DEFINITION OF FARM IN THE AGRICULTURAL STATISTICS OF HUNGARY AND THE EU

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The article gives an overview of the concept of farm (focusing on the small holdings), as an observation unit of the present system of agricultural statistics in Hungary. The authors describe the EU's methodological requirements of two main areas of agricultural statistics (farm typology and Economic Accounts for Agriculture) and the possible ways of adapting them according to the Hungarian circumstances.

KEYWORDS: Farm holding; Classification of farms.

The analysis of results of the Agricultural Census to be implemented under the Act XLVI of 1999 and appropriate conclusions are difficult challenges for both users and statisticians even in the current preparatory stage of data collection and analysis. In the course of preparing for a census the statistician must apply the national and international methodological specifications of statistical science and make sure that the analyses cover many different facts of the national economy and society for meeting the needs of future users. This paper discusses some of the issues facing statisticians and users and offers alternative solutions.

Generic classification of farms

The objective of agricultural censuses is to provide the possibly most accurate picture of a country's agriculture. For this purpose all respondents, that is all farms must be included in the scope of the census. The question as to what exactly a farm is has already emerged in the past but recently has become even more imperative. The underlying reason is that the classification of business units tends to vary in a broad spectrum of the purposes of production and the processes, regarding plant and equipment used.

No uniform-across-the-board practice for defining the relevant boundaries exists in the EU either. On the one hand, full coverage of all activities of farms is required, whereas only farms over and above a certain output threshold are included in the scope of

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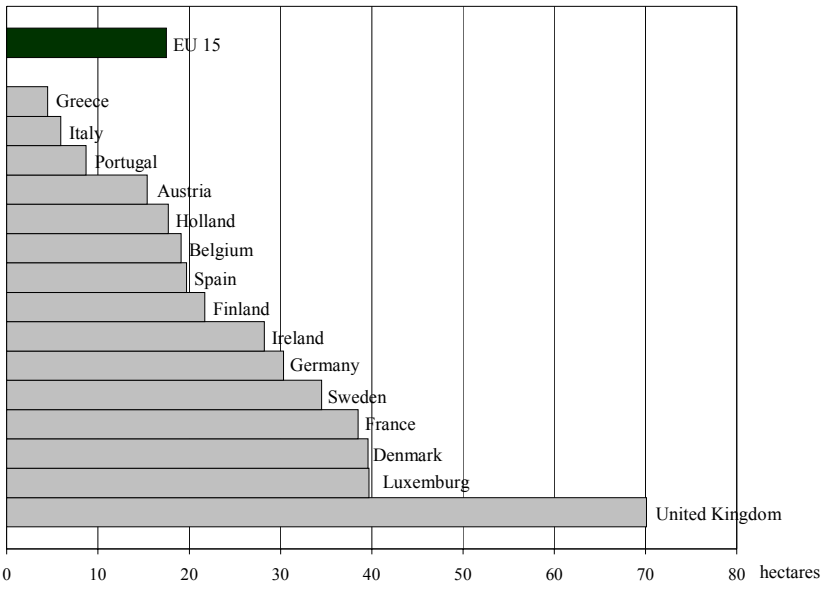
observation on the other. This is a key issue both from the point of view of typology and the system of agricultural accounts.

The scope of respondents can only be determined in terms of the size of respondents to be covered by the census, in other words, as a threshold level under which units active in the relevant field are excluded from the scope of observation. These entities forming the population of the agricultural census are the farms.

According to the EU methodological specifications agricultural censuses must cover all self-contained technological–economic units producing agricultural output and operating under independent management. At the same time, the threshold level must be defined bearing in mind that the total contribution of units excluded from the census to the Standard Gross Margin (SGM) must not exceed one percent. In order to meet such 'coverage criterion' the EU-member countries define various threshold levels. The common feature is that all units involved in agricultural activities should use at least one hectare land area or less but sell a certain volume of their products or exceed some other defined physical or value limits.

An interesting example is the threshold level accepted in the Netherlands that sets the lowest limit of a farm as three European Size Units (ESU). Such size of farms is the equivalent of approximately a 3-hectare autumn wheat or respectively 1.6-hectare sugar beet output. It must be emphasized that under the Dutch threshold level, which otherwise tends to be too high for Hungary, all units contributing to 99 percent of the gross agricultural output are covered by the census.

Average size of farms in the EU-member countries, 1995



In the EU-member countries adopting the effective regulations the average size of farms exceeds 17 hectares (see the figure.).

