

Euratlantic Project



REPORT

Analysis of the Euratlantic Area in the Agri-food sector with a view to an international promotion campaign



December 2005



General index

Chapter	Page
1. Introduction and Methodological Notes	4
1.1. The Euro-Atlantic Project	7
1.1.1. Why this Project?	7
1.1.2. Euratlantic Phases	10
1.1.3. Methodology	11
2. The Agri-Food and Biotechnology Sector in the Euratlantic Area	13
2.1. General Overview	13
2.2. The Provision Conditions	16
2.3. Demand Conditions	25
2.4. Enterprise Structure	31
2.5. Emerging Sectors	49
2.6. Biotechnology	52
2.7. R&D Policy	60
3. Foreign Direct Investment	67
3.1. FDI Flows and its Determinants	67
3.1.1. FDI Flows	67
3.1.2. FDI Determinants	75
3.1.3. FDI: From which regions of North America?	78
3.2. Euratlantic Regions General Overview	84
3.2.1. Gross Regional Product (GRP) and Gross Regional Product Growth Rate	84
3.2.2. Labor Force and University Students	86
3.2.3. FDI in R&D: Mission Possível	89
3.2.4. Physical Infrastructure	91
3.2.5. Regional Incentives, Taxes and other Initiatives	94
3.2.6. Relevant Prices	97
3.2.7. American Enterprises in Euratlantic Regions	99
3.3. Swot Analysis	100
4. Territorial Marketing Strategy Guidelines	
4.1. Orientation principles and grounds to define a territorial marketing strategy to the Agri-Food and Biotech Euroatlantic area	103
4.2. Agri-food and Biotech sector territorial marketing strategy framework for Euroatlantic area	110
4.3. Developing an Agri-food and Biotech sector territorial marketing strategy in Euroatlantic area	116
4.3.1. What is Euratlantic region?	118
4.3.2. Why invest in Agri-food and Biotech Euratlantic	

Region region?	124
<hr/>	
5. Study Conclusion	126
<hr/>	
Information Sources	137
<hr/>	
Annexes	139
Annex I	139
Annex II	147
Annex III	150
Annex IV	232
Annex V	238
Annex VI	255

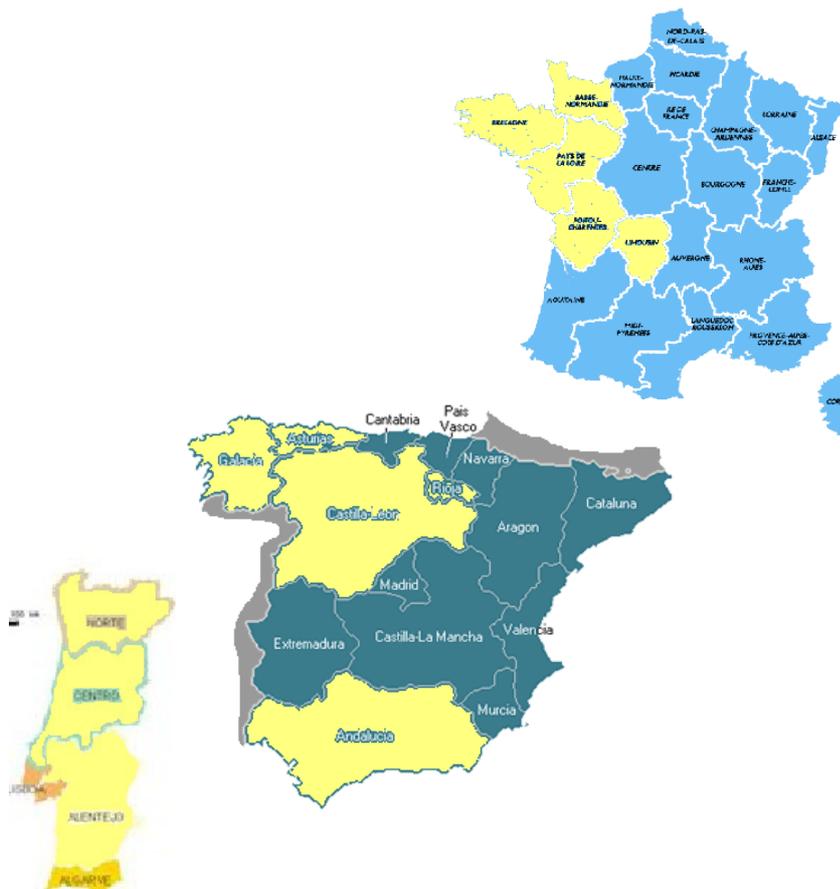




Introduction and Methodological Notes

The Euratlantic is a Project that integrates thirteen regions in Portugal, Spain and France in an to devise a concerted strategy to create and develop territorial marketing to attract North American investors, towards Spanish, Portuguese and French regional economic promotion. These regions are: Alentejo, Center and North (Portugal); Andalucia, Asturias, Castilla y León, Galicia and La Rioja (Spain); Bretagne, Basse-Normandie, Limousin, Pays de la Loire and Poitou-Charentes (France). Euratlantic regions are depicted in yellow in Figure 1.

Figure 1 - Euratlantic partner regions



In each region exists one development agency, which helps to develop the project, according to description made in Table 1. The leading partner is Ouest Atlantique of France.

