised Agricultural Area
<i>SGM</i>	:	Standard Gross Margin
∅	:	Average
++	:	Upper quarter (the first 25 percent of farms in decreasing numerical order according to the income before taxes per farm)
+	:	Second quarter (the second 25 percent of farms in decreasing numerical order according to the income before taxes per farm)
-	:	Third quarter (the third 25 percent of farms in decreasing numerical order according to the income before taxes per farm)
--	:	Low quarter (the last 25 percent of farms in decreasing numerical order according to the income before taxes per farm)
*	:	No available data

\* If the symbol is indicated inside the table.

## Calculated indicators and definitions

$$\text{Return on total output (\%)} = \frac{\text{income before taxes}}{\text{total output}} * 100$$

$$\text{Return on assets (\%)} = \frac{\text{income before taxes} + \text{interest paid}}{\text{total balance}} * 100$$

$$\text{Return on net worth (\%)} = \frac{\text{income before taxes}}{\text{net worth}} * 100$$

$$\text{Return on labour (1000 Ft/AWU)} = \frac{\text{income before taxes} + \text{personal income}}{\text{Annual Work Unit}}$$

Cash - flow = consolidated profit of the year + depreciation

$$\text{Internal financing of investments (\%)} = \frac{\text{consolidated profit of the year} + \text{depreciation}}{\text{gross investments}}$$

$$\text{Liquidity quick ratio} = \frac{\text{liquid assets} + \text{securities} + \text{debtors}}{\text{current liabilities}}$$

$$\text{Liquidity current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

$$\text{Equity ratio (\%)} = \frac{\text{net worth}}{\text{sources}} * 100$$

$$\text{Net worth in \% of fixed assets} = \frac{\text{net worth}}{\text{fixed assets}} * 100$$

$$\text{Dynamic indebtedness factor (year)} = \frac{\text{net liabilities}}{\text{cash - flow}}$$

**Annual Work Unit:** the unit of labour (generally used in EU statistics); annual working time (in working hours) of a healthy worker capable of full work and employed in full time. In the calculations we took 1 800 hours per year.

**Average dispersion:** a statistical index for dispersion, the arithmetic mean of the absolute values of discrepancies between individual values and their arithmetic mean

**Corrected labour costs:** instead of labour costs (wages, benefits in kind and common charges) accounted in the books of private farms (primary producers and private entrepreneurs) labour costs usual in economic organisations are used. This way the labour costs of sample private farms are transferred (increased) to the level of labour costs in economic organisations (associations with and without legal entity, cooperatives). The method serves the comparability of the two groups of farms.

#### Derivation of income in accounting:

01	Net return on inland sales
02	Net return on export
<b>I.</b>	<b>Net return on sales (01+02)</b>
<b>II.</b>	<b>Other incomes</b>
03	Value of activated self-produced assets
04	Changes in self-produced stock
<b>III.</b>	<b>Value of activated self-produced goods (03+04)</b>
05	Costs of raw materials
06	Value of contract work
07	Purchase value of sold goods
08	Value of subcontractors' performance
<b>IV.</b>	<b>Material-type costs (05+06+07+08)</b>
09	Wages
10	Other wage-like payments
11	Social and health insurance
<b>V.</b>	<b>Labour costs (09+10+11)</b>
<b>VI.</b>	<b>Depreciation</b>
<b>VII.</b>	<b>Other costs</b>
<b>VIII.</b>	<b>Other expenses</b>
<b>A.</b>	<b>Farm income (I+II+ - III-IV-V-VI-VII-VIII)</b>
12	Received interests and interest-like incomes
13	Received dividends
14	Other incomes of financial transactions
<b>IX.</b>	<b>Incomes from financial transactions (12+13+14)</b>
15	Paid interests and interest-like expenses
16	Depreciation of financial investments
17	Other expenses of financial transactions
<b>X.</b>	<b>Expenses on financial transactions (15+16+17)</b>

<b>B.</b>	<i>Profit on financial transactions (IX-X)</i>
<b>C.</b>	<i>Profit on ordinary activities (+ -A+-B)</i>
<b>XI.</b>	<b>Extraordinary incomes</b>
<b>XII.</b>	<b>Extraordinary expenses</b>
<b>D.</b>	<i>Extraordinary profit (XI-XII)</i>
<b>E.</b>	<i>Income before taxes (+-C+-D)</i>
<b>XIII.</b>	<b>Taxes due</b>
<b>F.</b>	<i>Income after taxes (+-E-XIII)</i>
18	Use from the accumulated profit reserve for dividends and profit-sharing
19	Dividends and profit-sharing paid payable
<b>G.</b>	<i>Consolidated profit (+-F+18-19)</i>

**Gross investment:** the sum paid on the increment of invested assets in a given year.

**Gross Margin (GM):** the difference between the production value and variable costs of the production and service activities (enterprises) of a farm. It includes the profit of the enterprise and, regarding the farm as a whole, covers permanent costs (that are not divided among activities). Gross Margin can be calculated on a unit of activity e.g. 1 hectare wheat or 1 cow (annual average number) and on the whole activity (specific GM multiplied by activity size). Adding up GMs of all activities we arrive at the Gross Margin of the farm.

**Gross production value:** performance of production, service and supplementary activities connected to the basic activity of a farm (sales, activated own performance, other incomes).

**Labour costs:** the sum of personal income and the charges (social and health insurance etc.).

**Net investment:** increment of invested assets taking into account depreciations and write-offs (gross investment – write-off – depreciation).

**Net liabilities:** active debts, securities and liquid assets deducted from the amount of liabilities

**Net worth:** the own source of the assets of a farm, which the founders and owners made available on a permanent basis. (The remaining part of the assets are financed from foreign sources, and are therefore burdened with liabilities (instalments of loans, interests etc.). The consolidated profit is a part of the net worth.

**Permanent cost:** costs independent from the size of a given activity (e.g. annual depreciation of a 100-cow barn does not change whether there are 50 or 100 cows). Permanent costs are usually connected to the permanent assets of a farm (land, buildings, machinery, permanent staff). For a number of decisions we do not need to divide permanent costs according to types of activities/farming (this division is not easy in the case of sources collectively used by different types of activities or sources that are not connected directly to either activity), it is enough to count them in one aggregate amount at the level of the farm.



**Personal income:** is the sum of wages, benefits in kind and other wage-like payments for work.

**Standard Gross Margin:** normative gross margin (applied to usual weather and production conditions) determined on a unit of agricultural production activity (1 hectare, 1 livestock unit). It expresses the permanent income production capacity of a farm in connection with the supply of inputs, production structure and natural endowments. If we multiply the specific standard gross margin of the production activity with the size of the given activity, then add up the sums, we arrive at the total SGM value of a farm. It is used for the definition of the economic size of a farm. The ratio of SGM of a certain activity (enterprise) in the total SGM of a farm characterises the type of the farm.