The large number of small farms – similar to the ones in Hungary – is typical in the Mediterranean EU-member countries, primarily in Greece and Italy. (The Hungarian average figures including also the agricultural enterprises calculated on the basis of the 1991 and 1994 censuses show a similar picture.) Despite the change in ownership structure over the recent one hundred years this structure has prevailed in Hungary, and the 'household' farms in the seventies added to the increasing number of family farms.

Hungary's peculiar farming structure differs largely from that of the average EU-member countries, and currently it can only be presented in terms of the findings of the latest comprehensive census conducted in 1991. This census registered 1576 state-owned farms and companies, 1501 co-operatives and 1396 thousand small farms. The application of new methodological considerations to agricultural enterprises (including state farms, agricultural companies and co-operatives) is not free from all problems yet it is one of the less complicated tasks. Appropriate coverage and threshold definition along with the closely related classification of farms pose a substantially more difficult task for the nearly one-and-a-half million small farms.

Over the post-census years production structure analyses of the 1.4 million 'small farms' registered in 1991 were carried out in the framework of a research project funded by OTKA (National Fund for Scientific Research). The prime targets of analyses were the size of farms and, in a broader sense, the activity types.

Since no SGM calculations were carried out in the early '90s the gross production value of the agricultural production was estimated for analyzing the size of farms. The estimated gross production value was based on average prices and yields rather than the actual output of individual farms. Product balance sheets were used as the basis of calculation. At that time gross production value was the only value indicator for summarizing data expressed in terms of various different natural units, such as land area by cultivation types, livestock by types of animals, etc.

Table 1

The number and distribution of small farming units by gross production value, 1991

Gross production value (HUF)	Farms	
	number	share (percent)
1 – 25 000	270 072	19.3
25 001 – 50 000	341 646	24.5
50 001 – 100 000	364 988	26.2
100 001 – 200 000	234 254	16.9
200 001 – 500 000	148 887	10.6
Above 500 000	35 906	2.5
Total	*1 395 753*	*100.0*

In our investigations size groups of farms were defined on the basis of gross production value. Our findings showed that 70 percent of the farms turned out extremely low production value, below 100 thousand HUF (see Table 1.). The ratio of farms where the majority of income of a small farming household originated from agricultural production

came to only a few percent on the basis of the production value net of costs. Household dependence exclusively on agricultural production could be assumed only in the case of the largest farms while in the case of the majority of farms other sources of income also contributed to make a living. Part-time agricultural activity, which has become a world-wide phenomenon, is widely practiced in Hungary, too.

This picture is even more colorful if gross production value is investigated in terms of main activity types. The units observed were grouped under the following three categories:

– *mixed farms,* where both the land area used and the livestock owned exceeded the threshold level applied in the Agricultural Census;
– *animal husbandry farms,* where only the livestock was equal to or higher than the threshold level applied in the Agricultural Census;
– *plant cultivating farms,* where only the land area used was equal to or higher than the threshold level applied in the Agricultural Census.

Of the registered farms 46 percent was qualified as mixed, 41 percent as plant cultivating and only 13 percent as animal husbandry farms. The farms falling under these three categories significantly varied in terms of size and production structure. Among the farm types the mixed ones had the highest average production value. Many of the animal husbandry and plant cultivating farms fell into the group of farms with the lowest production value.

Table 2

Distributions of farms by gross production value and type, 1991
(percent)

Gross production value (HUF)	Total number of units	Of which:		
		mixed	animal husbandry	plant cultivating
1 – 25 000	19.3	0.5	14.5	41.9
25 001 – 50 000	24.5	10.2	40.9	35.1
50 001 – 100 000	26.2	32.9	26.6	18.5
100 001 – 200 000	16.9	30.3	10.7	3.7
200 001 – 500 000	10.6	21.1	5.8	0.6
Above 500 000	2.5	5.0	1.5	0.2
Total	*100.0*	*100.0*	*100.0*	*100.0*
Number of farms	1 395 753	637 754	185 383	572 616
Share (percent)	100.0	45.7	13.3	41.0

Mixed farms had the greatest economic strength. The gross production value per unit of animal husbandry farms was below 50 percent of that of the mixed ones, and farms surviving nearly exclusively on plant cultivation had only one sixth of this performance. In the case of mixed farms some three-quarters of the gross production value originated from animal husbandry. Along with the increase of gross production value per farm this ratio shifted markedly toward animal husbandry. The average production value of plant

cultivation of small farming units came to the same orders of magnitude for both mixed and plant cultivating units (HUF 21 thousand and HUF 52 thousand respectively). Due to the land ownership and conditions of use prevailing at that time animal husbandry was certainly the most effective activity of small farming units in the early nineties.