Table 1 – Partner regions and their agencies

Country/Region	Euratlantic Partner
France	
Región Bretagne	Bretagne International
Region Basse-Normandie	Normandie Développement
Limousin	ARD Limousin
Pays de la Loire	Ouest Atlantique
Poitou-Charentes	Ouest Atlantique
Portugal	
Alentejo	Agência de Desenvolvimento Regional do Alentejo (ADRAL)
Centro	Conselho Empresarial do Centro (CEC)
Norte	União das Associações Empresariais da Região Norte (UERN)
Spain	
Andalucia	Agencia de Innovación y Desarrollo de Andalucía
Asturias	Instituto de Desarrollo Económico del Principado de Asturias (IDEPA)
Castilla y León	Agencia de Desarrollo Económico de Castilla y León
Galicia	IGAPE/Invest in Galicia
La Rioja	Cámara de Comercio e Industria de La Rioja

Euratlantic is a project financed by Interreg III B Atlantic Area Operational Programme, Measure D3. It started at the beginning of 2005 and scheduled to be concluded at the end of 2006.

With the Euratlantic project is envisaged to enhance economic growth, by improving vitality and competitiveness in the thirteen regions. The overriding idea is to promote a common identity of the Euratlantic Regions in North America (both in USA and Canada), promote the excellence of these regions

as destinations for North American Foreign Direct Investment (FDI), focus on promoting greenfield investment, technological partnerships, joint-ventures and take-overs and fostering better mutual understanding and sharing of best practices between the thirteen regions. The automobile/Aeronautic and Agro - industry/Biotechnology sectors are the two sectors that is the focus of this project.

An initial question could be made here: Why should North American companies invest in Europe? There are several convincing answers to this: Europe has a large population (nearly half a billion people), the GDPs of EU-25 and USA are roughly comparable, trades between these two regions exceed a **billion US dollars per day** and USA is the largest investor in Europe, **employing about 3.2 million people**. Looking at the Euratlantic area, its population is similar to that of Germany, with about **30 million inhabitants**. Another potential factor of interest is the **growth** in the Euratlantic regions, as we can see later. The myriad attractive assets of the euroatlantic area, as we shall see in this report, make the regions very attractive to North American investors.

FDI prospects, as referred by UNCTAD¹, are another major argument to invest in Euratlantic regions. France is considered, in the UNCTAD referred document, the fifth most attractive location, in respect of the developed countries, while Spain is the sixth positioned. Besides the fact that this document refers to FDI flows should be dislocated, due to the high production costs, it's true that the Euratlantic regions still have arguments to attract FDI, including lower labor costs when compared with many other European countries, yet at the same time labor being of very high quality.

In terms of investment up the value added chain, the UNCTAD document notes that most of the FDI in R&D activities is invested from developed to developed countries. Since this is an important form of FDI, which can leverage the economic performance of Euratlantic regions, as well as their knowledge centers, it is important for these regions to develop a concerted effort in order to attract this type of investment. Policies like incentives for investment and

investment promotion with better targeting measures are not always appreciated by companies. These policies incentives are the principal actuation areas of developed countries in order to attract foreign flows. Euratlantic regions should pursue similar strategies.

FDI projects have great economic impacts. One of them is in the number of jobs created. As concluded in the 3rd World Investment Conference², it can attain about 50 to 60 jobs per project in well-developed countries like UK and France and the number can rise from 200 to 300 in emerging markets. In other hand, FDI projects attract skills and obviously have impacts in GDP growth. Normally these projects have impacts in the infrastructure created, as FDI projects tend to promote the construction of infrastructures, for the functioning of projects. In all this, Euroatlantic region is very well placed to attract investment.

1. 1. The Euratlantic Project

1.1.1. Why this Project?

The globalization process, the fast spread of a technology and information based society, among other factors, and particularly for Europe, the latest enlargement eastwards, create innumerable opportunities for both the European economies as well as foreign, particularly north American investors. Regions have to be concerned to attract investors, as the enlargement increases the number of consumers as well as the challenges. Regions have to be more competitive, and one option is to increase cooperation among them. In the particular case of the agricultural and agri-food production, new member countries have very good conditions.

Euratlantic is an international cooperation project, between thirteen regions in Portugal, Spain and France as mentioned in the introductory note, whose

¹ http://www.unctad.org/en/docs/iteit20057_en.pdf

general objective is to promote the Euratlantic region and turn it into a competitive region, with a territorial marketing strategy, designed for economic promotion. One of the options to increase competitiveness is to attract Foreign Direct Investment (FDI), particularly north-American investors. FDI depends, among other factors, on human resources, physical infrastructure scientific development, fiscal and legal frameworks, markets accession and product competitive potential.

A common strategy in the Euratlantic territory can benefit from scale and complementarities effects, since regions can interact while they burden their international visibility and their negotiation capacity. It's then essential that the different regions are linked and share the same goals and interests.

The general objective leads us to another four specific objectives in our research:

1. To identify the key-factors of investments and location choice of North-American investors;
2. To define and systemize the qualitative and quantitative information to be congregated by Euratlantic partners with inquiries and interviews among the more relevant territorial key actors;
3. To determine the strengths and weaknesses, traits and opportunities of Euratlantic region to identify the essential factors to create a collective or specific brand image;
4. To build a collective territorial marketing strategy to international promotion and communication of Euratlantic territory (define the instruments and tools to use on the territorial promotion kit).