**Types of farming:** are defined in terms of the relative importance of the different enterprises<sup>1</sup> on the farm. Relative importance is measured quantitatively as a proportion of each enterprise's SGM to the farms' total SGM. The six types are the following in Hungary:

- Arable farms (cereals, sugar beets, potatoes etc.): SGMs of arable crops  $\geq 60$  percent
- Animal production I. (grazing livestock: cows, cattle for fattening, sheep, equidae): SGMs of grazing livestock  $\geq 2/3$ ;
- Animal production II. (granivores: pigs, poultry etc.): SGMs of granivores  $\geq 2/3$ ;
- Permanent crops (vineyards, fruits, hop): SGMs of permanent crops  $\geq 2/3$ ;
- Horticulture (vegetables, ornamental plants, nurseries) SGMs of horticulture  $\geq 2/3$ ;
- Mixed farms: other farms that cannot be classified into the previous types.

**Variable costs:** costs that change with the size of an activity (e.g. seeds, fertilisers, fuels, lubricants). These costs, contrary to permanent cost, do not exist if the activity is stopped for a time.

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<sup>1</sup> The English term "enterprise" in the sense of the EU farm typology means a specific part of the total farming activity of a farm, that is, a certain crop or animal category.



## Summary

In the survey carried out in the framework of the Farm Accountancy Data Network in 2000 we analysed the data of 1378 private farms and 292 economic organisations. These data mostly come from business records and mainly allow analysis of the income situation of different farm groups. Data were only collected from reasonably large, commodity producing farms, which cultivate at least 5 hectares or keep at least 5 livestock units.

In 2000 **profitability of farming** improved in both farm groups, private farms and economic organisations (associations with or without legal entity, cooperatives) as compared to the results of 1999, but **is still far behind what is considered reasonable and necessary for maintaining economic stability**.

Although there are significant differences between private farms and economic organisations in size and in the structure of incomes and costs, **farm incomes per hectare were almost the same in both groups (after a correctional transaction made for the sake of comparability somewhat above 11000 forints/ha)**.

It is an important difference, however, that private farms, which base their operation mostly on their own capital, were less affected by the losses on financial (credit) transactions, while **economic organisations**, which rely largely on loans, suffered more from interest charges: **both their profits before and after taxes were negative, that is, they made losses on their operation**. On the other hand, **private farms had** (very slightly, but still) **positive incomes before and after taxes**. (Taking into consideration that the differences are very small in absolute value, we cannot draw long-term conclusions from the comparison of the profitability of the two farm groups.)

Naturally, **the very modest profits or the losses did not allow the renewal or increase of assets**. Although at current prices the value of assets increased both in private farms and in economic organisations, their utility value was less than before.

At the same time, it is noticeable that **average values cover significant** dispersion in both farm groups. (It is shown by for example that 72 percent of private farms were profitable, 28 percent unprofitable; 62 percent of economic organisations were profitable and 38 percent unprofitable.) Based on the results, it seems obvious that larger farm-size, better supply of assets and reasonable structure of farming lead to better incomes, but farming expertise and professionalism probably also play an important role.



## Introduction

### Development of the Farm Accountancy Data Network

For the planning of agricultural policy measures and the assessment of the impacts of decisions it is essential to have up-to-date economic information about the main groups of farms and agriculture as a whole. Besides policy makers, several other organisations (schools, research institutes, extension services, interest groups, financial institutions etc.) need data on the financial and income situation of agricultural businesses. After the change of political and economic system in Hungary, this need for information remained unsatisfied. This unfortunate situation had to be changed without a doubt, not only for internal reasons but also in the highlight of EU accession.

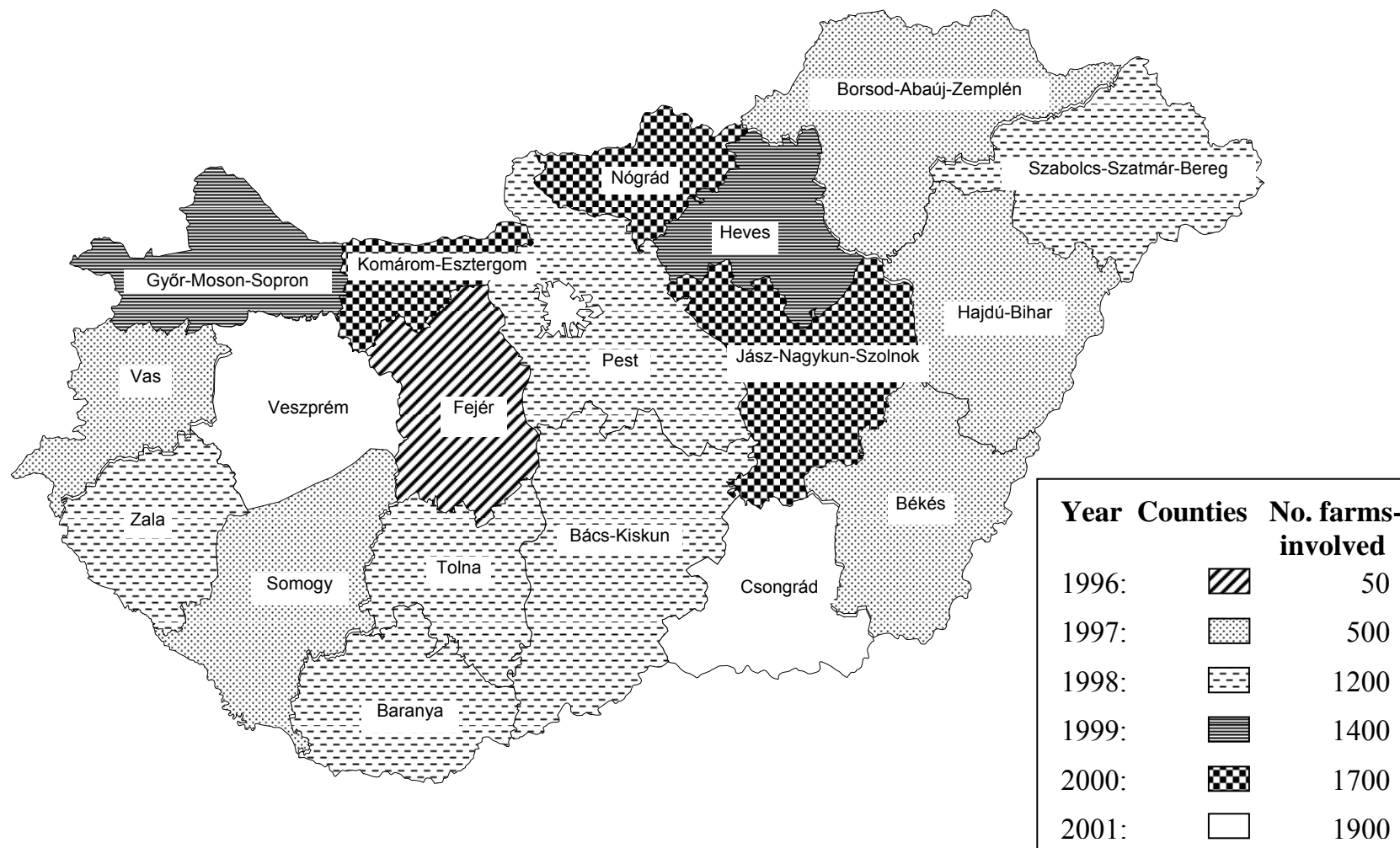
For the efficient implementation of the Common Agricultural Policy the EU created the legal background and established a representative **Farm Accountancy Data Network (FADN)** in 1965, which provides information on different groups of farms on regional and national levels. Member countries organise data collection and procession, then transfer the required data in the prescribed format and regularity to the Commission. Naturally, data are utilised by member countries for national purposes as well.

