COMPONENTS OF THE AGRICULTURAL INFORMATION SYSTEM IN THE LIGHT OF EU-HARMONISATION *

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The EU-harmonisation of agricultural information systems is a pressing task. These systems may facilitate the accession of Hungary to the EU, and their output may contribute to the negotiating efficiency at the accession talks. This paper offers an outline of agricultural information structures and key information systems of the European Union, and addresses the key components such as Statistics, Market Information System, Test Operation System, Integrated Management and Control System and the Economic Accounts for Agriculture. The current status of harmonisation in Hungary is also reviewed. Finally, the study draws conclusions, including some recommendations, obligations and opportunities for respondents in relation to the information systems.

KEYWORDS: Agricultural information system; EU-harmonisation.

In the last three to four years the Hungarian agricultural information systems, including agricultural statistics, have been largely upgraded. The implementation of some key system components compliant with their EU-counterparts, which should be in place as the prerequisite of Hungary's accession to the EU, has been started. The efforts have already yielded the first practical results while others require heavy efforts to come on stream in the coming years as part of the development of information systems.

EU-harmonisation of information systems, including the statistical ones, is a pressing task also because achievements in these areas can underpin the efforts of the Hungarian mission at the accession talks and, on the other hand, safeguard the interests of Hungarian agriculture after accession. Moreover, an up-to-date information system developed on scientific grounds is appreciated already now as an important tool of operative decision making and strategic planning.

In the adaptation or development process of a state-of-the-art EU-compatible agricultural information structure the modules of the system are components of an integrated entity, therefore the system design is integrated, as well. This means a preferably consistent

* Some issues are reviewed in more detail in the paper of the author prepared for the Integration Strategy Task Force of the Office of the Prime Minister titled 'Development of the agricultural information system in the light of Hungary's EU accession' (No. 56, 1999 Budapest).

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hierarchy of subsystems with connectivity in all directions, starting from business organisations through regions up to the level of governmental and supranational agencies. Consequently this system development phase will concentrate on the structure of the information system and the interfaces between the subsystems.

The objective of this paper is to facilitate the development of a state-of-the-art agricultural information system conforming to the policies and aims detailed above. In this context the existing European systems will be outlined and the issues of scope as well as management already addressed or to be resolved are explored below.

IT Structure in the European Union

The design and implementation of an EU-compliant registration system and information network are determinant among the criteria of EU-integration of the Hungarian agriculture. Apart from accession there is an obvious need for a new information system for the decision support of agricultural administration. The existing information service is no longer capable of fully satisfying the emerging new needs. *Gyula Varga* is absolutely right to say that the development of agricultural information system must be completed even if '…Hungary will be never join the EU, and will not even negotiate accession'.[2]

Administration of the EU agricultural sector is supported by the controlled flow of a vast amount of carefully agreed and standardized data. Member States are linked with the EU decision-making centres via information channels. Decisions relying on these data can lead to considerable benefits or heavy losses to the concerned countries therefore the reliability and comparability of data is not merely a rigorous standard but also an inherent concern of the existing or prospective EU Member States. Thus the Hungarian agricultural information system must meet the EU-standards even in the phase of accession talks. In the negotiation phase, however, Hungary should only agree to the harmonisation of the agricultural database without the mechanical adaptation of any existing European system. This approach is indicated by the specifics of the Hungarian agricultural structure, namely, the perpetuance of large, medium- and small sized businesses and the consequent requirements, such as the need for mandatory standards of higher accuracy and detail applicable to legal entities.