With the first objective, in this part of the study, we wanted to analyse what kind of investment and sub-sectors was the investment taking place, where were the investments currently undertaken and why, and what are the determining factors for FDI investors. We can observe several FDI determinants, like human resources, scientific development, fiscal and legal framing, market access and

² 3rd World Investment Conference, June 2005, La Baule

products' competitive potential in what concerns penetration on foreign markets. Our focus was on the agro industry and biotechnology areas.

The second objective involves the identification of the necessary information to be collected by the partners and the compilation of the information (qualitative and quantitative information) to be used to identify opportunities and marketing problems, adjust or evaluate actions or promotion and communication tools.

With the third objective, using a kind of SWOT analysis, we aim to determine the traits and opportunities that Euratlantic with the changes in European and world macro-environment in what concerns growth, commerce, R&D, specialized education, financial resources and economic functioning flexibility. We expect also to determine the strengths and weaknesses facing the changes in European and world micro-environment in what concerns about competition, input supplies and demand satisfaction and to identify the essential elements to build a collective or specific brand image and the necessary linking/coordination mechanisms to attain it.

Finally, via the fourth objective, the construction of a territorial marketing campaign, we expect to underlining strategies based on the cooperation between regions and territories, to profit from the opportunities generating strengths and minimizing weaknesses. We want also to conceive a specific brand image to the regional territories, build from the perceptions and strategic options of relevant actors, to build a territorial marketing strategy for Euratlantic space, valuing the common global image (built upon the articulation of each involved territory specific territorial images) and to define the instruments and tools to use on the international promotional kit for Euratlantic territory.

The fundamental objective subjacent in the study was to enhance economic growth, by improving vitality and competitiveness in the thirteen regions.

1.1.2. Euratlantic Phases

Towards achieving the objectives identified, the proposed study was split into three main phases:

1. The definition of investment choice and localization of North-American enterprises key-factors;
2. The key information regarding the Euratlantic territory;
3. The conception of a brand image conception and territorial marketing strategy development.

The first phase was in turn divided into:

- a]** To determine the FDI flows to Euratlantic regions on the different sectors, especially from USA;
- b]** Interview North-American investors, in order to understand reasons behind investment decisions in Euratlantic;
- c]** Diagnosis of the regions where North-American investments have occurred, trying therefore to identify key factors;
- d]** Diagnosis on conditions that exist on the three Euratlantic countries and its thirteen considered regions;
- e]** Identification of key-factors on investment and location choice of FDI.

In the second phase we aimed for the following:

- a]** Study the factors that condition an identity and territorial supply offer building from an entrepreneurial point of view (investment, production, commercialization, weaknesses and strengths, traits and opportunities, actors expectations, among others);
- b]** Diagnosis on demand, the markets and commercialization and distribution strategies used on the distinct regions and territories;
- c]** Diagnosis upon the essential factors to build a collective or specific brand image and the needed mechanism of coordination between regions to attain it.

In the third phase we undertake:

- a] Identification of the regional specific considered territories brand image (real /potential).
- b] Conception of a specific brand image to the considered regional territories.
- c] Building of a territorial marketing strategy to the set of regional territories involved, valuing the construction of a global common image.
- d] Identification of the channels, segments and target-public to attain.
- e] Definition of the instruments and tools to use on the international promotional kit for the Euratlantic territory.

1.1.3. Methodology

To obtain the final output, we use several methodologies. Firstly we analyse existing FDI data, to determine the actual flows and the main investors in Europe and the respective sub sectors. We wanted also to identify the North-American enterprises, which are present in the thirteen Euratlantic regions. Then we use an extensive analysis of enterprises and factors, which influence their decisions of, invest in Europe.

Our goal of realizing the 10 interviews of North-American enterprises located in the Euratlantic regions and also surveys on economic regional associations which can contribute to the promote of Euratlantic regions, were not fully realized both due to the acute shortage of time as well as logistical reasons. We tried to overcome this via various conversations we had among 'experts' as well as an exhaustive search for opinions that existed regarding investment decisions, using the Internet as our tool.

Depending on the results of the key-factors on investment, choice and localization of North-American enterprises, the methodology would ideally include one or more than one of following techniques:

- Discussion Groups, to compare opinions and make strategies, valuing consensus and non-consensus. The objective is to compare opinions and make strategies, valuing consensus and non-consensus. This is a technique used in substitutions of individual interviews, when the

temporal horizon and the budget are scarce. Sometimes it attains better information amplitude, when compared with interviews. The utilization of this technique consists in sitting a group of individuals (limited in the number, with a pre-defined selection), to discuss a theme, with the discussion being controlled by a moderator, which should be discrete and impartial;

- Delphi Method, to find consensus between different linked subjective positions with the conception of image of mark and the construction of the territorial marketing strategy. The objective is to find a consensus between different subjective positions with the conception of image of mark and the construction of the territorial marketing strategy. This method consists in realizing some compared interviews from qualitative nature realized to a cluster of specialists with responsibilities about the study. This method has advantages once it allows to determinate the weight, overtake and the impact of the diverse problems of the investigation. With the information obtained, we made synthesis tables.
- Panels of random identification of public-goal to evaluate fixed parameters to analyse the evolution of ratios;
- Study cases, to show commercial strategies, distribution circuits and promotional and divulgation forms. The objective is to show commercial strategies, distribution circuits and promotional and divulgation forms for agro-food products which serve as example.

The final output is a document, which serves as territorial marketing.