Because of the above-described lack of information and the preparation for accession, in 1995 the Hungarian Ministry of Agriculture and Rural Development commissioned the Research and Information Institute for Agricultural Economics (AKII) to set up the EU-conform information system. The Hungarian name “**Tesztüzemi rendszer**” is a metaphase of the German Testbetrieb System. In the preparation period **German experts** provided support, then in 1996 AKII set to the practical implementation. The method was to extend the system county by county and farms were selected according to their location, size and type of farming in order to represent the statistical population as well as possible. In the framework of several PHARE projects foreign experts gave us help in the tackling of methodological and institutional problems. The development of the system is shown in figure 1.

**Establishment of the Hungarian network was ordered by the Act CXIV of 1997 on agricultural development**, which provides the legal basis of the system. The relevant section of the law says: “**in order to provide basis for the management of agriculture and meet the requirements of EU accession the government establishes and operates a representative farm accountancy database.**”

figure 1.

**Development of the Farm Accountancy Data Network between 1996-2001**

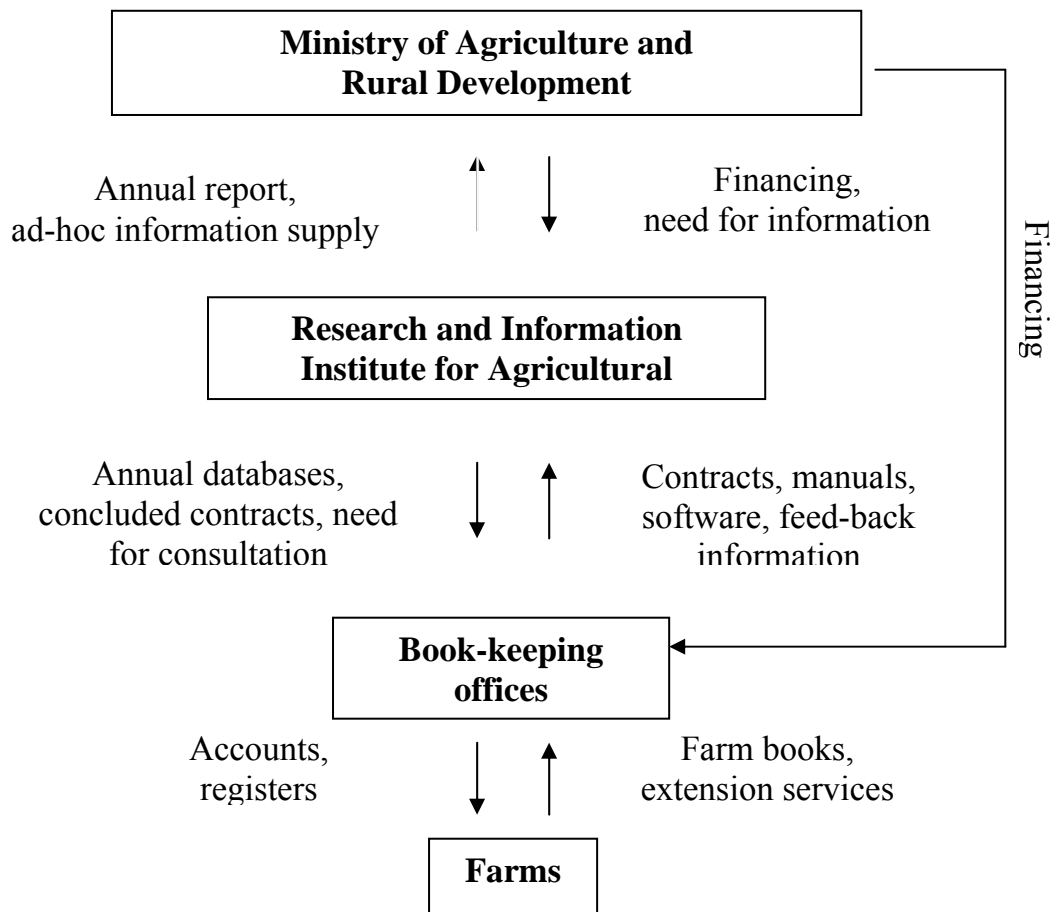


**In 2000 the system already covered 17 out of the 19 counties (except Csongrád and Veszprém counties) and more than 1700 farms of Hungary. In 2001, the two last counties joined the system, which now provides data of 1900 farms and is considered fully extended on a national level.** Farms referred to in this report were selected in early 2000. At that time, the results of the General Agricultural Census, which was carried out by the Central Statistical Office in April 2000, were, naturally, not available and could not be used for the selection of a representative sample. (This shortcoming was present in the previous years as well, and can only be eliminated in the report on 2002.)

The organisational structure is shown in figure 2.

figure 2.

**Organisational structure of FADN**



—————> flow of information and financial assets

The data collection system includes the following organisations:

- **Ministry of Agriculture and Rural Development (FVM)**, which takes up general supervision and financing;
- **AKII**, which is responsible for continuous operation, central data procession, publishing and dissemination of information and development of the system;
- Specially selected **book-keeping offices** maintain direct contacts with farms, (in the majority of private farms) do the book-keeping and compile the annual reports. Based on the selection plan worked out by AKII, recruiting of farms is also their task.
- **Farms** are the objects of observation. Selection is made according to four criteria (legal form, farm size, type of farming and geographic situation). **The survey only included farms with above 5 hectares UAA (wine, fruit and vegetable farms above 1 hectare) or 5 livestock units.**

**Information flow** between the different layers of the structure are **characterised** by the following:

The **Ministry of Agriculture and Rural Development** asks **AKII** for data and provides financial sources. At the same time, AKII prepares the annual report and supplies information on ad-hoc demands.

In their comprehensive connection **AKII** provides **book-keeping offices** with contracts, professional documentation, instructions and software, while the offices prepare the annual farm reports and require information.