Varying types of plant culture and animals were typical for various sizes and types of farms. The 1000 square meters average size of gardens was independent of the size and type of the farms. The size of mixed farms was primarily related to the total size of arable land and livestock, but the most significant cattle breeders also belonged to this group of farms. The share of cattle farming in the group of animal husbandry units was less than that of the mixed ones. Most of the gross production value of these farms came from pigs and chicken, but geese, ducks, turkeys and rabbits also played an ever increasing role in this group.

Table 3

Key indicators of small farming units, 1991

Description	Gross production value (thousand HUF)								*Total*
	below 25	25–50	51–100	101–200	201–500	501–1000	1001–3000	above 3000	
	Total farms								
Number of farms (thousand)	270	342	365	234	149	29	6	1	*1396*
Share of farms (percent)	19.3	24.5	26.1	16.8	10.7	2.1	0.4	0.1	*100.0*
Share in gross production value (percent)	2.0	7.6	16.4	20.9	31.0	12.9	7.1	2.1	*100.0*
Per one farming unit									
arable land (hectares)	0.22	0.34	0.46	0.71	1.11	2.03	3.88	9.02	*0.67*
vineyard (hectares)	0.08	0.13	0.17	0.25	0.36	0.52	0.56	5.16	*0.20*
orchard (hectares)	0.07	0.11	0.14	0.20	0.26	0.38	0.60	2.16	*0.15*
garden (hectares)	0.09	0.09	0.11	0.12	0.12	0.14	0.17	0.19	*0.10*
cattle (heads)	-	1	1	2	4	7	14	48	*4*
pig (heads)	1	2	3	5	12	27	54	91	*6*
horse (heads)	1	1	1	1	2	2	2	4	*2*
sheep (heads)	2	4	6	11	20	43	130	388	*22*
poultry (heads)	10	15	25	37	43	67	568	5107	*33*
	Plant cultivating farms								
Number of farms (thousand)	240	201	106	21	3	2	0	0	*573*
Share of farms (percent)	41.9	35.2	18.5	3.7	0.5	0.2	0.0	0.0	*100.0*
Share in gross production value (percent)	1.4	35.0	37.2	14.6	4.9	6.9	0.0	0.0	*100.0*
Per one farming unit									
arable land (hectares)	0.23	0.40	0.68	1.35	3.55	7.64	7.61	3.22	*0.50*
vineyard (hectares)	0.08	0.14	0.25	0.61	1.60	3.17	1.51	0.25	*0.20*
orchard (hectares)	0.07	0.12	0.21	0.40	0.91	2.30	2.00	1.94	*0.15*
garden (hectares)	0.09	0.12	0.16	0.20	0.23	0.39	0.20	0.12	*0.12*
cattle (heads)	-	-	-	-	-	-	-	-	-
pig (heads)	-	-	-	-	-	-	-	-	-
horse (heads)	-	-	-	-	-	-	-	-	-
sheep (heads)	-	-	-	-	-	-	-	-	-
poultry (heads)	10	16	18	19	19	15	15	18	*18*

(Continued on the next page.)

(Continuation.)