The Agri-Food/Biotechnology Sector in the Euratlantic Area

2.1. General Overview

Agri-food/Biotechnology sector is very important and strong in the Euratlantic Area. It is characterized by a very diversified range of agri-business industries, a very broad offer of agricultural based raw materials, a quite good development level and an important growth in agricultural biotechnology over the past years. Private firms, universities, and regional and national governments all increased patenting in agricultural biotechnology. The pattern of agricultural biotechnology patenting and the industrial development of biotechnology clearly differ across Euratlantic, both between different sectors of biotechnology and different regions.

Private firms, non-private firms, and universities dominate patenting in both general agricultural biotechnology and "modern" agricultural biotechnology, which involves greater use of molecular-level information. Innovation is the key to some agricultural biotechnology firms' survival and growth in the Euratlantic Area. It requires negotiating a complex thicket of economic, policy, and technical themes, including questions of optimal patent policy, market structure, and antitrust policy in both the innovation market and the output market, public-private collaboration, public-sector research and development (R&D) in agricultural biotechnology, and the management of intellectual property owned by universities and government research organizations.

In Portugal agri-food sector is important considering the transforming industry context and the country economy but compared to others Euratlantic regions, Portuguese ones show a significant delay in the area of the biotechnology. This is mainly due to the absence of companies of technological base that,

altogether with companies of the sector, can establish a bridge between the research and the enterprise capacity.

Portugal faces a deficit situation in what concerns the production of agri-food products with imports clearly above the exports. This high external dependency on one hand reveals the weakness of the productive structure and on the other hand constitutes an opportunity to FDI in the sector, through products positioning, enterprises installation with or without industrial bases and/or the financial participation on national enterprises.

The raise on live standards of Portuguese population, which changed consuming habits to the demand of more convenient products, with a higher added value, and the raising concerns with the impact of food habits on health, raised the dynamic of agri-food enterprises and generated greater opportunities to the installation of new enterprises on Portuguese market, namely on its Euratlantic regions.

In Spain, the agri-food/biotechnology sector registered on the last two decades a notable progress, to which is not strange to European Union integration process. On horticultural and fruits sub-sectors it has a good position on the world ranking, which is very useful on the raw materials' for industry supply, in what concerns quality and quantity. The use of biotechnology to develop new products that create value for producers, processors, and consumers has made use of extensive knowledge of plant breeding and agronomic and market practices in Spain.

A very important aspect of the agri-food/biotechnological sector development in Spain has been the institutional promotion of their agricultural and food products. In order to make biotechnological efforts profitable in a large-scale market, the Spanish Institute of External Commerce increase the budget to the external promotion of food products. It represented almost 0,1% of the total production value on the sector, being 76% to products linked in some way with the territory, such as wine, fruit, horticultural products, canned fish, mineral

water, Jerez brandy, olive oil cheese, nougats, sweets, cakes, ham, cow meat and other animal meat products.

Spain, especially in its south regions, is much visited by North European tourists, which are undoubtedly, even for its Euro-Atlantic regions, an important vehicle of consumption and dissemination of typical products. Due to touristy flows and special seasons, the demand for ready to eat and added value products is greater on summer, Eastern and Christmas.

France is one of the main world leaders on the technology of agri-food manufacturing processes and biotechnology, with a good integration of natural sciences and engineering in order to achieve the application of organisms, cells, parts thereof and molecular analogues for products and services. This situation is applicable to both “traditional” and “modern” biotechnology. “Traditional” biotechnology refers to the conventional techniques, which have been used for many centuries to produce beer, wine, cheese, bread and other foods (Table 2). “Modern” biotechnology embraces all methods of genetic modification by recombinant DNA and cell fusion techniques together with the modern developments of “traditional” biotechnological processes.

Table 2 – Traditional Processed Foods using Biotechnology

Foods and Drinks
Alcoholic Beverages (wine, Beer)
Cheese
Bread
Vinegar
Yoghurt
Fruit and Vegetables Products (Pickles, Soya Sauce, Sauerkraut)
By-Products of Fermentation (Enzymes, Flavours, Additives)
Dietary Supplements (Amino Acids, Vitamins)

Source: European Federation of Biotechnology, 1997

French firms began to use both “traditional” and “modern” biotechnology in agriculture for different reasons: Some had experience in agricultural inputs (especially seeds and chemicals) and sought to apply new technologies, others were seeking applications for innovations in which they possessed cutting edge ability, and still others were startup companies formed to commercialize new biotechnology discoveries. The agri-food sector is modern, strongly dynamic and has the latest technologies in what concerns packing and preservation. Beside a strong agri-food sector, the country has important agri-food equipment industries.

The large high quality food production tradition and a very strong agricultural sector were two of the determinant factors to the development of the French agri-food sector position, particularly on its Euratlantic regions.

French agri-food sector has passed recently for big changes, especially due to the necessity of production technologies modernization, higher quality standards demanding consumers, higher environmental concerns and higher costs to get to strong and competitive markets, due to globalization process. Their principal sub-sectors are meat and milk and milk products, each of them representing almost 25% of the country agri-food industries' annual turnover.

2.2. The Provision Conditions

In what concerns provisioning conditions, and knowing that agricultural sector is very important for these countries in what concerns provisioning of their agri-food/biotechnological sector, it is of particular importance to know which are the more relevant Technical-Economic Orientations (TEO) on the studied regions, to understand their agricultural specialization degree. As comparison, the number of agricultural holdings, the regular farm labor force, the farm holders less 35 years old and over 64 years old, the producer price indices, income indicator and the Gross Value Added at basis prices of the agricultural industry are presented on Tables 3 to 6.