This requires strategic decisions in the first place. The tasks of this phase profoundly differ, even in terms of philosophy, from the operational ones falling due only after accession (such as quotas, support granted on basis of set aside areas, extensive animal keeping, regional support including handicapped area support or structural support). In turn, these tasks require reporting data of perfectly unknown accuracy detailed by producers and expressed in terms of value and physical units. While the negotiations can benefit from finding the answers to the implied questions as soon as possible these solutions are mainly needed because they will determine the support made available to the Hungarian agriculture after accession. If the preparations are not made in time, and this may take at least 3 to 5 years, then the EU support scheme will be out of reach. However, there is an

[2] *Varga, Gy. (*1996*): Az agrárgazdaság és az agrárpolitika helyzetének kérdőjelei és legfőbb teendői az EU-csatlakozás tükrében*. Az Integrációs Stratégiai Munkacsoport Agrárgazdasági Témacsoportjának helyzetfelmérő tanulmánya. Budapest.

uncertainty to be considered, and the preparations for these tasks must be weighted against the realistically expected benefits.

Compared to the Common Agricultural Policy (CAP) the structure of European Information Technology (IT) systems has been rather stable. CAP is revised at 5-7 year intervals depending on the actual trends in the agricultural sector of the member countries and the impact of these trends on the regulation. Nevertheless, certain components of the CAP information system have remained more or less unchanged. Certainly this does not mean that the system has 'petrified', on the contrary, it has the ability to accommodate additional components, such as the Integrated System of compensation support management. The development of this information system, however, is far more balanced and predictable than the CAP itself, therefore it may be easier to satisfy the IT requirements than to successfully negotiate at the accession talks the ongoing CAP reform and the assertion of Hungarian interests.

The EU information systems are manifold, but they actually fall in the following two general categories: Primary Information Systems, Secondary Information Systems.

Primary information systems include the large European data collection and data processing structures. These structures actually provide the basis of the European agricultural information system. The four key modules of this category are as follows.

1. Agricultural Statistics providing statistical information under EUROSTAT coordination on EU processes and trends in many areas;[3]

2. Farm Accountancy Data Network (FADN) for the monitoring of financial processes and income position of farms, one of the key data systems of the EU (following the German practice better known in Hungary as the Pilot System);

3. Market Information System for providing market trend data for producers and also vital information for the Brussels staff; and finally the

4. Bulk of systems used in the allocation of support, including, in particular, the essentially 'technical' Integrated Administration and Monitoring System used for in the administration of EU for the posting and monitoring of payments.

Secondary information systems typically have no built-in massive data collection features but they rather use the databases of primary systems. They are designed to meet the specific information needs of certain 'narrower' areas. Only the system of Agricultural Accounts, a mandatory EU-system, is addressed of these in this paper. The tasks based on the system of accounts combine output, input and process figures of product categories specified by the EU to provide short-term forecasts of output, value added and income positions, and the expected impact of agricultural policy actions.

Agricultural Statistics

The very exacting standards and requirements specified for the system of agricultural statistics exemplify the high share of agricultural support in the budget of the EU. The system of agricultural statistics is one of the most state-of-the-art sub-systems of the sta

[3] This complexity is illustrated by the inclusion in the EUROSTAT Compendium of Geographic Information Systems (GIS) and field monitoring by Remote Sensing (RS).

tistical system of the EU and it supplies the overwhelming majority of data used in the European Union.

Directorate General Agriculture is one of the 23 General Directorates of the European Commission (EC). DG AGRA is responsible for the implementation, 'direction' and development of the common agricultural policy. The necessary input information is transmitted via two channels, i.e., the EUROSTAT and the direct link from the Member States. Data received directly from the Member States typically include detailed and up-to-date market information used mainly in operative management.

The agricultural statistical information used in formulating the agricultural policy, in economic analyses and for general information, reaches the Commission via EUROSTAT. EUROSTAT accepts exclusively reporting received from the official statistical agencies of the member countries. Practically it means that the data reported by national statistical offices are attested by EUROSTAT before forwarding to the Commission. Thus, in the case of Hungary, the Hungarian Central Statistical Office (HCSO) is the approved source of agricultural statistical data reported to EUROSTAT and only these data are accepted as valid in the EU. EUROSTAT, however, is not merely a passive receiver and forwarder of data service but rather the official statistical service of the EU. It is also responsible, among others, for developing and upgrading the EU information systems, for designing data collection methods, providing support and guidance to member countries in statistical activities. Directorates control the various special statistics, e.g. Directorate F supervises agricultural, forestry, fishing, environmental and energy statistics.