Description	Gross production value (thousand HUF)								*Total*
	below 25	25–50	51–100	101–200	201–500	501–1000	1001–3000	above 3000	
	Animal husbandry farms								
Number of farms (thousand)	27	76	49	20	10	2	1	0	*185*
Share of farms (percent)	14.6	41.1	26.5	10.8	5.4	1.1	0.5	0.0	*100.0*
Share in gross production value (percent)	2.0	16.9	21.9	17.8	20.7	8.9	11.8	0.0	*100.0*
Per one farming unit									
arable land (hectares)	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	*0.08*
vineyard (hectares)	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.04	*0.04*
orchard (hectares)	0.03	0.03	0.04	0.04	0.03	0.04	0.04	0.04	*0.03*
garden (hectares)	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	*0.04*
cattle (heads)	-	1	1	2	4	8	15	73	*4*
pig (heads)	1	2	3	7	16	35	63	109	*5*
horse (heads)	1	1	2	2	2	2	3	3	*2*
sheep (heads)	2	4	7	13	20	42	122	102	*14*
poultry (heads)	8	14	26	37	43	96	1291	6853	*32*
	Mixed farms								
Number of farms (thousand)	3	65	210	193	136	25	5	1	*638*
Share of farms (percent)	0.5	10.2	32.9	30.3	21.3	3.9	0.8	0.1	*100.0*
Share in gross production value (percent)	0.0	1.9	12.5	22.8	37.4	14.7	7.9	2.8	*100.0*
Per one farming unit									
arable land (hectares)	0.20	0.25	0.40	0.67	1.08	2.01	3.84	10.79	*0.80*
vineyard (hectares)	0.07	0.08	0.12	0.20	0.29	0.46	0.52	7.32	*0.20*
orchard (hectares)	0.06	0.07	0.11	0.17	0.22	0.33	0.54	2.28	*0.17*
garden (hectares)	0.08	0.09	0.11	0.13	0.14	0.15	0.19	0.25	*0.12*
cattle (heads)	0	1	1	2	4	7		46	*4*
pig (heads)	1	1	2	5	11	25	53	86	*6*
horse (heads)	1	1	1	1	2	2	2	4	*2*
sheep (heads)	2	4	6	11	20	43	131	433	*25*
poultry (heads)	9	12	22	36	43	59	304	3332	*36*

In the group of plant cultivating farms the ‘large’ farms were active in vineyard, orchard and production on glass/plastic covered area or had plant cultures in the arable land areas of best quality of Hungary.

Specific indicators per one farming unit (see Table 3) clearly show what sizes of farms produced primarily for own consumption. These were farms producing less than HUF 1 million of gross output.

Due to the large number of petty farms producing exclusively for family consumption compliance with the statistical coverage specification was an extremely difficult methodological task. At the same time, comprehensive monitoring of agricultural activity provides vital information for decision-makers, analysts and agents of the market. For instance, the livestock kept at commodity producer farms is insufficient for determining the total livestock. The exact definition of the commodity producer unit would also bring up numerous problems, not mentioning comparability. In terms of size, activity or degree

of specialization commodity producer farms under Hungarian circumstances probably would not fall in the same category prevailing in the Netherlands or Denmark.

In Hungary commodity production of petty farms producing mainly for own consumption was not negligible even at the time of earlier censuses conducted in 1972 and 1981. This was kept in mind in defining the threshold levels for earlier censuses. For comparability almost the same threshold levels were used in statistics over the recent 30 years.

Table 4

Thresholds applied in censuses

Description	1972	1981	1991	1994	2000
	year's census				
Total arable land (hectares)	0.15	0.15	0.15	0.15	0.15
Orchard, vineyard, garden (hectares)	0.08	0.08	0.08	0.08	0.05
Cattle (heads)	1	1	1	1	1
Pig (heads)	1	1	1	1	1
Horse (heads)	1	1	1	1	1
Sheep (heads)	1	1	1	1	1
Poultry (heads)	50	50	50	50	50
Bee colony (pieces)	20	20	25	25	5
Rabbit (heads)	20	20	25	25	25
Other small domestic animals (heads)	–	–	25	25	25

Hence statistical coverage has been comparable for nearly 30 years. But how could and should the classification of Hungarian farms be interpreted and managed in terms of the EU-typology and the Economic Accounts for Agriculture (EAA) system?

The EU-typology of farms

By the decision of June 7, 1985 the EU embarked on the creation of standard typology of farms. This EU-typology is a farm classification by SGM based on type of farming and economic size.

According to Article 2 in Section 1 of the EU-decision the typology was designed to meet the information needs of the common agricultural policy, including the

– analysis of the situation of holdings based on economic criteria,
– comparison of the situation of holdings
  among the various classes,
  among member states and member state regions,
  among different periods.

The typology is based on data collected through Community Farm Structure Surveys (agricultural censuses) and the Farm Accountancy Data Network (FADN).

According to Article 3 in Section II SGM shall mean the balance between the standard value of production and the standard value of certain specific costs, this balance shall be determined for the various crop and livestock characteristics within each region.

The EU-decision stipulates in detail the methods of data collection and calculation as well as the frequency of SGM calculations. SGM is defined as the mean value of the calculated basic data for certain periods over three years.

By the stipulations of Section III farm type is determined by the relative contribution of different activities to the SGM. Four levels of farming are defined in the typology:

– general types of farming (9 types),
– principal types of farming (17 types),
– particular types of farming (50 types),
– subdivisions of certain particular types of farming (32 sub-groups).