Table 3 – Number of Agricultural Holdings (In 1 000) and Regular farm Labor Force (In 1 000 persons)

Country	Number of Agricultural Holdings (1 000)	Regular farm Labor Force (In 1 000 Persons)
Portugal	416	1064
Spain	472	1471
France	664	1329
EU - 15	6771	13511

Source: Eurostat Yearbook, 2004

Table 4 – Farm Holders³ less than 35 years old and over 64 years old

Country	Less than 35 years old (In 1 000 Persons)	Over than 64 years old (In 1 000 Persons)
Portugal	17	155
Spain	73	253
France	53	97
EU - 15	528	1867

Source: Eurostat Yearbook, 2004

Table 5 – Producer Price Indices⁴ for Agricultural Production and Purchase Price Indices⁵ for means of Agricultural Production (1995=100 deflated)

Country	Agricultural Production	Means of agricultural production
Portugal	86,7	87,2
Spain	82,6	95,2
France	87,9	99,0
EU - 15	85,3	95,7

Source: Eurostat Yearbook, 2004

³ The farm holder is the legal or physical person taking benefit from the agricultural activity. They are only accounted for as the individual holders and not the holders of group holdings.

⁴ The indices in this table give information on the trends in the producer prices of agricultural production as a whole. The sub-indices were weighted by the values of sales in 1995. Nominal indices are deflated by means of the harmonized index of consumer prices.

⁵ The indices in this table give information on the trends in the purchase prices of the means of agricultural production as a whole. The sub-indices were weighted by the values of purchases in 1995. Nominal indices are deflated by means of the harmonized index of consumer prices.

Table 6 – Indicator⁶ of the Income from Agricultural Activity and Gross Value Added at Basic Prices⁷ of the Agricultural Industry (In million EUR)

Country	Indicator of the Income (1995=100)	Gross Value Added at basic prices (In million Euro)
Portugal	126,4	3 419,5
Spain	114,4	24 897,4
France	103,4	31 207,1
EU - 15	105,3	144 629,6

Source: Eurostat Yearbook, 2004

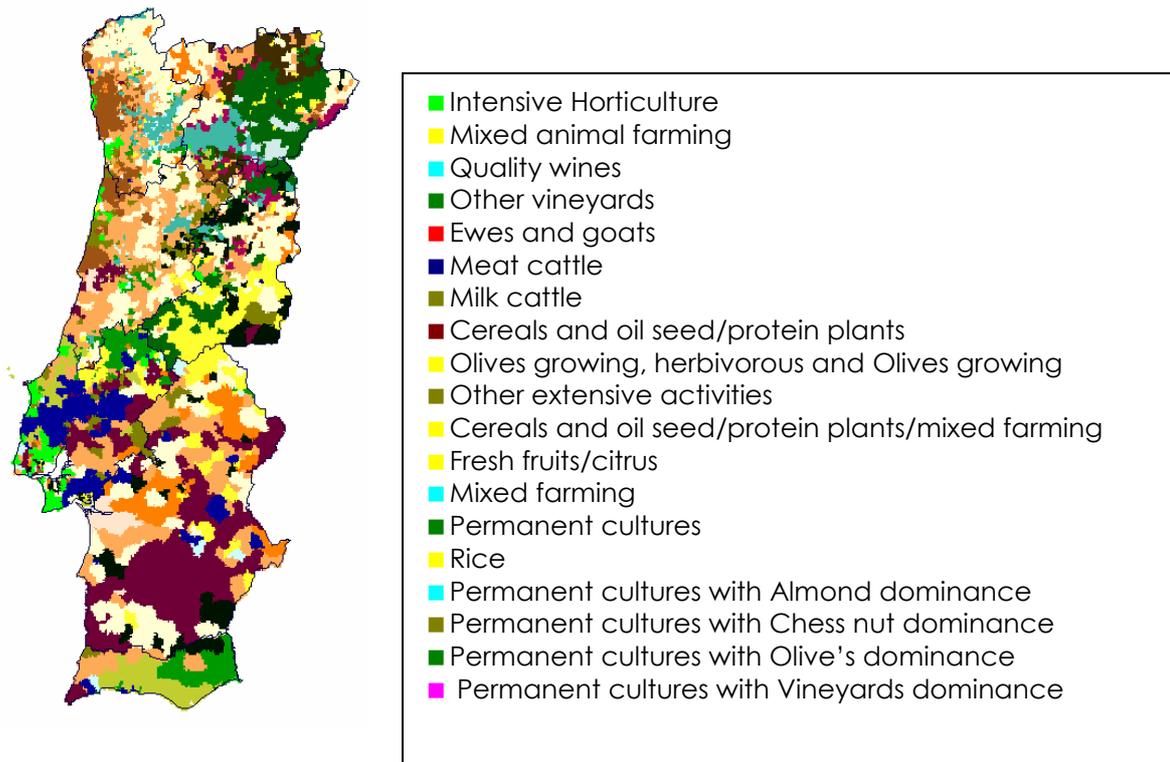
In general, the agri-food sector in Portugal has as raw materials principally basic agricultural products. In face of the structural crisis of the agricultural sector, the high dependence industries have from these sectors surely become a weakness of the Portuguese agri-food sector. In the last years agricultural development has been relatively shy in Portugal. This can be a consequence of several factors, especially structural factors, in which we can underline the lack of scale economies on agricultural production, due to the very small size of farms in most of the country and the lack of tradition and bad working standards of associative and cooperative structures, the imposition of a Common Agricultural Policy (CAP) not adjusted to the country's agriculture vocation, the low formal educational level of the producers and the lack of productions orientation to the markets.