The detailed explanation of the issues of agricultural statistics is beyond the scope of this paper,[4] however, the following issues should be noted here.

The strongest pillar of the European system of agricultural statistics, i.e. the surveys of business structure, is as an abundant source of information about the position and structure of European agriculture and the social and financial positions of farms. In order to meet the critical professional requirements and to obtain a realistic picture of ownership- and business conditions of the Hungarian agriculture an Agricultural Census is required.[5] Furthermore, a successful census is also a prerequisite for the realistic evaluation and use of data from other databases created from samples. Thus a carefully prepared and implemented agricultural census is a cornerstone of Hungarian agricultural statistics and information system.

The existing production statistics of adequate reliability and rate cover land and animal assets as the two key factors of production, and the key data of plant production and animal production. The existing Hungarian agricultural statistics can satisfy 75-80 percent of the European statistical requirements.

Among the gaps of the Hungarian statistics vis-à-vis the EU requirements special note should be made of the regular survey of the operation and performance of agricultural businesses in general and the private farms of various sizes and profiles in particular.

[4] For detailed information about agricultural statistics please refer to the proceedings of 'Agricultural Information Technology 99' event held at the Agricultural University of Debrecen, in: *Laczka, É.*: Agricultural Statistical Information System (pp. 32–35); *Szabó, P.*: Economic Accounts for Agriculture in the light of National Accounts (pp. 36–39); *Gyimesi, K.*: Agricultural Census 2000 (pp. 40–43).

[5] The General Agricultural Census was carried out in April 2000.

Monetary statistics is closely related to this issue. These gaps are especially apparent in the information subsystems used in economic studies. Among sub-systems of monetary statistics price, labour and income statistics by minor adjustments are required to meet the EU-standards.

The field crop monitoring system using satellite based remote sensing came on stream in 1997. By now GIS and RS techniques have become indispensable decision support tools in agricultural administration. The efficient use of these state-of-the-art methods is particularly indispensable in the realistic mapping of excess surface waters. The agricultural information system including agricultural statistics will also benefit from the efforts launched in connection with the adoption of *acquis* in the areas of land administration and cartography. This includes high priority national tasks supported by the Land Registry IT and service development.

The Market Information System

Market information systems are mainly designed to ensure market transparency as a critical precondition of effective competition. Market information systems may prevent the accumulation of unreasonably high earnings at certain levels of a commercial chain, typically to the detriment of other. From the aspect of producers market transparency means the ability to sell products at fair market value. For improved efficiency and higher performance distributors and manufacturers also need market transparency.

Agricultural market information may improve the competitive positioning of agricultural producers in the first place. Based on the information on low supply or surplus they can find the best opportunities of sale. However, if the market prices are to truly reflect the actual market positions, this information must also be available to all of other parties.

The EU market and price information structure grouped by the two key categories of users includes information systems serving the information needs of market agents and central agencies, especially DG AGRA of the European Commission.

There is a certain level of connectivity between the two categories, therefore they are closely linked in several EU-countries. This is illustrated by the example of France where SNM (Services des Nouvelles des Marchés – Market Information Service) is directly supervised by the Ministry of Agriculture and satisfies the information needs of national authorities, the EU-administration and market agents alike. In contrast, the information needs of German market agents are served by a dedicated agency, ZMP (Zentrale Markt- und Preisberichtstelle für Erzeugnisser der Land-, Forst- und Ernährungswirtschaft Gmbh – Central Market and Cost Monitoring Service of Agricultural, Forestry and Food Products). Still another structure has been implemented in the Netherlands where the market and price information systems are operated by trade organisations (Produktschappen), associations and sales co-operatives.

The Brussels administration has defined in detail for the Member States the market (statistical) reporting mechanism. The reporting obligations specified by the EC are different by product categories. Reports are delivered to DG AGRA. In each Member State reporting is the responsibility of the respective ministry of agriculture.