The subdivisions shall be optional for those member states in which the number of holdings in this type of farming is small.

Paragraph IV stipulates the classification of farms by size. Accordingly the size of farms must be expressed in terms of the European Size Unit (ESU) based on the total SGM.

The degree of specialization of the two top levels of farm types (general and principal) is rather high from the Hungarian perspective. Hence one can rightfully ask whether it makes sense at all to impose this classification on the Hungarian farming households producing for own consumption, such as those keeping a 1-2 pigs, and whether the stipulated comparability of farms of different member countries and regions can be met.

The results of censuses conducted in 1991 and 1994 suggested the need for breaking down this group of nearly one-and-a-half million units. Also a second threshold was needed for the classification of farms by EU-terms rather than for coverage. The so-called *reporting threshold* is required to assure the coverage needed for authentic information at national level on agricultural performance, total livestock, cultivated arable land area etc. The so-called *farm threshold,* however, is required to define the size of commercial farming in EU-terms. For clarity the units falling between these two thresholds could be called *small* farm similar to the term 'minor holding' used in some EU-member countries, such as the United Kingdom and Sweden. It is true, however, that small farms in these countries are of substantially larger than small farms in the Hungarian context. It does not mean, however, that small farming would not be monitored and analyzed in terms of activity and size, but rather this is an expression of need for monitoring and analytical criteria other than those pertaining to the large ones. Hence a clear picture comparable in the international context could be available for the formulation of agricultural and social policy, and regional development could draw on the wealth of ideas generated.

The critical point here is naturally the definition of the second threshold for farm size. For this purpose pilot calculations were carried out on the basis of data of the 1991 and 1994 agricultural censuses and the data available from that of the Farm Accountance Data Network (FADN). The essence of these calculations is briefly reviewed in the following , while emphasizing their preliminary and experimental nature.

In the EU farm size is expressed in terms of Euro calculated as the total contribution of products and services to SGM. This indicator, not unlike the value added, is converted to European Size Units (ESU). An ESU is currently equal to 1200 Euro.

Table 5

Number of farms and SGM-values in the EU-member countries by size categories, 1995

Description	Number of farms, thousand SGM (ESU)	SGM per one farm (ESU)							*Total*
		–2	2–4	4–8	8–16	16–40	40–100	100–	
		distribution by size categories (percent)							
Belgium									
Number of farms	71	10.3	7.8	10.0	11.1	21.0	30.0	9.8	*100.0*
SGM	3 025	0.3	0.5	1.4	3.0	13.5	45.0	36.3	*100.0*
Denmark									
Number of farms	69	0.5	6.0	16.0	17.4	21.3	24.1	14.7	*100.0*
SGM	3 557	0.0	0.4	1.8	3.9	10.6	31.1	52.2	*100.0*
Germany									
Number of farms	567	20.8	12.0	12.0	13.2	22.0	16.3	3.7	*100.0*
SGM	15 845	0.8	1.2	2.5	5.5	21.0	35.2	33.8	*100.0*
Greece									
Number of farms	802	33.9	20.4	22.1	16.0	6.7	0.8	0.1	*100.0*
SGM	4 866	5.3	9.8	20.9	29.4	25.3	6.8	2.5	*100.0*
Spain									
Number of farms	1 278	39.9	18.6	16.3	12.8	9.0	2.7	0.7	*100.0*
SGM	10 973	4.5	6.1	10.6	16.7	25.1	18.3	18.7	*100.0*
France									
Number of farms	735	18.6	8.7	9.0	12.2	25.7	20.3	5.5	*100.0*
SGM	23 015	0.6	0.8	1.7	4.6	22.0	39.4	30.9	*100.0*
Ireland									
Number of farms	153	15.3	15.3	19.8	18.6	20.4	9.4	1.2	*100.0*
SGM	2 526	0.9	2.7	7.0	13.0	31.9	33.1	11.4	*100.0*
Italy									
Number of farms	2 482	51.9	16.3	13.2	9.1	6.2	2.5	0.8	*100.0*
SGM	18 535	5.8	6.1	9.8	13.4	20.5	20.1	24.3	*100.0*
Luxemburg									
Number of farms	3	12.0	8.9	10.8	10.2	23.5	32.7	1.9	*100.0*
SGM	96	0.4	0.9	2.1	3.8	22.5	62.5	7.8	*100.0*
the Netherlands									
Number of farms	113	0.1	1.7	9.7	12.1	17.4	31.9	27.1	*100.0*
SGM	8 931	0.0	0.1	0.7	1.8	5.9	28.0	63.5	*100.0*
Austria									
Number of farms	222	27.4	14.3	16.6	18.6	18.8	4.0	0.3	*100.0*
SGM	2 463	1.9	3.7	8.7	19.3	41.5	19.4	5.5	*100.0*
Portugal									
Number of farms	451	47.7	24.7	14.4	7.2	4.2	1.4	0.4	*100.0*
SGM	2 438	8.8	12.9	14.8	14.8	18.9	14.9	14.9	*100.0*
Finland									
Number of farms	101	14.9	14.0	16.3	21.9	26.4	5.5	1.0	*100.0*
SGM	1 565	1.3	2.7	6.1	16.7	41.8	20.4	11.0	*100.0*
Sweden									
Number of farms	89	18.5	15.7	15.7	13.7	17.8	15.1	3.5	*100.0*
SGM	2 055	0.9	2.0	3.9	6.7	20.3	39.9	26.3	*100.0*
Untied Kingdom									
Number of farms	235	18.3	9.5	12.0	12.3	17.4	19.0	11.5	*100.0*
SGM	9 996	0.2	0.6	1.6	3.3	10.9	28.5	54.9	*100.0*
EU-15									
Number of farms	7 370	36.6	15.8	14.5	12.0	11.8	6.9	2.4	*100.0*
SGM	109 883	2.2	3.0	5.5	9.1	20.0	28.6	31.6	*100.0*