In Portugal, the Euratlantic regions present almost 84% of Portuguese farms (INE, 2005.a). TEO from Euro-Atlantic regions' farms are presented in the figure 2). The corresponding data is in table1, Annex I.

⁶ This Indicator corresponds to the deflated (real) net value added at factor cost of agriculture, per total annual work unit. The implicit price index of GDP is used as deflator.

⁷ Gross value added at basic prices corresponds to the value of output (at basic prices) less the value of intermediate consumption. The basic price is defined as the price received by the producer, after deduction of all taxes on products but including all subsidies on products.

Figure 2 – Relevant TEO in Portugal



Source: Ministério da Agricultura, do Desenvolvimento Rural e das Pescas, 2005

As we can see very TEO, except fruits culture and horticulture, represent, in Euro-Atlantic regions, more than 70% of the country's farms, which have that TEO. This is obviously linked with the fact that a great majority of the country belongs to the Euratlantic area. In the case of fruits culture, which even though presents in the Euratlantic region 48% of the farms that have this TEO in Portugal, this is linked with the fact that the Algarve has almost 90% of the citrus national production and for horticulture it is linked with the fact that this is a specially important TEO in the region of Lisbon.

The sectors with more competitive advantages are wine, industrial tomato and milk products. There are other sectors, such as fresh horticulture, fresh fruits, dry fruits, olive oil and mineral waters, which also have competitive advantages, but in which it is necessary to create their comparative advantages through investment and innovation on the production and commercialization processes.

From the agricultural point of view, Portugal should strategically bet on these sectors to be able to supply its industry with high quality raw materials and avoid the situation of growing degradation on agricultural commercial balance and current transactions balance. Under these circumstances, the competitiveness of agri-food sector can never be based on the basic agricultural products but in products with added value, produced under competitive advantages conditions.

The provisioning of food sectors that depend on imports has its principal origin on EU countries, namely France and Spain. In what concerns subsidiary materials, the main part is produced in Portugal, in spite of a frequent use of Spanish enterprises as suppliers of packing materials.

In Spain, Euratlantic regions have 49% of the Spanish farms (INE, 2005.b). For some TEO these regions represent more than 50% of the farms that, in Spain, have this TEO, which means there is a relevant specialization. We can see in table 2, in Annex I the TEO for which Spanish Euratlantic regions present more than 50% of the farms.

We can even see that for some of these TEO only some of the five regions we are dealing with are relevant. Andalucía alone has more than 50% of the farms which TEO are Cotton, Greenhouse Flowers and Ornamental Plants, Greenhouse Horticulture and other activities, Vineyards for Dried Grapes and olives, La Rioja, Andalucía, Castilla y León and Galicia, together, have more than 50% of the farms which TEO are Annual Fresh Horticultural Growing and Grape Growing, Andalucía and Castilla y León have 50% or more of the farms which TEO are Olive Growing and Goats, Asturias (Principado de) together with Galicia have 50% or more of the farms which TEO is mixed cattle, La Rioja, together with Castilla y León have 50% or more of the farms wick TEO is mushrooms and finally, Galicia has 50% or more of the farms is Horticulture and Other Different Open Air Activities.

Burdening the recollection and manipulation of raw materials' conditions has undoubtedly contributed to burden the volume and quality of Spanish agri-

food production. The best example is in wine sector, where there has been a sensible selection of soils, varieties and recollection and manipulation of grapes and wine preparation processes. Other sectors, which have also benefited from these improvements, were fruits and related products and poultry products.

On the fruits and related products sector the fruit quality and manipulation processes' improvement were the motor of the fruit juices' sector development in the country. On poultry products the improvements were especially at food level and breeds' selection, which determined important productivity and competitiveness gains. The olive oil sector is also a very strong sector.

The sectors with more difficulties in what concerns raw materials' provisioning are milk and meat industries. On milk industry the main problems come from the difficulty on establishing a price reflecting quality differences on the recollected milk and the restrictive regimen of production quotas imposed by CAP. On meat the main problems are sanitary, namely African swine pest occurrence.

In spite of Spain's strong agricultural sector, its agri-food sector sometimes faces problems of raw materials provisioning. The risk of not having enough raw materials at disposal or price fluctuation is more relevant on the sectors that are strongly dependent on the country's production. Beside national production, Spanish agri-industry also imports raw materials. Its main suppliers are other European Union countries, such as France, United Kingdom, Germany and the Netherlands, Brasil, United States of America and Argentina.

In what concerns raw materials consumption the Euratlantic regions of Andaluzia and Castilla y León represent one third of the Spanish total.

According with the FIAB (Spanish Food and Drink Industry Federation), the Spanish agri-food sector ranks fifth in terms of sales in Europe. It is the largest sector of the Spanish manufacturing industry, with 20% of the total industrial production, 15% added value, and 17% total employment. In order to promote the competitiveness of its sector, the companies are increasingly interested in improving the quality of their products by ameliorating their management

techniques and efficiency, offering continuous vocational training to their employees and investing in research and development.

