

THE DEVELOPMENT OF THE SCIENTIFIC RESEARCHES IN THE EUROPEAN UNION. CASE STUDY, FRANCE

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Abstract

The agricultural scientific research institutions constitute the vertebral tier of the world system. Either the research institutions are under the national agricultural form, or they are under the form of agricultural research councils, that act as coordination bodies of the regional or local specialized research institutions, that form the biggest part of the research capacities in each region of the world. In the present study, I chose France because it has an agricultural surface of almost 30 million hectares, that represents more than a half of the total surface of its territory. The lands situated on one side and on the other side of 45 North latitude parallel allow a large variety of production. About 61% of the agricultural surface of the country is occupied with crops, 35% pastures and 4% vineyards. The paper makes an analysis of the research in the agricultural sector, in France and it highlights its main positive particularities, that apply also in other European Union countries.

Key words: agriculture, farm

INTRODUCTION

Half of surfaces of EU Member States is used for agriculture, which contributes to the growing importance of this area for high quality crops. Due to the occupied area and the importance for human and animal food, the cereal crop is the largest in the world. According to the statistics, cereals occupy 30% of the utilized agricultural area in EU states. Certain Balkan areas are occupied 50%: south West Oltenia, Ilfov regions of Eastern Europe (Hungary, Slovakia, Poland), from North Europe (Denmark, Finland) and South (region of Italy). A smaller area is occupied in the south of Europe, in some alpine regions on the Atlantic coast of the Iberian Peninsula, in northern Sweden, Portugal, Spain and Italy, with cereal crops that are less than 10% of the utilized agricultural area. Belgium, France, the Netherlands and Ireland allocate a relatively small grain surface although manifesting a preference for pastures and fodder. I selected France, as a case study because it holds an agricultural area more than half of the total area of the territory. According to Eurostat data, the income of farmers in the EU-27 grew

by 12.3% in 2011. It is estimated that farmers' incomes increased in 21 EU countries and decreased in 6 countries. The largest increases in farm incomes in 2011 were recorded in Denmark (+54.8%) and Estonia (+48.8%), followed by Ireland (+39.1%), the Netherlands (+32.0%), France (+31.4%), Latvia (+25.5%), Belgium (+24.1%), Bulgaria (+23.0%) and Germany (+22.8%). While the largest decreases were registered in Romania and the United Kingdom (both -8.2%), Greece (-4.3%), Italy (-3.3%).

MATERIALS AND METHODS

For the study of scientific research in the European Union, we used the specific research methods: dynamic, deductive and quantitative economic analysis, SWOT analysis, case studies, by collecting information from the literature and information processing on site.

Case study-France, we analyzed and interpreted the data collected from the Eurostat website 2012, using the comparison method.

RESULTS AND DISCUSSIONS

Research institutions are the pillar of the entire system. Either they are in national agricultural form, research institutes or as agricultural research councils, which act as a coordinating body of specialized research institutions, regional or local make up the much of the research capacities in each region of the world. Knowing, explaining and finding viable solutions were based on agricultural scientific developments, the stage is located and the future requirements.

The way of addressing problems is integrates in the concept of Thomas Kuhn that to solve such complex and important issues will have to develop a system of values (solutions) together with the analysis of institutions through which this system is passed and enforced, to know problems in economic context. The problem of funding of scientific research in agriculture was .

Standing under the paradigm of the moment, not so dependent of the needs of this activity, and especially to methodology approach of the development periods. In practice of scientific research, a very important result we have a systematic approach for understanding the complex reality problems specific to agriculture the diversity of the elements that make scientific research and integrates the financing and generate a variety of scientific combinations. The Romanian agricultural research gains new valences in the context of European integration, European Academies Union or agricultural sciences Agriculture, Food and Nature (UEAA) whose activity began at the Bologna meeting on 13-14 November 1999, and in Florence on 20 October 2000, when 14 founding members from 13 countries (Italy, France, Germany, Netherlands, United Kingdom, Russia, Poland, Greece, Estonia, Croatia, Latvia, Slovenia and Romania) signed the Act establishing the Union, with the President elected Academician SCARAMUZZI Franco, president of the Academy dei Georgofili, Italy. At the institutional level, the European Union complete actions made by the Member States for the dissemination and exploitation

of the results of scientific research and technological development. From a financial perspective, the European Union aims to support research institutes and attract young people to scientific careers, knowing that quality of life depends vitally on the progress of science and the application of research results in the company. Half of surfaces of EU Member States is used for agriculture which contributed to the growing importance of this area for the environment and increasing interest in crop quality. In 2010, the EU-27 produced 285.2 million tons of cereals (including rice). Despite the bad weather, the EU cereal production was relatively stable between 2000 and 2010 with higher yields in 2004 and 2008. Cereal production fell from high relative value recorded in 2008, with production falling by 6.1% in 2009 and 3.6% in 2010. However, cereal production in the EU-27 remained 2.6% higher in 2010 than in 2000.

In this study, we chose France because it holds an agricultural area about 30 million hectares, which represents more than half of the total territory.