In Hungary the Research and Information Institute for Agricultural Economics (RIIAE) (Agrárgazdasági Kutató és Informatikai Intézet – AKII) operates the market in

formation system and it is widely accessible through the media. The key target groups, data and other features of the RIIAE system are reviewed in the following.

In a recent development project co-ordinated by PHARE the EU-compatible Market Information System for the sectors of wheat, maize, pig for slaughter, cattle for slaughter, and milk was implemented. Data are collected fortnightly or monthly (in the case of milk).

The lead-time between data collection, processing and finally publication of results is 3 days at most. Reports on the market position of product categories are generated at similar frequency and promptly published through the media as well as in printed bulletins. In line with the accepted international practice the respondents are manufacturers and procurement organisations. The range of collected data includes procurement (input) prices and quantities by grade as well as producer and consumer (output) prices. Informal information and data on key market processes and trends are also collected. Furthermore, the bulletins include Hungarian and international commodity exchange rates and reviews covering certain market trends in the trend-setting EU-countries.

A module of this system implemented in the first half of the 1990s provides data collected on peasant and wholesale markets of vegetables, fruits, and cut flowers. Fifty of the most important retail markets and five of the eight wholesale markets operating in Hungary are covered. These markets represent about 40 percent of the overall vegetable/fruit and cut flower production in Hungary. Prices are transmitted to the RIIAE mainframe daily or two times via modem. Processing is on-line; the output is broadcast via the Hungarian television's Teletext pages on the day of entry. The weekly summary figures are published in a printed form. On-line access via modem is also available. This module provides also weekly data on the key German markets, Vienna, Milan and several nearby cross-border cities.

In 1997–1999 the potato information sub-system produced biweekly publications. The data collecting, processing and publishing structure of this sub-system was developed in a joint Dutch-Hungarian project. Upon the completion of the project the independent Potato Bulletin was terminated, however, its main components were integrated in the biweekly Vegetable and Fruit Bulletin.

The pig forecasting system is operated in the framework of the Market Information System. A forecasting application was developed using for input the actual data published by HCSO every 4 months, the technical and process parameters of pig breeding and the market trends.

As it appears in the foregoing, the reporting system focuses on tightly regulated product categories. This system will be rolled out in the future to cover other product lines. The roll-out tasks scheduled for year 2000 include the following product categories: chicken for slaughter, sugar beet, sunflower, apple and onions.

Most of the data describing the market activities of the food economy are supplied by RIIAE, HCSO, Kopint-Datorg, the Agricultural Intervention Centre (AIC) (Agrárintervenciós Központ – AIK) and the Office for Agricultural Market Regime (Agrárrendtartási Hivatal – ARH). ARH operating under the supervision of the Ministry of Agriculture and Rural Development (MARD) (Földművelésügyi és Vidékfejlesztési Minisztérium – FVM) is not involved in data collection directly, however, pursuant to applicable law it strongly relies on market data collected from the Product Councils.

The Farm Accountancy Data Network[6]

For political initiatives and decision support the European Commission uses information on farm income levels, and analyses of the expected impact of political decisions.

For this purpose the EC implemented the Farm Accountancy Data Network for the collection of representative data from all EU member countries. FADN supplies annual output for the EC covering all types of agricultural activities of farms. Further on, data about certain non-sectoral activities, such as village tourism or forestry, are also collected.

The sampling design is a key factor in representative data collection, however, this design must be prepared in the light of the population, i.e., the total population of farms under survey. The Commission defines the scope of FADN observations on practical grounds, therefore only full-time entities are covered. Full-time entities are defined as farms or businesses large enough to absorb most of the working hours of the farmer and generate sufficient income to keep the household. The characteristics of the population are derived from the business structure census surveys of national statistical offices.

The farms covered by FADN show considerable variability. In order to reflect this diversity the population is stratified prior to sampling. Stratification is a statistical method to increase sampling efficiency in order to minimise the number of entities included in the sample. In the stratification process entities are categorised in more or less homogeneous groups and the sample is composed of entities selected from each group.