In our experimental estimates the categories of the last agricultural census were converted to ESU expressed in terms of gross production value using the pilot data provided by the Research and Information Institute for Agricultural Economics for the year 1998. The FADN-system provided the production value and SGM-figures of 21 products, making up 80 percent of the total agricultural output of farms and agricultural enterprises covered, including their share. In the first step the ratio of average SGM and the production value were calculated using the share of the given product in the respective outputs of two agricultural groups as a weight factor. Then the aggregate figure of individual products based on their share in the total output was calculated. Hence the ratio of SGM and production value to the total agricultural output was determined, and the result was adjusted by the ratio of value added to the output shown in the national accounts. The calculations showed that SGM was equal to some 40 percent of the production value.

The ESU value of individual categories was determined by adjusting the size categories expressed in terms of production value with the SGM-ratio using the exchange rate of ECU prevailing in 1995. The result was astonishing: in the first half of the nineties the 99.5 percent of farms fell into the smallest size category and generated 91 percent of the total SGM. At that time two ESUs were approximately equal to one million HUF production value.

For accenting the specifics of the Hungarian agricultural structure the average farm sizes of the current EU-member countries are given in Table 5.

We must point out again that the previous estimation is based on a large number of assumptions, therefore by no means can it replace the accurate and detailed calculations to be carried out on data collected under the Agricultural Census.

Small farms in the Hungarian EAA

Under the new EUROSTAT EAA methodology, it was decided by EU-member states to exclude units which produce solely for own consumption. Such regulation meets the agricultural structure of the current EU-member countries, however, the farming structure of Central European countries substantially differs from that. In these countries the number of small farms and their share in the total output are extremely high. (For the same reason this issue was raised at the EAA meeting of the OECD countries held in February 2000, in Paris.)

The Hungarian Central Statistical Office (HCSO) has also implemented a recent change in methodology. The earlier method was based on the absolute gross approach: all types of intra-unit consumption and intra-industrial flows were recorded under EAA. The ‘old’ Hungarian data were identical with the term ‘usable output’ (column 3quintal of the elaboration table of the new EUROSTAT manual).

The current Hungarian methodology for measuring the output is actually the adoption of the EUROSTAT-method as part of the EU-harmonization process, therefore the output does not include a part of the intra-unit flows, and production solely for own consumption is also excluded. In applying the new regulations most of the problems arise in the handling of small farms, therefore their definition in the Hungarian context is quite extraordinary.

The relevant EUROSTAT EAA regulations are quite ambiguous. Several sections referring to it are in conflict. Let us demonstrate the problem by briefly reviewing the key sections (*italics*) and their applicability in the Hungarian environment.