The progressive liberalization of the world commerce is also one important issue of the agri-food sector in Spain, which causes the need for investment in productive activities as well as in internationally oriented activities such as exports promotion, commercial agreements and technological assistance.

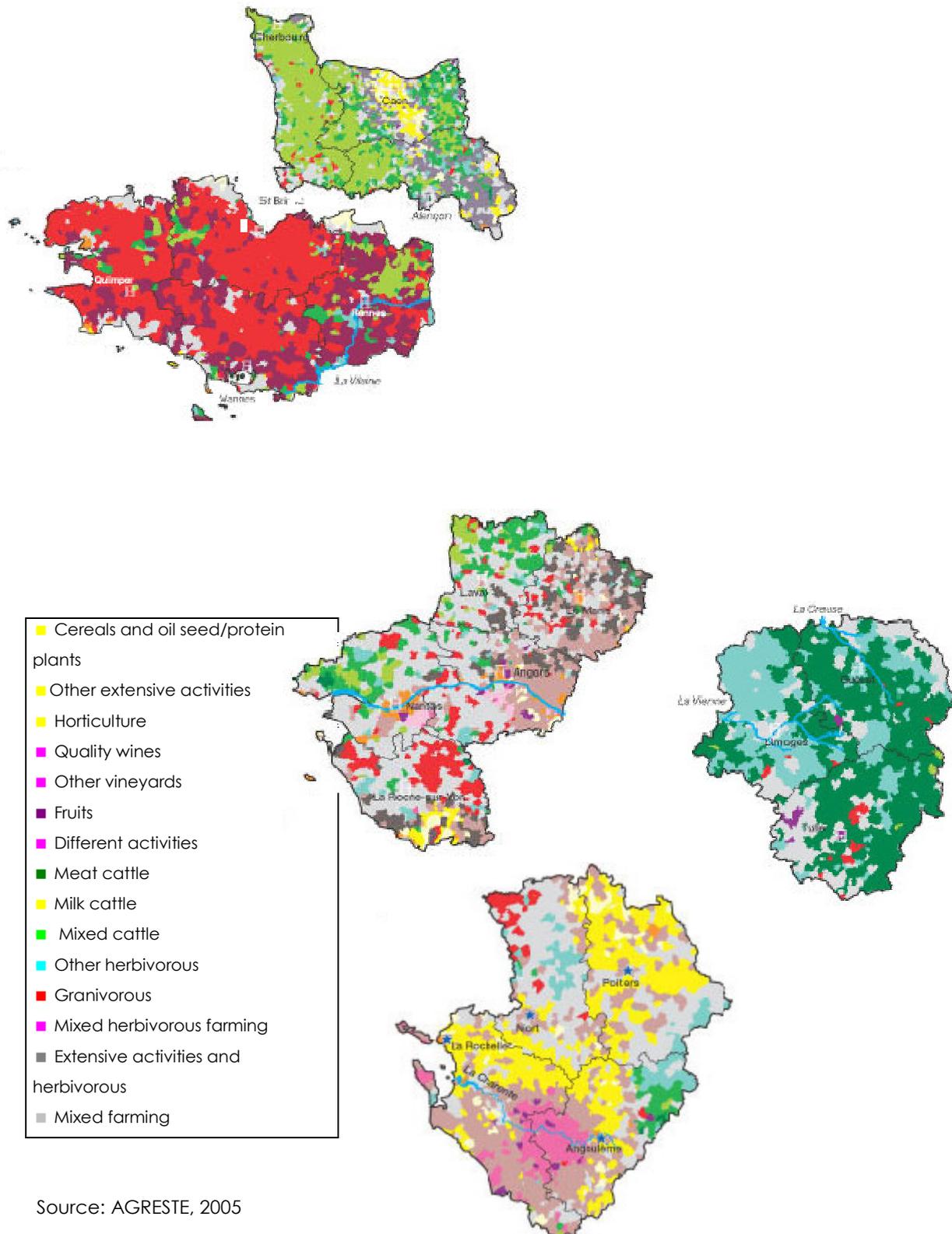
France is a country constituted by a multiplicity of agricultural regions, characterized by specializations linked with their history and their climatic conditions. French agri-food sector presents a strong link with the national agricultural sector. There is even also a consensual vision on the fact that the competitiveness of the agri-food sector largely depends on an agriculture oriented to a competitive and strong transforming industry needs.

The more abundant raw materials in France are milk, meat, horticulture and fruits and cereals. Given the French agriculture development, agri-food industries main supplier is domestic market. Disrupts and supplementary needs are satisfied with imports, mainly from other EU countries, USA and Brazil.

Specifically, French Euratlantic regions present about 44% of French farms (Agreste, 2005). For some TEO these regions represent more than 50% of the farms that, in France have that TEO which, like in the other countries, means a relevant specialization. We can see in figure 3 the French Euratlantic regions and France TEO. The relevant values are presented in the table 3, Annex 1.

Bretagne region can be described as a traditional oriented food producer, with plentiful raw materials natural resources, low-cost region according to the rest of France. A region of wine, quality gastronomy, quality of life, an expertise in food processing thanks to a past and experience worldly renowned.

Figure 3: Euratlantic French regions' farms, upon TEO



Source: AGRESTE, 2005

Normandy is essentially a farming region, which is famous for its dairy production: it has successfully revitalized this traditional sector by developing the market for dairy products with a high added value. Thanks to its production of traditional cheeses, as well as innovative specialties, it is now France's foremost cheese-making region. The quality and diversity of its dairy products has earned Normandy an international reputation. One of the industry's greatest assets is the efficient organization and adaptability of its agricultural production: the 16,300 dairy farmers supply milk which meets all the requirements of the major firms, in terms of both quantity and quality.