The stratification used widely by the EC is based on the following three variables: geographic location (region), business size, and business type.

The implementation and operation of the Farm Accountancy Data Network started in Hungary with the assistance of German experts in 1996. The host organisation, RIIAE, is responsible for managing and supervising the operation; liaising with the relevant organizations such as the EC, MARD, HCSO, unions and chambers; validating, processing, analysing the data and publishing the output. With the assistance of other agencies RIIAE is also responsible for the methodological development tasks following from the overall harmonisation of the system with EU-standards.

Test holdings are selected from voluntary respondents. Farm Accountancy Data Network data are collected and evaluated on changes in

– holding size and ownership structure (viable business size, land holding and land use);
– financial and technical assets of production, including capital projects, plant upgrading and replacement;
– production pattern and production structure to support sustainable growth of production, higher efficiency in the utilisation of natural assets, or higher operating income;
– employment, operating performance and agricultural income;
– local and international competitive strength of products and production processes;
– physical inputs used in agricultural production;
– costs and profitability of production,

[6] In the elaboration of this issue I have relied on the paper by *Kovács, G.* and *Keszthelyi, Sz.* (1998): A Mezőgazdasági Számviteli Információs Hálózat az Európai Unióban. *Gazdálkodás*. No. 2. pp. 52–57.) and the document entitled 'Farm Accountancy Data Network, An A – Z methodology' (Brussels – Luxembourg, 1989).

and also on the impact of agricultural support schemes on competitive strength and profitability.

RIIAE publishes an annual report comprising the output of food processing industry and matched closely with the Profit and Loss Statements used by the EU Commission to present practically all information on the management of the reviewed farms.

In 1997 data were collected from six counties (Békés, Borsod-Abaúj-Zemplén, Fejér, Hajdú-Bihar, Somogy, Vas) and covered 500 farms. These holdings included individual holding and businesses managing more than 5 ha land or an animal stock exceeding 5 stocking units. With Pest, Bács-Kiskun, Tolna, Szabolcs-Szatmár-Bereg, Zala and Baranya added in 1998 a total of 12 counties and approaximately 1200 entities were covered with the assistance of 7 accounting agencies. The network was further enhanced by two counties, Heves and Győr-Moson-Sopron, in 1999 and an additional three counties in 2000.

According to historical data of the HCSO to be further refined and improved by the general census of for 2000 there are approaximately 70 000 holdings with more than 5 hectares cultivated area or more than 5 notional livestock units in the Hungarian agricultural sector. Most of these farms are operated as part-time individual businesses, however, they represent a considerable share not to be ignored in the sample. These 70 000 holdings are estimated to use 72 percent of the total cultivated area and keep 68 percent of the total livestock. In contrast to 1.5 percent used in the EU the assumed overall sampling rate in Hungary will be 3 percent for the time being. Under such conditions 350-400 legal entities including agricultural businesses and co-operatives, 1600-1800 individual farms, i.e. a total of approximately 2000-2100 farms will be selected for voluntary reporting at the complete roll-out of the FADN. This may be achieved by 2001 or 2002.

In the counties the regional work is performed by accounting agencies. This structure based on the co-operation of the Ministry with the accounting agencies corresponds to the German model, and the same approach is used in Spain and Luxembourg. Other EU-countries, however, show a considerable diversity of test farm data collection systems and various ways of co-operation among different agencies and organizations. Regional agencies of ministries, farmers' associations, agricultural chambers, agro-economic management centres, universities and consultants are also involved in this activity. All in all, the 15 member countries use 9 co-ordination management approaches.

The Integrated Administrative and Control System

The Integrated Administrative and Control System (IACS) is the fourth module of the primary information system of the EU. The objectives of IACS largely differ from those of the other primary systems. While the Statistical System, the Market Information System and the Farm Accountancy Data Network are mainly used in decision support and decision follow-up, IACS is a technical information system designed primarily, moreover, exclusively to support a key component of the Common Agricultural Policy. This component is the allocation and compliance review of compensation support (or direct support).