1.16 Since the purpose of the EAA is to measure, describe and analyze the formation of income from agricultural economic activity (which, in the Member States of the EU, is almost exclusively a commercial activity), it was decided to exclude units which produce solely for own consumption (e.g. kitchen gardens and private livestock rearing). This type of 'small' unit should be recorded if it is above the minimum threshold used in the survey on the structure of agricultural holdings. The appropriateness of using a threshold higher than this minimum threshold, though perfectly possible, must be justified. It should, however, be pointed out that agricultural production for own final consumption by holders whose holdings are larger than the minimum size must be recorded in the EAA.

The first bracket in the first sentence of this section is rather intriguing. According to this definition agricultural activity in the EU member countries is almost exclusively of market producer nature. Certainly, this is not the situation with the Central-Eastern European countries, therefore the exclusion of farms producing exclusively for own consumption is not compatible with the Hungarian conditions either. Currently we can only estimate the number of units producing solely for own consumption, but the accurate answer will come from the data of the Agricultural Census of the year 2000.

For the method of approach we used data of the latest agricultural census. The estimations are based on the Agricultural Census of 1991 and the product balances (see Table 3.).

The first three categories of this table (each below one hundred thousand HUF gross production value) include farms, which – in our view – produce solely for own consumption. It was also assumed that the remaining farms produce and, in general, sell the surplus (while, of course, consumption was not neglected either). Under such conditions 70 percent of Hungarian 'farms' are units producing for own consumption.

Table 6

The share of own consumption in the Hungarian EAA

Product	Output	Own consumption	Share of own consumption (percent)
	million HUF		
Total agricultural products	*999 641*	*115 071*	*11.5*
Processed vegetable products	506 935	37 760	7.4
potato	35 569	7 697	21.6
fresh grocery	93 883	11 730	12.5
fresh fruits	46 015	12 013	26.1
Animals and animal products	492 706	77 310	15.7
pig	170 689	41 474	24.3
poultry	111 783	18 104	16.2
eggs	40 967	9 968	24.3

The average arable land area used by these farms is less than 0.46 hectare, their vineyard area is less than 0.17 hectare. On average they own less than 1 head of cattle, or 3 heads of pigs, or 25 heads of poultry. The output achieved with such land area and livestock (including animal products) is more or less sufficient for the consumption of one family. Despite their small size, however, these farms have a 26 percent share in the total output. It is likely that this share has reduced since 1991 but it is still significant, therefore leaving them out from the calculations would reduce the validity of results.

According to the second half of the quoted section of the Manual Farm Structure Surveys, such as the Agricultural Census, should cover the production of units above the threshold level along with own consumption, for inclusion in the EAA. The farm threshold applied in the Hungarian agricultural statistics is traditionally very low and this section of the Manual allows the inclusion in the EAA of the majority of farms producing exclusively for own use.

Appendix XI of the Manual explains the relationships between EAA and the National Accounts.

1.05. ESA 95 asks for the inclusion of the own-account production of agricultural products by households in the industry account (ESA 95, 3.08 and 3.21). However, agricultural units below the minimum threshold of the farm survey (production solely for own consumption in kitchen garden and private livestock rearing) are excluded from the EAA, whereas agricultural products retained by farmers are generally included. Where the household production not covered in the EAA is significant (quantitatively important in relation to the total supply of that good in a country) the corresponding values are to be added to the EAA data (compare ESA 95, 3.08).

The last sentence of this section is relevant from our point of view because it contradicts the former quoted section 1.16. Accordingly the output of farms below the threshold level contributing to a significant extent to the total output of a particular product must be estimated in addition to that of farms exceeding the threshold level. The manual offers no specification as to exactly what extent or share is deemed significant. Consequently this statement allows the inclusion in the EAA of the output of all farms below the threshold level.

Due to such interpretation of the rules the Hungarian EAA covers the total output of all farms, including the production for own consumption. In Hungary EAA output estimations are based on product balances. The value of own consumption stated in the EAA is shown in Table 6. In the case of some key products it becomes clear from the Table that the share of own consumption is extremely high and therefore – in the spirit of the preceding Section – it must be accounted for in the EAA. For instance, based on the data of Table 3 the average poultry stock of farms producing for own consumption remains below the threshold value of the Agricultural Census (see Table 4.). Consistently, the ratio of own consumption of poultry and eggs is high in the EAA (16.2 and 24.3 percent, respectively). Consequently accounting in the EAA for the poultry and egg production exclusively of farms exceeding the threshold size would result in a figure substantially lower than the one shown so far.