**Book-keeping offices** provide **farms** with feedback information on their own activity and let them have the average figures of farms with similar capacities, which they can use for horizontal and vertical comparison. In addition, in exchange for the cooperation, book-keeping offices offer extension and other services for farms (preparation of tax return sheets and applications, organisation of field tours for data suppliers etc.) on the other hand, farmers let the book-keeping offices have their invoices and business records.

In sample farms data are collected in the following fields:

- identification and basic data of farms,
- geographic data at the end of the year, changes,
- labour-force,
- business balance,
- profit and loss account,
- changes in invested assets,
- value of livestock and stocks,
- maturity of active and passive debts,
- changes in livestock and stocks,
- arable area, average yields and prices, internal consumption,
- calculation of costs and receivables.



## Aim of the report

Our FADN report has now been published for the fourth time since 1998. In 2000 data collection covered 17 out of 19 counties and 1700 farms. Annual data registry has been done on time and, according to the requirements stipulated in the contract, data were transmitted to AKII after May 31st, 2001 in a digital form. Our present report includes the processed data of 1670 farms that supplied information fit for evaluation. Due to incorrect data supply or because of their non-typical character we could not process the data of some farms.

We had 750000 items of data from the business reports on 2000, i.e. 450 items per farm on the average. Such an enormous amount of data can be evaluated in many different ways. When compiling the tables in the annexes our objective was to publish data that can be used for many purposes in a standardised form.

Data in the annexes cover farms as a whole, while data about the different activities (enterprises) will be published in a separate publication. All output data **were calculated as an average of the individual groups of sample farms**. If, in exceptional cases, the number of farms in a certain group was less than five, data relevant for the group were not indicated.

Data of the individual farm groups were indicated according to the following categories:

- assets,
- production structure,
- yields, sales prices,
- asset and liability statement,
- investments,
- income statement,
- economic profitability, liquidity.

Since there was no actual registry or typology of farms in Hungary at the time of procession and therefore we did not know how many other farms a sample farm represents, we could not calculate weighted results in this sense. This, naturally, limited the generality of the data.

In the methodology of data procession we used **Standard Gross Margin (SGM)** according to the EU rules. (See explanation on page 8.) We calculated SGM from the books on 1997-98-99. In some cases we compared the results with time series from other sources and carried out the necessary corrections.

The report includes a short analysis as well, but because FADN is still in an experimental phase in Hungary and certain data (comparable time series) are not available, it is rather limited. Evaluations are mainly based on the comparison of results of different farm groups in 2000, data of earlier years are rarely referred to.

Tables in the text have been compiled **on the basis of tables in the annexes**, but in some cases we also used parts of the total database not indicated there.

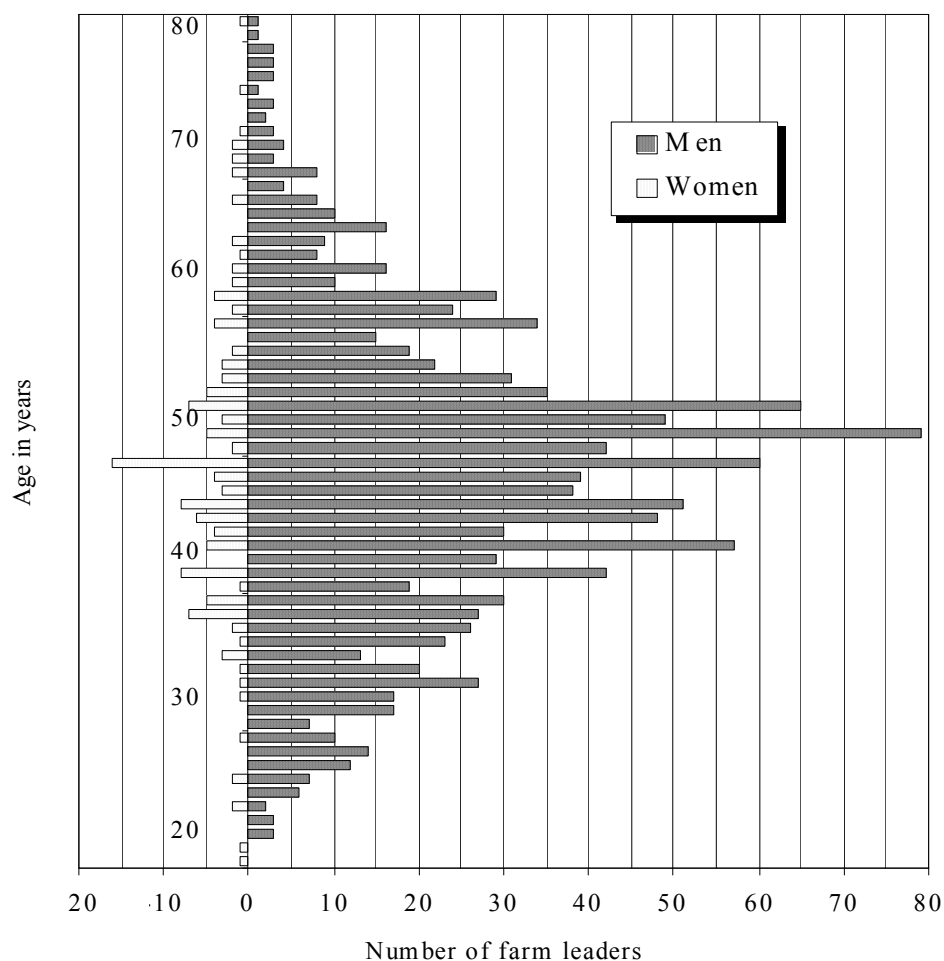
In the following first we describe the income situation of private farms then economic organisations and in the end we compare the two categories.

## 1. Incomes of private farms

The survey covers 1378 private farms (“primary producers”<sup>2</sup>, private entrepreneurs and so-called merged farms<sup>3</sup>). Average size was near 62 hectares<sup>4</sup> (46 percent of which was rented land), average labour size was 1,74 AWU and the average value of assets was 19,1 million forints (including the value of own land as well). The average age of farm leaders was 47 years, one fifth were older than 55 years of age and one sixth were younger than 35. (figure 3.)

figure 3.

### Age structure of private farm leaders



<sup>2</sup> “Primary producers” are small-scale farmers but not private entrepreneurs, possess a special licence for agricultural production and are eligible for certain relief from taxation. A large number of „primary producers” are over 65 and only pursue subsidiary farming. They are not interested in quality production and thus renounced subsidies and rejected registration.

<sup>3</sup> Merged farm is a farm, which, due to taxation and subsidy reasons, is formally divided into several farms but is actually operating as one.

<sup>4</sup> In harmony with the EU regulations the analysis only covered larger farms that produce explicitly for the market. When evaluating the results we took into account that profitability of such farms is better than the whole of agriculture.

Mainly due to higher producer prices, in 2000 profitability of private farms was better than in the previous year, but in the aggregate profit was still very modest. (table 1.)

table 1.