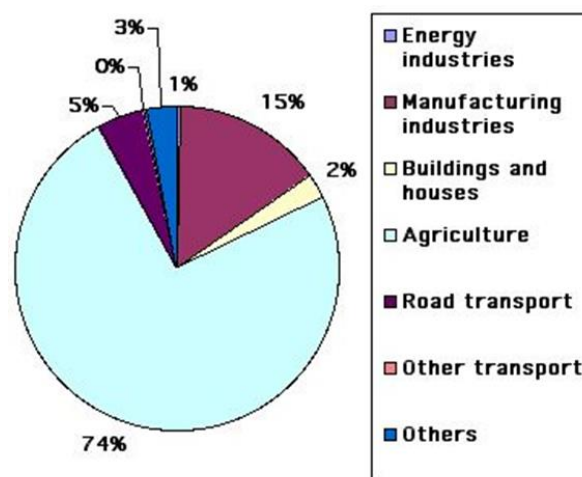


Fig. 1 Study activities in France

Located in the south-western part of the European continent. Climate is temperate oceanic in the west, where rainfall is high (about 1000 mm / m) and Mediterranean in the south, where rainfall is on average 500 mm / mp. The relief is very varied. The hydrographical network is very dense, facing the Atlantic Ocean and the Mediterranean

Sea. The land located on both sides of the 45th parallel north latitude allow a wide range of production. About 61% of the agricultural area of the country is occupied by crops and pastures 35% 4% 7% vineyards. The agriculture involves the active population although it has a low contribution to GDP (3.3%), France being on the first place in Europe and fifth in the world in production of grain. Total area - 55.17 million ha

Table 1. General Information

| Indicators | Physical data | Percent data |
|-------------------------------|-----------------------|--------------------------------|
| Agricultural land | 29,57 mil ha | 53,75 of total country surface |
| Arable land | 18,5 mil ha | 33,64 of total country surface |
| Pastures | 10,7 mil ha | |
| Forests | 23,2 mil ha | |
| Total population | 61,03 mil inhabitants | |
| Active agriculture population | 1,14 mil | 7% of total country population |

Agriculture in France holds the first place in Europe, represented by cereals, industrial crops, livestock and viticulture. French agriculture is based on private ownership of land. Land owner has overall responsibility on how it is used.

Four types of farms were defined in France:

- 1) Industrial farms: their average area of 120 ha, their number and the surface are increasing (in 2009 there were 133,000 registered holdings); they could be found in cereal basins in French plains where there is poor labour force, but very modern equipment;
- 2) Family farms-their average area of 45 ha and they are declining in terms of numbers, so that in 2010 there were 200,000 family farms, from 540,000 in 1988 there were many; their surface increased from 27 ha in 1988 to 45 ha in 2010 and is found in areas close to large urban agglomerations
- 3) Organic farms-their average size -10 ha and tend to grow due to increased demand for products of this type, both for domestic use and export.
- 4) Leisure farms-farmers have other sources of income, practicing this activity just for the

pleasure of producing its own needed products

-developed in industrial areas and mountain areas.

They have modern equipment in all types of farms.

The farmer may change it, after several years of use of an agricultural machine, in a new, more efficient one, farms that sell these products, receiving for the new equipment, the used equipment used the difference in money.

Table 2. Farm structure

| Farms Structure | | | |
|---------------------------|-----------------|---------|-------|
| | | Total | % |
| According to used surface | small <20 ha | 195.100 | 39.72 |
| | Medium 20-50 ha | 99.000 | 20,15 |
| | Large 50-100 ha | 106.600 | 21,73 |
| | >100 ha | 90.400 | 18,4 |
| Total | | 491.100 | 100,0 |

Type of farms with number grew slightly in 2010 are those that grow grain and oily plants (rapeseed and sunflower). From 1994 until now, the organic sector in this country has shown consistent growth. During this period, the number of organic farms increased by 457% and 490% organically cultivated land. Recent data published by Agence Bio, taken from agricultur.ro shows that currently, 3,769 new farms changed to organic. In late 2012, the share of organic farms was estimated at 3.14% of total French farms. During the past 30 years, the French agriculture experienced two heavy periods that exceeded, with the state support:

-in 1974 due to higher commodity prices

- After 1984 due to lower agricultural prices

To meet market competition in Agricultural Policy, a policy of state support farmers and .To meet market competition in Agricultural Policy, a policy of state support farmers and farm compensation premiums granted in disadvantaged areas, or less fertile areas.

Total grant allocated 9.940 million.

Table 3. Subsidies allocated

| | |
|--------------------------------|---------------------------|
| Total allocated subsidy | 9.940 million Euro |
| Contribution /citizen | 139 euro |
| Subsidy /ha | 338 euro |
| Average subsidy/farm | 18.862 euro |

In France, state subsidies for agricultural insurance represents about 2.5% of the total insurance premium (40% for farms us - for the first amount corresponding to an excess of 20% or 25%). In 2011, only 15% of agricultural objectives were provided to a total of 60,000 farms.

France is one of the largest food markets in Europe.

Common Agricultural Policy is divided as follows: Direct aids (81%) Rural Development (17%). Export subsidies (2%)

From the information above you can see the features of French scientific research with applicability in other EU countries.

CONCLUSIONS

In the new Member States of the EU post-accession economic growth stimulated the diversification by pluri-activity, namely: finding a paid job outside the farm, diversification of farm activities, starting a business in tourism or leisure on the farm or outside the farm. All these options can be applied in a survival strategy for small farms. The trend in European countries is to reduce the overall number of semi-subsistence farms as growth occurs in the rest of the economy. In the European Union, the Common Agricultural Policy points out the need of the cooperation in agriculture, setting objectives improving living in rural areas, improving agricultural sectors, increased competitiveness and diversification of activities in the rural area. There are many stakeholders involved in promoting rural development: NGOs, EU institutions and member states. The EU countries have created different networks bringing together agencies and national

institutions aimed at promoting agriculture and rural competitiveness by ensuring the implementation of the National Rural Development Plans, they aim the effective absorption of EU funds for rural development . The farmers' organizations were created in EU states, on the basis of contributions , that make available to its members consultancy in different fields: accounting, legislation, training courses, property rights etc. These powerful organizations make lobby for the rural area support. There are also non-profit organizations, think-tanks (eg RISE), which contribute to the promotion of the rural development.

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