There is another reason for the full accounting of the production for own consumption under the EAA. Such accounting method is fully compliant with the rules of the National

Accounts system constituting also the framework of EAA. (In other words, there is no contradiction between the two systems of accounts in this respect.)

Latest developments

The EAA specific part of this paper was presented by the Hungarian delegation at the OECD-meeting of agricultural accountants experts (3-4 February 2000), too. Since then EUROSTAT has sent a circular note to the member states about the treatment of kitchen gardens in the EAA. However it was planned to introduce these changes in the forthcoming Revision 1.1 version of the EAA Manual, but the new version has remained unchanged in this regard, because some Member States recommended to decide this important issue on the next Working Party meeting. The proposed new wording for paragraph 1.16 is the following:

1.16.1. The purpose of the EAA is to measure, describe and analyse the formation of income from agricultural activity. Therefore, only those units which are involved in agricultural economic activities are covered by EAA. The output to be recorded in the EAA comprises the market output and the output for own final use of these units. Units for which the agricultural activity is only a leisure activity, producing solely for own consumption are to be excluded.

1.16.2 Agricultural economic activity, in the Member States of the current EU-15, is almost exclusively a commercial activity. However, in many non-EU countries, a large number of units are engaged in subsistence farming. For these units, the carrying out of agricultural activities is an economic need (and not a leisure activity); they sell none, or only a very small fraction of their output. In the EAA, subsistence farming is considered as an economic activity, and consequently has to be recorded.

The former described way of recording kitchen gardens i.e. splitting up into hobby garden and subsistence farming both satisfies the Member States and the candidate countries. This distinction raises the question of how to define hobby gardens and subsistence farming. Since both types of farming have a low output and small land area and number of livestock, the borderline can not be drawn by using any kinds of value indicator (SGM, Gross Output etc.) or physical indicator (land size or herd size). The only 'tangible' difference maybe, that animals are usually not kept on hobby farms, but typical in subsistence farming . We think that this distinction should be made at country level considering the special characteristics of agriculture in the country. In Hungary practically all small farms can be regarded as subsistence farm, i.e. they should be recorded in EAA according to the proposed changes in the Manual.

Conclusion

Between April 1 and 21, 2000 the sixth comprehensive Agricultural Census of the Hungarian agricultural statistics was conducted. As it is expected, some ten thousand agricultural businesses and nearly one-and-a-half million households account for their agricultural activity. Indisputably, this is necessary even with a stable agricultural struc

ture based upon censuses conducted once every decade (also supported by the several decade-long practices of the FAO and the EU). These days it is especially valid for Hungary where a number of significant changes have taken place since the last comprehensive census.

In the case of the agricultural enterprises there is no ambiguity concerning the need for annual surveys, classification and / or inclusion of farms in the EAA or the EU analyses.

Based on the 2000 census data, however, we must re-consider some of the issues concerning households and small farms. One thing can be stated even without knowing the census results: for the most complete scope of observation of the agricultural activity agricultural household surveys should be conducted every 5 to 10 years. Consequently the same extremely low census threshold which has been in use for nearly 30 years had to be applied again. In the periods between such comprehensive censuses the annual samples should be selected to cover nearly the full scope of large farms (whose annual gross production value exceeds one million HUF). For the small (producer) farms below this value the activity shall be monitored using the data of a small sample of a few percent size. Data collections after year 2000 are planned to follow these principles.

We must, however, carry out calculations based on the 2000 Agricultural Census in order to define the size of Hungarian farms where production covers solely own consumption. The objective is to arrive at the size categories where either surplus is produced or where the prime objective of production is the sale of products, that is, to determine the market producer farms.

Excluding farms producing exclusively for own consumption from the EAA calculations would mean a substantial reduction of the currently reported Hungarian agricultural output.

In the current regulations adopted in the EU-member countries the specifics of agriculture in the Central European candidate countries have not been taken into account. This is why it is necessary to re-think and re-interpret the EU regulations concerning small farms in the light of conditions prevailing in the candidate countries before their accession to the EU. In our view small (producer) farms falling above the second ‘farm threshold’, along with the agricultural businesses should be included in the EU typology. For farms below this threshold level a special Hungarian farm typology to meet the needs of exploring, analysing and managing the described structure must be designed.

Consultations on the relevant subject with EUROSTAT may shape practices for encompassing and managing the peculiar features of the Eastern-Central European region and may even serve as an example.