### Main details of the income of private farms profitability indices

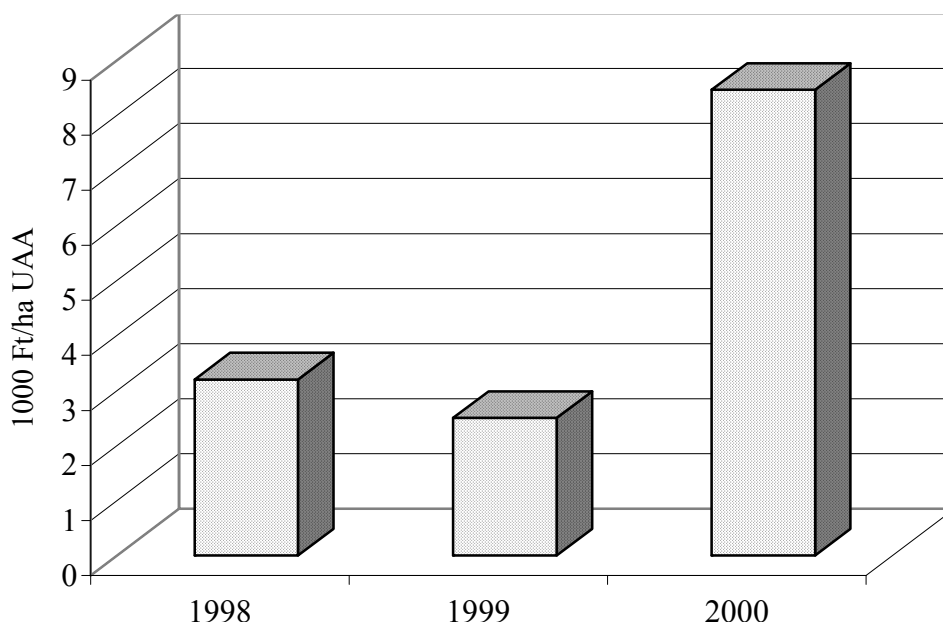
	1000 Ft/ha UAA	Distribution %
Gross production value	169.46	100.00
of which: net sales	138.73	81.87
of which: arable crops	69.62	41.08
animal production	49.82	29.40
vegetables, fruits, wine and grapes	11.25	6.64
other incomes	16.40	9.63
activated own performance	14.32	8.45
Total costs	141.30	100.00
of which: cost of raw materials	83.77	59.29
of which: purchased seeds, seedlings	11.36	8.04
fertilisers	9.52	6.74
crop protection	8.26	5.85
purchase of livestock	7.27	5.14
purchase of feed	19.09	13.51
fuel and lubricants	16.82	11.90
labour costs	13.75	9.73
of which: wages	9.90	7.01
depreciation	16.16	11.37
Farm income	28.16	
Income before taxes	25.36	
Income before taxes per farm	1510.12 thousand Ft/farm	
Consolidated profit of the year	20.63	
Return on total output %	14.97	
Return on assets %	8.74	
Return on net worth %	8.98	
Return on labour	1210.42 thousand Ft/AWU	

Income before taxes was 25360 forints per one hectare utilised agricultural area, 869000 forints per annual work unit and 1510000 forints per farm. These figures indicate a 25-30 percent improvement as compared to 1999 (see figure 4.), but taking inflation and the realizable interest rates (or the incomes on other alternative investment possibilities) into account, profitability is still considered very low: 15,0 forints income before taxes per 100 forints production value, 8,7 percent

profitability of total assets and 9,0 percent profitability of net worth. From the total sum of income before taxes and personal incomes 1210000 forints fell on one annual work unit.

figure 4.

### Income before taxes in private farms



Although the value of the above indicators is below the expectable level<sup>5</sup>, the fact that in reality incomes include a significant part of expected personal incomes implies an even worse situation. The accounted labour cost was only 341000 forints per year per work unit (slightly more than 28000 forints per month). This way in the average of farms gross income covered personal consumption rather than the improvement of production.

In 2000, private farms in the surveyed sample made investments in the value of 1,75 million forints on the average. However, this only brought an accrual of fixed assets of 520000 forints (net investment), because the bigger part of investments was used to compensate annual depreciation and to replace the written-off or sold assets<sup>6</sup>. 55 percent of gross investments was executed in the category of machinery, equipment and vehicles, 13 percent was used for buildings. 13 percent of investments was used for land purchase, melioration and establishing new plantations (in 2000 the value of plantations grew severalfold as compared to the previous year).

<sup>5</sup> The return on net worth for example should have been 12-13 percent to be considered reasonable (compared to alternative investments).

<sup>6</sup> If we assume that the average age of assets to be replaced is 9 years and take into consideration that between 1991 and 2000 the average agricultural investment price index was 358 percent, gross investments should be 3.6 times more (4.5 million forints per farm) than the amount of replacement at book value in order to realize a replacement at utility value.

Similarly to the previous years, indebtedness of private farms remained very little. This is indicated by the high ratio (88 percent) of net worth and the negative index of net liabilities, which means that the amount of liquid assets and active debts exceeds the amount of total liabilities. However, these favourable figures alone do not indicate that the financial standing of private farms is stable. It is rather the consequence of deficiency of own sources required for taking out loans and also other difficulties (high interest rates, complicated administration, necessity of strong securities) farmers are compelled to adjust their activity to their self-financing capacity. This, on the one hand, reduces business risks, but hinders development of farms with profitable size and assets in greater numbers on the other.

Examining profitability of private farms according to economic size,<sup>7</sup> we can detect a clear dominance of large farms. (table 2.)

table 2.

### Profitability of different size groups (SGM) of private farms

	Unit	Size categories (1000 Ft SGM)		
		Small ≤2000	Medium >2000 – 4000	Large >4000
Number of farms		575	389	414
Utilised agriculture area	ha	17.16	41.91	134.99
Livestock unit	pc	3.42	9.66	32.61
Gross production value	1000 Ft/ha	189.66	179.47	162.97
Operational costs	1000 Ft/ha	174.00	152.37	132.30
Farm income	1000 Ft/ha	15.65	27.10	30.67
Income before taxes	1000 Ft/ha	13.91	24.47	27.64
Income before taxes	1000 Ft/farm	238.61	1025.56	3731.42
Return on total output	%	7.33	13.63	16.96
Return on assets	%	3.84	7.55	10.29
Return on net worth	%	3.91	7.78	10.62
Return on labour	1000 Ft/AWU	471.37	939.37	1749.92

Large farms cultivated 135 hectares agricultural area and had 32,6 livestock units. Small farms, at the same time, had 17 hectares and 3,4 livestock units. Examining the structure of production, we noticed that in small farms labour intensive plants (horticultural, grapes, fruits) had a larger ratio of in the price income (19,3 percent) than in large farms (6 percent). This can be the reason of why large farms had 14 percent smaller gross production value per hectare. On the other hand,

<sup>7</sup> A private farm is small if total farm SGM does not exceed 2 million forints,  
medium size if SGM is between 2 million and 4 million forints,  
large if SGM is over 4 million forints.

