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# AGRICULTURAL STATISTICS IN GREECE - THEIR IMPORTANCE FOR AGRICULTURAL POLICY

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## 1. GENERAL INFORMATION

The agricultural sector in our country continues to constitute an important element of the national economy.

In particular (the following data refer to 1991):

- \* - It contributes in the order of 16 % to the formation of the Gross Agricultural Product at current prices and 12 % at stable prices (1970)
- \* - It offers main employment to 22 % of the country's working population. If we take into consideration that a significant portion of the population of the country is engaged in agriculture in a supplementary capacity, the importance of the agricultural sector where employment is concerned becomes even greater.
- \* - It provides important sources of foreign exchange through its share of about 33 % in the total of exported products, while its share in the total value of imported products comes to 16 %
- \* - It provides the necessary raw materials for agricultural processing units and the necessary prerequisites for numerous other economic activities
- \* - It ensures, to a large extent, the supply of foodstuffs
- \* - It contributes to the exploitation and conservation of the natural environment

However, the agricultural sector is facing a series of problems, such as:

- \* - The fact that structurally it comprises small, greatly subdivided agricultural enterprises
- \* - the ageing of the agricultural population and the abandonment of farming as a profession
- \* - Soil heterogeneity which compounds the problems of land structuration and the high percentage of mountainous and semi-mountainous regions with low fertility.
- \* - A small area under irrigation (13 million stremma), in comparison to the total area which could be irrigated
- \* - Peculiarities in the composition of agricultural production; stock-rearing comprises 30 % of the Agr. Product, while by contrast plant production comprises 67 % of the Agricultural Product, percentages which are exactly the opposite of those in the other countries of the EU.

As well as the above-mentioned problems there are organisational and legislative weaknesses such as:

- \* Deficiencies in infrastructure in the processing and retail branch
- \* Deficiencies in the organisation of product distribution both at home and abroad
- \* Insufficiencies in technical support, training, and the information available to farmers
- \* Administrative and organisational weakness of the co-operatives.

The above-mentioned weaknesses and problems keep productivity in the agricultural sector at a low level which is again half that apparent in other sectors of the national economy. The utilisation of reliable statistical data which are readily available at all times is essential for the formation of sound agricultural policy.

The completeness, reliability and prompt availability of these data assist in the preparation of structural and functional programmes in the agricultural sector, as well as in their promotion and ratification.

The Ministry of Agriculture is the main executive organ of agricultural policy, which is carried out within the framework of the Common Agricultural Policy (CAP) and international negotiations and agreements (GATT, OPE), through the application of various programmes.

The official source of the statistical data which are used for procedural support of a programme, in accordance with Greek law, is the National Statistical Service of Greece (NSSG).

In addition the Ministry of Agriculture carries out limited statistical research based on daily, weekly and monthly data concerning milk and eggs, and also on the accountancy-based observation of agricultural enterprises.

Realising from the outset the importance of correct and prompt information where agricultural policy is concerned, the Ministry of Agriculture, subsequently assisted by the NSSG, pursued the development of a modern information system for agricultural statistics and with Decision 85/360 of the Council of the European Communities (modified by Decisions 90/386 and 92/582) it undertook a programme of the restructuring of agricultural statistics. The total cost reached 40 million ECUs and the share of the Community amounted to 20 million ECUs over a ten-year period (1986-1996).

The programme had the following goals:

- \* - The creation of an appropriate technical infrastructure, both centrally and regionally based, which is designed to support agricultural statistics on 4 levels (national, regional, district and local)
- \* - The creation of a register of agricultural and livestock breeding enterprises
- \* - Large-scale restructuring of the statistics concerning Greek agriculture
- \* - A broad programme of training of the personnel engaged in the electronic processing of the data, as well as of those who are concerned with statistical applications.

Thus, within the framework of the programme the following research is being conducted by the Ministry of Agriculture:

1. Statistical evaluations of plant production (extent and size of production according to type and variety, by district)
2. Statistical research into milk and dairy products (carried out at dairy enterprises - monthly, yearly or triennial data are gathered)
3. Monthly statistics for slaughtered animals, expectation of animal production
4. Balancing of agricultural products
5. Monthly evaluations for the production and trade in eggs which are destined for hatching, and an annual study concerning the structure and use of hatcheries
6. An accountancy-based system of observation of agricultural enterprises

Within the framework of this programme the Ministry of Agriculture began the application of a programme of remote sensing in 1991. This is conducted in accordance with Action 1 (regional planimetry-recording of cultivated areas of the more important crops of hard and soft wheat, barley, maize, sugar beet, cotton, tobacco, olives, vines) of the MARS programme (Monitoring Agriculture with Remote Sensing) with the close collaboration of the Institute of Remote Sensing Application (IRSA) of the Centre for Joint Research of the EU (JRS) at Ispra, Italy.

The organisation applied was:

- \* Stratification - choice of geographical sample
- \* Recording of sampling units
- \* Digitising of the sampling units with a special camera
- \* Use of satellite pictures
- \* Input and processing of data yielded and output of the results of production

The results indicate that the geographical sample provides valuable results when the cultivated areas examined represent a significant percentage of the region under study.

Research by the NSSG:

- \* Creation of a register of the heads of agricultural and stock-rearing enterprises
- \* Basic research concerning the structure of agricultural and stock-rearing enterprises
- \* Study of grain
- \* Study of the yield of the main cereals
- \* Sampling study of animal stock
  - pigs
  - bovines
  - sheep
  - goats

- \* Study of vineyards
- \* Study of fruits
- \* Annual agricultural study
- \* Research into slaughtering

### 1.1 Conclusions

The fullness, reliability and ready availability of statistical material are all elements which assist in the programming and execution of Agricultural Policy. They are also of notable assistance in the drawing-up and documentation of the structural programmes which are most needed by Greek agriculture, and in their authorisation by the European Union. Realising the importance of that mentioned above, the Greek Government has pursued the development of a modern information system for agricultural statistics, with co-funding from the European Union.