However, the introduction of the compensation support scheme means an enormous additional workload for the organisations of the European Union, national and regional organisations and the individual farms alike. Regulation, submission and evaluation of

applications for support, authorisation of payments, the payment process, and the detection and sanctioning of any abuses asked for an integrated system of detailed reports, complex registries and reliable identification of the supported items, such as cultivation areas or animals. To meet these requirements and to support monitoring and supervision IACS was implemented[7] e.g. to verify if the farms submit applications under a certain title only once a year. Furthermore, for the purposes of support IACS also serves as a farm registry. For any support managed under IACS a form including the details of the applicant farm is completed so as to ensure detailed information on all producers receiving compensation support. By completing this form the producer becomes completely 'transparent'.

The rigorous verification data collected in the IACS puts a heavy workload on the clerical staff of the EU. 5 percent of the land support applications and 10 percent of the animal support applications are inspected on site by the EU-staff. If material offences been revealed during the earlier reviews in a specific region, these percentages may be increased. 'Errors' are heavily sanctioned, too. In case of any misrepresentative data remedial actions are taken against the relevant producers as well as their home countries. If a farmer makes a mistake in the completion of the form and subsequently receives additional support, the penalty is the double of the surplus in the 3-20 percent error range. If the error exceeds 20 percent, no support is paid and farmer is disqualified from the compensation support scheme for the next year. Member countries are punished by the Brussels administration by reducing the compensation budget by a percentage defined by the rate of errors found in the detailed audit of the sample.

The least progress made in Hungary has been made in the implementation of IACS. In fact, no technical or organisational measures have been made towards this end. This is unacceptable even if it is clear that there is no agreement in the EU regarding to the access of candidate countries to compensation support. Several officers of the EU and some Member States have hinted unofficially that candidate countries did not suffer any price losses in connection with the CAP reform in 1992 therefore they are not eligible for compensation support, and anyway, the local producer price levels will increase after their accession. On the contrary, candidate countries argue that exclusion of the future members from the area-based and animal stock-based support schemes is a discrimination conflicting with equality principle under the Rome Treaty constituting the basis of the EU.

No matter how the internal power relations of the EU or the standards of CAP may change by the date of accession there is no chance of support without an adequate in-depth information system documenting the actual eligibility of producers and farms. Consequently the adaptation, implementation and commissioning of the Integrated Administrative and Control System is one of the most urgent tasks in Hungary to be commenced as soon as possible. This is a grand project probably taking several years. In France the design and implementation of the technical infrastructure alone, including hardware and software, required two years effort of the 70 member IT staff.

In my view IACS should be closely linked to the management of support payments. According to the current proposals the Hungarian Agricultural Intervention Centre (AIC) will

[7] EC Directive No. 3508/92 issued on November 27 1992 instructed the member countries to implement the Integrated Administrative and Control System in order to enhance the efficiency of administrative and control mechanisms and adapt them to the changing environment.

be upgraded to receive, transfer and manage support payments in the period before accession, as the local Paying Agency. This proposal along with the relevant EU-standards should be considered in any organizational decisions relating to the implementation of IACS.

Agricultural Accounts

The Economic Accounts for Agriculture (EAA) is a satellite account of the System of National Accounts, EAA has been defined according to the information needs of the EU agricultural policy. This system provides comprehensive and detailed evaluation reports on agricultural activities, where the latter term includes all agricultural activities performed in any sector of the national economy. EAA must be defined and operated on national as well as regional levels. EAA describes the generation, use and inputs of agricultural production and the relevant cash flows in a consistent system.

Since autumn 1996 RIIAE has been developing the EAA, including models and simulations, according to the EUROSTAT Guidelines. RIIAE was responsible for data processing, eliminating problems due to aggregate amounts or insufficient statistical data collection, preparing draft estimates and developing evaluations for use in agricultural policy options. Partner organisations including HCSO, the Ministry of Agriculture and Rural Development, the Ministry of Finance and the Gödöllő Agricultural University made the completion of this arduous task possible through their committed assistance.