For example (on the average of the years 1997-1999) 1 million forint SGM can be produced with 7 hectares of sugar beet or 6 milk cows.

their production costs per hectare were 24 percent lower than those of small farms. As a result of the savings on specific costs, large private farms had almost twice as high farm incomes per hectare than small farms. This more effective cost management is due to that large farms are able to utilise labour and assets more effectively and they have to purchase fewer services (because they can do a large part of machine work themselves). The competitive advantage of large farms is proved by the other indices as well.

We have also examined incomes of private farms according to the type of farming. Based on the return on net worth, which can be regarded as a key indicator, in 2000 vegetable growers had far the best results (20,2 percent) among private farms. The results coming after are fairly even: the return on net worth in around 8-9 percent in every farm group. Pig and poultry breeders (animal production II.), arable crop producers and mixed farms improved their profitability significantly as compared to 1999. In the other groups, the situation has not changed remarkably since the previous year.

However, we must not forget that income averages show a significant dispersion. Among sample farms consolidated result was positive in the case of 998 farms (72,4 percent) and negative in the case of 318 farms (27,6 percent). Average consolidated profit was 2,25 million forints, while average consolidated loss was 1,44 million forints. It is notable that while 67 percent of small private farms were profitable, this ratio was 79 percent among large ones.

The best 25 percent of private farms<sup>8</sup> realised a income before taxes of 59600 forints per hectare, while the weakest 25 percent of farms made a loss of -28400 forints per hectare (table 3.).

The average deviation of individual results (regardless whether positive or negative) from the mean of the incomes before taxes per farm (1510000 forints) was almost 2,4 million forints. Such an exaggerated dispersion of incomes in an otherwise homogenous group must be paid attention to, because farms with different financial standing need differentiated economic and policy approach.

On the other hand, this large dispersion shows that still a lot can be done for the levelling of the standard of farming. Since professional knowledge of farmers have a greater and greater role in profitability, attention should be paid to training and extension services.

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<sup>8</sup> Classification was done on the basis of income before taxes per farm.

table 3.

**Result of the best and worst 25 percent of private farms**

	<b>Unit</b>	<b>Best 25 percent</b>	<b>Worst 25 percent</b>	<b>All farms</b>
Number of farms	-	344	345	1378
Standard Gross Margin	1000 Ft/farm	7552.74	3496.71	4093.32
Agricultural area	ha/farm	103.77	55.81	59.55
Assets	1000 Ft/ha UAA	356.93	292.68	320.45
Livestock	LU/100 ha UAA	23.31	25.29	23.44
Wheat yield	t/ha	3.99	2.56	3.48
Milk yield	l/cow	5565.11	3200.88	4910.30
Gross production value	1000 Ft/ha UAA	215.62	117.23	169.46
Net investments	1000 Ft/ha UAA	16.66	1.67	8.74
Income before taxes	1000 Ft/ha UAA	59.56	-28.43	25.36
Income before taxes	1000 Ft/farm	6180.54	-1586.68	1510.12
Consolidated profit	1000 Ft/ha UAA	51.02	-28.44	20.63
Cash-flow	1000 Ft/farm	6958.25	-546.44	2190.36
Return on net worth	%	19.02	-11.23	8.98



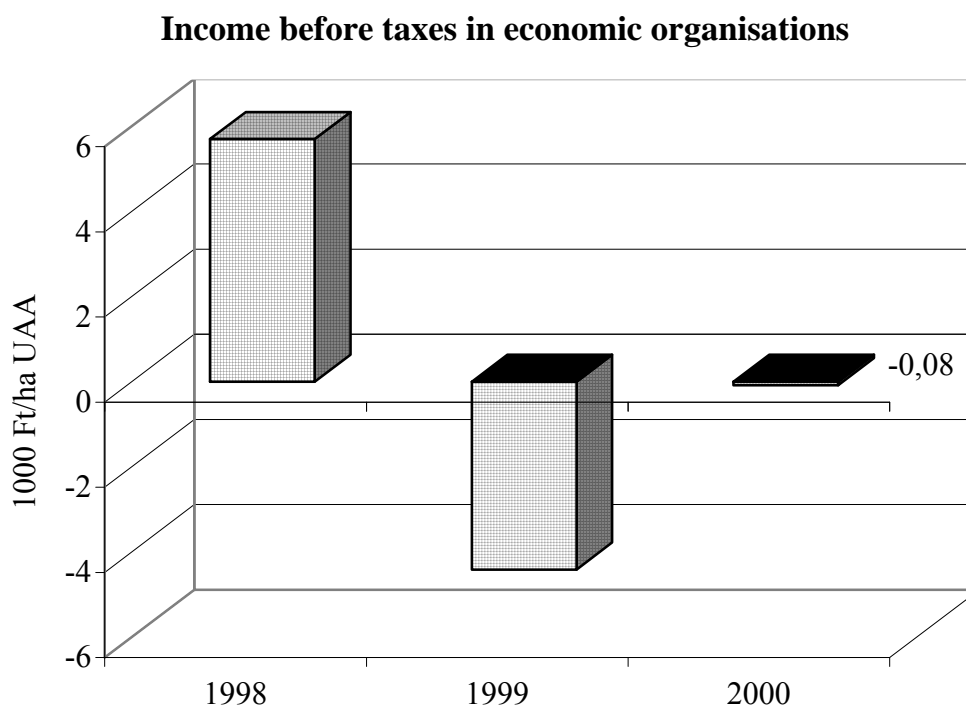
## 2. Incomes of economic organisations

For the FADN survey of 2000 292 economic organisations (associations with or without legal entity, cooperatives) provided data.

Average size of utilised agricultural area of economic organisations was 942 hectares, 97,6 percent (almost all) of which was leased. Average value of assets was 266 million, i.e. 305000 forint per hectare. 39 AWU were employed per farm.

While economic organisations created 293600 forint per hectare gross production value, costs amounted to 282300 forint per hectare, i.e. farm income was only 11300 forint per hectare. (table 4.) If we deduct from this the losses on financial transactions (large credit costs) and the (slightly negative) balance of incomes and expenses irrelevant to the usual farm activities, the income (more precisely the loss) before taxes that we get this way is around zero (-80 forints). Nevertheless, if we take into consideration that in 1999 the income before taxes of economic organisations was deeply negative, -4400 forint per hectare, we have to admit that the improvement is notable. (figure 5.). The income after taxes and the consolidated profit were also negative (-1600 forint per hectare and -1414000 forint per farm, respectively). Income before taxes as a proportion of 100 forint sales revenue was -0.03 forint, while income on 100 forint net worth was -0.05 forint.

figure 5.