The greatest effort which has taken place within this framework is concerned with the development and establishment of statistical studies based on sampling, with the samples being taken from up-to-date registers of the heads of agricultural enterprises.

## 2. INFORMATION SYSTEM - DOCUMENTATION

By the term "information" we mean processed data which have a special value and meaning to a user. Under the conditions prevailing at present, with the enormous developments in technology and the appearance of new methods, information has acquired a particular importance in the functioning, organisation and administration of a unit or organisation, at all levels of management:

1. At the functional level, i.e. concerning short-term activities and decisions
2. At the tactical/administrative level, i.e. concerning medium-term activities and decisions
3. At the strategic level, i.e. concerning long-term activities and decisions

The information consists of processed data, which will have to be stored, accessible, and portioned out to interested users.

The procedure for the creation of information begins with the facts themselves, continues with their conversion into digital code which describes them, then the processing of the digitised data, and ends with their receipt by the user. The role of information is particularly important as an aid to the decision-making process. For this reason every assessment of the value of information is closely interrelated to the type of support which it gives to the decision-making process. The value of the information has close bearing upon

- \* who uses it
- \* when it is used

\* in what form it is used

The system is defined as a sum total of the parts which work together to achieve a common purpose. One of its components is the information system - this means, of course, one which is computer-supported and defined as a complete system for the user-operator; its purpose is to support administrative-functional activities and decision-taking procedures in an organisation. It allows access to recorded data which contain information of value to the user.

There are a number of criteria for the evaluation of information systems:

\*Whether they are lucrative, i.e. advantageous from the point of view of cost

\*Whether they bring improvement to the work of those who use them

\*Whether they can help to solve serious problems faced by an organisation

\*Whether they are user-satisfactory

*Features which judge the success of a system are:*

\* User response, enlightenment and training

\* Support from a high administrative level

\* Maturity of the organisation

\* Size of the organisation

\* Resources of the organisation

An information system consists of databases which are organised methodically into a total body of records containing the description of information units and the products and services which accrue from them, so that the information can be accessed and utilized. For this purpose indexing is employed, i.e. the subjects are presented with standardised terminology. The indexing permits the access of relevant information from a database in answer to a user-generated query.

Most information systems use one or more indexing languages. These languages are also called documentation languages and differ from natural languages as follows:

\* They are technical, standardised languages which have been created and are used in the information systems so as to permit the accessing of information

\* They contain only concepts which are considered useful for the presentation of the matter contained in the information systems.

Such indexing languages for agriculture are the Categorisation Scheme and the multilingual thesaurus AGROVOC which contains descriptors and cross-references between them; it also contains non-descriptors but these are anomalous. The second version of AGROVOC contains 14,714 descriptors and 8,495 non-descriptors.

An information system which uses the above-mentioned languages is AGRIS. Thematic units covered by it are:

- Agriculture (general)
- Geography and history
- Training, agricultural applications and information
- Administration and legislation
- Economics, development and agricultural sociology
- Morphology, physiology and plant nutrition, and plant production
- Plant protection
- Technology of harvesting
- Forests
- Animal husbandry, animal nutrition, animal production and veterinary science
- Fisheries and hydrocultivation
- Agricultural machinery and buildings
- Natural resources and the environment in relation to agriculture
- Processing of agricultural products
- Human nutrition
- Infection
- Methodology

Each of the above units is divided into sub-groups.

Greece is represented in AGRIS by the Department of Documentation of the Directorate of Agricultural Policy and Documentation, Ministry of Agriculture, which operates as a liaison and a national centre for the collection of agricultural information. Up until March 1995 1,025 records had been sent with the corresponding summaries of scientific articles.

One information system for the research programmes which are being developed in the Member States of the EU is AGREP.

It contains all the research programmes which are being developed under the Agricultural Research Programmes, and thus offers an index of research programmes into farming, forests and foodstuffs. It was started by the Commission of the European Communities in 1974 (Council Regulation 1728/27-6-74). The European Union contributes to the management of the system and its promotion in the Member States. In this task the EU is also assisted by the Standing Committee on Agricultural Research (SCAR).

It is a database which contains information on the research programmes, research organisations and the researchers and it also provides a general picture of agricultural research and statistics for each Member State.

The elements are selected from the national focal points, at each of which there operates a national AGREP database, which is complemented by a free-text search system. From these

systems the data are transferred to a European AGREP database which is accessible on-line and on CD ROM and also in a catalogue which is printed annually. The database contains 23,000 on-going research programmes.

The Ministry of Agriculture and in particular the Department of Agricultural Policy and Documentation is the authority with responsibility in Greece and is the national focal point for the collection of information concerning research programmes, research foundations and researchers in the agricultural sector.

The Department of Agricultural Policy and Documentation of the Ministry of Agriculture has recently been connected to the INTERNET ([www.minagr.gr](http://www.minagr.gr)) and has begun to operate a server, on which web pages have been created that give the position of the Ministry on Greek agriculture, provide links with other information systems which are of interest to the Ministry of Agriculture, and press releases.

This server is under construction and it is expected that it will shortly be enhanced by the addition of subject-matter that is intended to inform the farmer and to promote Greek agricultural products.