The completed system is already capable of generating quarterly forecasts and estimates, and it has the capacity to conduct impact analyses in the future.

HCSO proposed to operate the EAA several years ago. The required infrastructure was implemented in 1999 consequently HCSO has been managing EAA in co-operation with the mentioned agencies. EAA-based forecasting and impact analyses, however, will remain the responsibility of RIIAE. Arguably the reporting structure evolved recently in the EU is the most widely used approach, however, this is mainly attributable to the circumstance that at the level of the EU EAA is managed by EUROSTAT rather than DG AGRA.

Conclusions

This paper makes it quite clear that currently HCSO and RIIAE supply the most critical decision supporting information. Agricultural data, however, are also collected and processed by several other organisations. In my view the responsibility for the future development and operation of agricultural information systems must be divided vertically and horizontally among the existing agents.

Horizontal division means that juxtaposed and co-ordinated databases are operated in the agricultural information system by various ‘host’ organisations according to their own specific requirements, however, other parties may also need their data. For example, it stands to reason that tasks falling in the circle of competence of the Ministry of Agriculture and Rural Development are associated with the responsibilities of its special departments. It is also evident that the responsibility for the supervision and operation of the majority of databases for economic and sectoral management tied to the management information system of agricultural administration should lie with HCSO and RIIAE. Public

agricultural chambers (or unions), on the other hand, should also have the right to create databases for the direct information of producers.

Vertical division means that the different contributors can also co-operate the various databases. This co-operation is particularly helpful in case of economic or sectoral control. For example it seems feasible that agricultural universities collect sectoral factor-product and cost-income data under the supervision of RIIAE. In other sub-systems this function can be assigned to other suitable organisations. Universities and colleges as regional information centres promise a wealth of potential benefits. There is no need for a new specialised organisation; thus cost benefits are apparent, and it is easier to build confidence between the collectors of data and the respondents. The data collected, pre-processed and loaded into a database can be utilised in university education and research. (Such structure is similar in several respects to the UK model).

According to the proven EU-practice the systems are supported by sound regulatory background providing a solid framework for the specification of tasks and interfaces, and for decisions on systems funding. Hungary has some backlog in this respect as well. Statistical data collection is regulated primarily in the framework of the National Program for Statistical Data Collection (Országos Statisztikai Adatgyűjtési Program – OSAP), whereas a separate Act has been passed for the Agricultural Census. The reference conditions of operation of the Farm Accountancy Data Network are regulated by the Act on Agricultural Development adopted in 1997. However, the lack of regulations relating to the development, operation and funding of the Market Information System and the Integrated Administrative and Control System is a source of considerable uncertainty.

Last but not least the obligations and access opportunities of respondents to information systems are also worth mentioning. Information should be made equally accessible for every producer. Equity, with no bias for or against any particular type of business, in access to vital information must be assured for decision making based on identical information.

Producers do need information. Where does this information come from? It is partly composed of data reported by the farmers themselves and collected in statistical or other information systems. It is evident that producers and entrepreneurs carry a heavy reporting burden in an information society. Any conduct or position of the farmers to refuse reporting on the grounds of the notional exploitation by the government is indefensible. Producers must understand that information systems are not intended to render their living more difficult, on the contrary, in countries with advanced agriculture they serve the very objective to equalise personal income levels of the agricultural and other sectors.

At the time of accession to the EU Hungarian producers must be prepared for the encounter with the EU information system. If they want to utilise the financial opportunities offered under the Common Agricultural Policy, i.e. access to support schemes, they must be open and ready to report. This reporting is certainly far more detailed, more ‘delicate’ and relevant than the one known in the Hungarian practice of agricultural information and statistics.

This brief sequence of thoughts may illustrate the magnitude of the challenge to face. Farmers will have to develop skills in finding their ways in the information society. Whether smallholders or employees of big farms they must equally be aware of their rights and obligations, and they must know and be able to utilise the opportunities. Farmers have the right to get all assistance and training to achieve this objective.