Among income indices only the return on total assets is relatively favourable (4,25 percent), because the amount of paid interests was calculated as a factor increasing incomes, although it is a produced income which does not stay at the enterprise. The return on labour indicator, which is the sum of income before taxes and personal incomes per annual work unit, was 777100 forints/AWU.

table 4.

**Main details of the income of economic organisations profitability indices**

	<b>1000 Ft/ha UAA</b>	<b>Distribution %</b>
Gross production value	293.60	100.00
of which: net sales	244.20	83.17
of which: arable crops	66.43	22.63
animal production	100.78	34.33
vegetables, fruits, wine and grapes	8.82	3.01
agricultural services	29.41	10.02
other incomes	32.08	10.93
activated own performance	17.31	5.89
Total costs	282.25	100.00
of which: cost of raw materials	130.09	46.09
of which: purchased seeds, seedlings	8.98	3.18
fertilisers	10.10	3.58
crop protection	10.64	3.77
purchase of livestock	5.75	2.04
purchase of feed	35.74	12.66
fuel and lubricants	22.85	8.10
labour costs	46.97	16.64
of which: wages	30.68	10.87
depreciation	13.59	4.82
Farm income	11.34	
Income before taxes	-0.08	
Consolidated profit of the year	-1.62	
Consolidated profit of the year per farm	-1413.87 thousand Ft/farm	
Return on total output %	-0.03	
Return on assets %	4.25	
Return on net worth %	-0.05	
Return on labour	777.07 thousand Ft/AWU	

In 2000 the ratio of net worth was slightly above 53 percent in economic organisations, but it was still enough to cover all invested assets (end even some current assets), net worth in percentage of fix assets: 121 percent. Liabilities amounted to 118,4 million forints on the average of a farm, 68 percent of which was short-term liabilities. Net liabilities (deducted with the value of active debts and financial assets) amounted to 62,5 million forints.

The dynamic indebtedness factor reveals that the cash-flow (which is the sum of consolidated profit and depreciation) would allow the pay-off of net liabilities in 6 years. Liquidity indices are acceptable: 70 percent of short-term liabilities are covered by liquid assets (active debts and financial assets) and the amount of total current assets is 1,9 times higher than the amount of short-term liabilities. The overall picture of financial independence and stability of money flow in economic organisations is not alarming. However, it is worrying that farms are compelled to use a great part of their free sources to repay debts, while they urgently need money for development. The alarming tendency of indebtedness is also disturbing.

On the average of all economic organisations the value of gross investments per 1 hectare agricultural area is 29600 forints, the value of net investments is 3000 forints. The fact that this latter index is positive shows that although in nominal value farms invested more than the decrease of the value of their invested assets (depreciation, write-offs or sales), but because of the increase in the price of investment goods in the previous years this surplus was inevitably not enough to replace assets at usage value. (See foot-note no. 6 on page 21). The greatest part (38 percent) of gross investments was purchases of machinery, the investments in buildings had a ratio of 20 percent, but the ratio of unfinished investments is also very significant (18 percent).

As concerns profitability according to economic size expressed in SGM,<sup>9</sup> we found that, similarly to private farms, larger farm size results in higher income (here: in smaller specific losses). In the three size groups consolidated profit per 1 hectare was -12.6, -3.8 and -0.4 thousand forints (table 5.)

In the group of small farms, which are mostly deposit companies and limited liability companies, gross production value per hectare was higher than in the two other size categories. (This is due to the higher ratio of grape, fruit and vegetable production and the extensive service activity.) However, their per hectare costs are also higher, they suffer most losses on financial transactions. This latter factor is the one that worsens their position in the comparison to the two other size categories.

Nevertheless, there are profitable and unprofitable businesses in every size category. Based on their consolidated profit the ratio of profitable businesses is 61 percent in the group of small farms, 56 percent in the group of medium ones and 67 percent in the group of large farms. We can see that the majority of farms in every size category are profitable, but while profitable farms only realised rather modest individual profits, loss-makers' losses were significant, on the average.

<sup>9</sup> Based on their *economic farm size* out of the 292 economic organisations

93 farms are small:	SGM does not exceed 15 million forints,
94 are medium size:	SGM is between 15 million and 70 million forints,
105 are large:	SGM is over 70 million forints.

We classified farms arbitrarily, to a certain extent: we tried to form groups of roughly the same number of farms and keep round figures.

table 5.

**Profitability of different size groups (SGM) of economic organisations**

	Unit	Size categories (1000 Ft SGM)		
		Small ≤15000	Medium >15000 – 70000	Large >70000
Number of farms		93	94	105
Agricultural Area	ha	99.13	617.57	1786.43
Gross production value	1000 Ft/ha	408.33	254.92	299.92
Operational costs	1000 Ft/ha	396.07	246.78	287.63
Farm income	1000 Ft/ha	12.26	8.14	12.29
Income from financial transactions	1000 Ft/ha	-17.54	-8.89	-11.00
Consolidated profit	1000 Ft/ha	-12.58	-3.81	-0.40
Consolidated profit	1000 Ft/farm	-1247.06	-2352.94	-714.57
Return on total output	%	-2.17	-0.62	0.27
Return on assets	%	0.78	4.06	4.67
Return on net worth	%	-3.07	-1.22	0.49
Return on labour	1000 Ft/AWU	343.81	682.14	832.60

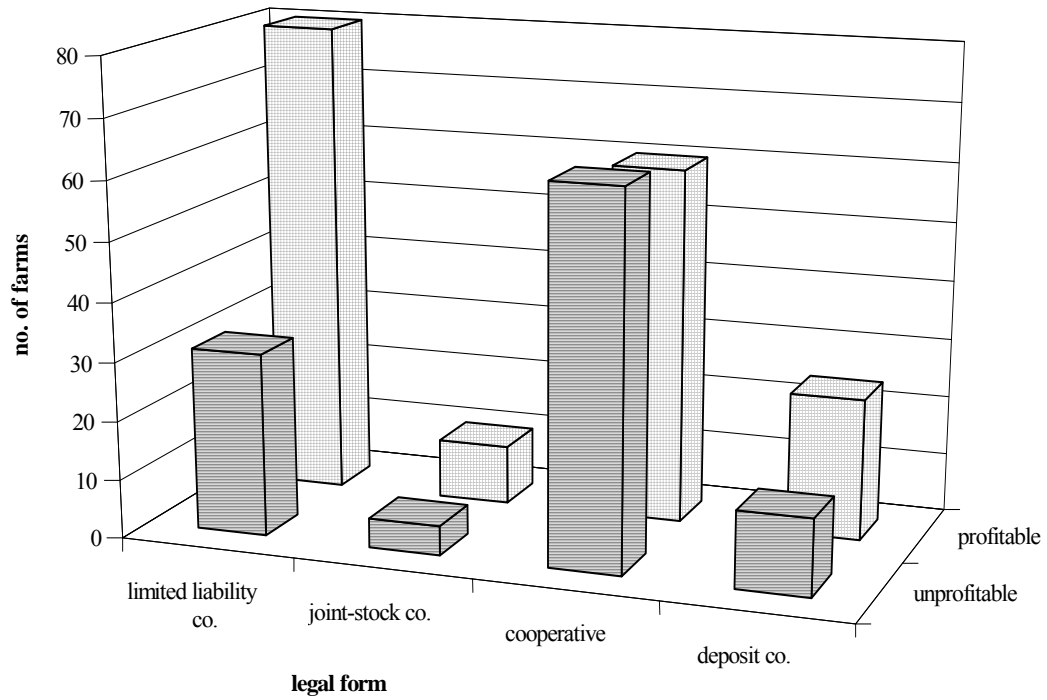
As concerns farm type, fruit and grape producer (plantation) farms had the best results. The order then is the following: grazing livestock producers, mixed farms, grain-fed livestock (granivores) producers and crop producers. (There were only two vegetable farms in the sample, which we could not evaluate separately.)

Dispersion of individual results is also very significant in economic organisations. 62 percent (180 farms) had positive balances, making an average of 9,7 million forints profit per farm. On the other hand, 38 percent (112 farms) had negative results, suffering a loss of -19.2 million forints on the average. The average consolidated profit was -1,4 million forints, from which individual farms deviated by 13,7 million forints(!) on the average (regardless of the direction of deviation). The best 25 percent of economic organisations realised a (consolidated) profit of 16890 forints per hectare, while the weakest 25 percent made a loss of -23360 forints.

Profitable and unprofitable farms also disperse according to legal business forms: the number of loss-makers is higher mostly among cooperatives. (figure 6.)

figure 6.

**Profitable and unprofitable farms according to legal business forms  
(based on consolidated profit)**





### 3. Comparison of the incomes of private farms and economic organisations

Profitability of private farms and economic organisations cannot be directly compared. The main reason is that private farms do not account justified wages for the work of family members as labour costs (in 2000 in private farms labour costs were 13800 forints per hectare, while in economic organisations they amounted to 47000 forints). Therefore, a part of personal incomes of family members is indicated in the profit of private farms. Comparability is only possible if in a correctional transaction similar wages are calculated for utilised labour units in both sectors. It means that instead of the wages and taxes on wages accounted in private farms we calculated with the same labour costs as in the case of economic organisations (1050000 forints/AWU/year).

As a result of the correction labour costs of private farms grew by 2,2 times, which resulted in a 12 percent increase in the operational costs. Evidently, the correction effected the incomes negatively. Farm income, for example, fell by 60 percent.

After all this, the two sectors can be compared based on the last two columns in table 6.

In economic organisations production value per hectare was 1,73 times, while production costs were 1,78 times higher than in private farms.

Crop production did not play a significant role in the difference between production values per hectare in the two groups of farms. However, specific incomes in the animal production of economic associations and cooperatives are twice as high as the same incomes of private farms. Another reason for the small difference in crop production is that in economic organisations the income on the so-called other agricultural activities (agricultural services, sales of agricultural products etc.) per hectare is several times higher than in private farms. Finally, economic organisations received 60 percent more agricultural support per hectare, which is accounted among other incomes, than private farms.<sup>10</sup>

As regards the structure of costs, labour costs per hectare (even after the correction) are 53 percent higher in economic organisations than in private farms. The so-called other costs (e.g. land rent, banking costs, insurance fees) are more than two and a half times higher in economic organisations than in private farms. Similarly, economic organisations had significantly higher burdens in the form of the so-called other expenses (provisions for expected liabilities and charges, taxes and fees accounted with the local government and the national budget etc.).

<sup>10</sup> The reason of the difference is that economic organisations get higher amounts of interest subsidy, even per hectare, than private farms, which are neither as able nor as ready to take out loans.

table 6.

### Comparative indices of private farms and joint businesses

	Unit	Private farms		Economic organisations
		Without correction	With correction	
Gross production value in ag.	1000 Ft/ha UAA	169.46	169.46	293.60
Net sales (agr.)	1000 Ft/ha UAA	138.73	138.73	244.20
of which:				
arable crops	%	50.18	50.18	27.20
animal breeding	%	35.91	35.91	41.27
fruits, vegetables, grapes, wine	%	8.11	8.11	3.61
other agricultural activities	%	5.80	5.80	27.92
Other incomes	1000 Ft/ha UAA	16.40	16.40	32.08
Activated own performance	1000 Ft/ha UAA	14.32	14.32	17.31
Total costs of agricultural activities	1000 Ft/ha UAA	141.30	<b>158.19</b>	282.25
of which: material costs	1000 Ft/ha UAA	83.77	83.77	130.09
labour costs	1000 Ft/ha UAA	13.75	<b>30.65</b>	46.97
so-called other costs	1000 Ft/ha UAA	9.50	9.50	24.94
so-called other expenses	1000 Ft/ha UAA	1.60	1.60	11.79
Farm income	1000 Ft/ha UAA	28.16	<b>11.26</b>	11.34
Income before taxes	1000 Ft/ha UAA	25.36	<b>8.46</b>	-0.08
Consolidated profit	1000 Ft/ha UAA	20.63	<b>3.73</b>	-1.62
Return on total output	%	14.97	<b>4.99</b>	-0.03
Return on assets	%	8.74	<b>3.47</b>	4.25
Return on net worth	%	8.98	<b>3.00</b>	-0.05
Return on labour	1000 Ft/AWU	1210.42	<b>988.44</b>	777.07
Cash-flow	1000 Ft/ha UAA	36.78	<b>19.88</b>	11.98

Note: corrected items are set in bold.

The aggregate result of these effects is that the (corrected) income of private farms (11260 forints per hectare) was almost exactly the same as of economic organisations (11340 forints per hectare). In economic organisations the losses on financial transactions (almost 11000 per hectare) pushed all the other income indices into the negative (profit on ordinary activities, income before and after taxes, consolidated profit), while in private farms all these incomes were positive.

We arrive at the conclusion that profitability indices of private farms are ahead of economic organisations, except **return on total assets**, but we have already mentioned that here the amount of paid interests is accounted as a factor that “increases” incomes.



Having read all the above, we have to see that for the time **being we cannot draw long-term conclusions from the comparison of the incomes of private farms and economic organisations**. The differences between the business results are not significant. If private farms had to pay the same amount of other costs (taxes and fees) per hectare as economic organisations, the income indices of the latter group would immediately seem better. Similarly, **every natural or market shock that, due to the different production and capital structure, affects the two groups in different way, can rearrange market positions**.

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## **Annexes**



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<sup>11</sup> If the number of farms in a certain group is less than five, data relevant for the group are not indicated.