Limousin is a beef meat production region, with a world's recognize brand name. Others sub-sectors are fruit and vegetables productions and milk production.

With only 5% of the total surface, Pays de la Loire supplies 10 % of the agricultural production and occupied the second position in the agriculture regions ranking. It's a first beef meat producer and the second producer on milk, pork and poultry. The regional economy is based on agri-food sector.

We already knew that the Euratlantic regions belong to the EU world's largest wine and olive oil producing area with more than one half of total world production. The main part of the production is used in Europe, although exchanges with other continents (particularly America and Asia) are increasing. Nevertheless, we can clearly observe that the provisioning conditions direct us for some other very specific sectors – allbight the importance of the wine and the olive oil sectors can not be neglected, we can point out also the horticultural sector, the fruits and related products sector, the meat sector and, finally, the milk and related products sector as sectors where the competitiveness advantages in what concerns provisioning conditions are a reality.

2.3. Demand Conditions

The main destination to products from agri-food Portuguese enterprises is internal market. We can underline as clients the final consumers, big distribution and other industries. Exports are lower than imports and the main destinations are EU countries, the Portuguese speaking countries (PALOP) and USA.

On the last two decades the final consumption of feeding products not only raised but also had significantly changed. The demand of sophisticated products, with greater added value and a more comfortable use registered a significant raise, as well as the consumption of new products, influenced by communication techniques and publicity. Nevertheless, the national agri-food sector demonstrated incapacity to industrialisation itself in order to satisfy consumers' needs has raised the imports.

Other important aspects of consumption habits' change are linked with the perception of what is a healthier feeding, which allowed products with less salt, sugar, cholesterol and fat to gain market quota, leading to a raise of its presence on market as well as a raise on its variety. Fruits and vegetables are generally bought fresh, but there was a development on the preference by frozen and pre-prepared vegetables.

Fast food also had a raising importance on a consumption of agri-food products in Portugal, associated to low costs, consumption comfort and publicity, promotion and other marketing stimulus and techniques.

Linked to the food products, buying habits reflect some seasonality on the consumption. That's the case of mineral water and green wine, preferably consumed on summer, and rice, olive oil and Oporto wine, preferably consumed on Eastern and Christmas.

The Portuguese distribution sector is characterized by a strong atomization in spite of the raise registered at big distribution level during the nineties. Actually, the big distribution importance on food products commercialization is such that its annual turnover doubles the annual turnover of all Portuguese agri-food sectors.

Such as in most countries, the relation between agri-food enterprises and the big distribution faces some difficulties coming from the great business weight of the second one. These difficulties are especially linked low selling prices, big payment periods, big discount volumes and exigencies in what concerns financing conditions to face centralization and returning expenses. In spite of this, agri-food sector recognize the big distribution importance as a selling channel for their products. Nevertheless, this selling channel is viable only for cost-efficient enterprises.

Spanish agri-food sector as has main clients the final consumer, the big distribution other industries and external commerce.

The Spanish feeding habits have also substantially changed on the last two decades. The main tendencies are the demand for a healthier and natural feeding; the raise on elaborated products' demand; the integration of a feeding tradition with leisure; and outdoor consumption.

According to the Spanish Ministry of Agriculture, the per capita consumption with food and drinks is around 700 €/year. According the same source, Spanish consumers spend annually with food and drinks more than 35 thousand million euros, from which three-quarters correspond to consumption at home. In what concerns available family income, about one quarter is spent on food, the meat and sea products and bread representing about one half of this.

On sails to big distribution, the packed or bottled products with the distributor label have a raising importance. On the relations between agri-food sector and the distribution sector we must emphasize such as in other countries the great

business weight of the second, which allows the imposition of selling conditions, namely prices, payment periods, discount volumes and publicity investments.

The distribution channels evolution in Spain on the feeding products commerce tendentiously consolidates the leadership of super and hypermarkets, raising the importance of hard-discount shops and dropping the traditional commerce weight. In the big distribution we can easily see the importance of big international distribution chains, such as Carrefour and Continente.

In what concerns external commerce, we have assisted, during the nineties, to a positive evolution of commercial balance, that even turned into situations of superavit, especially due to an increase of exports, that already represent more than all the annual turnover of Portuguese agri-food sector, and a decrease in imports. The commercial balance has been more favourable to the vegetable products, such as horticulture and fruits, with covering rates above 100%. The main exports destinations are the EU countries, especially France, Germany and Portugal.

For French agri-food sector the main clients are the final consumer, the big distribution and the other industries.

In French agri-food consumption we have to enhance the preference by food rapidly prepared and the increasing worries with health, that become evident with the increasing popularity of fresh meals, ready to eat, pre-prepared frozen food, dietetic and natural products. There is also an increasing demand, especially among younger people, by innovative products, especially from abroad, such as exotic and ethnic food, energetic drinks and food enriched with vitamins.

In general we can characterize food consumption in France as a mature market with high income, oriented to niche markets. The power of distribution sector in France is also relevant, with the little and medium agri-food enterprises pressed by organized distribution and by the competitiveness of big enterprises.

The major difficulties on the relations between agri-food sector and distribution are linked with the lack of their capacity to fix prices and selling conditions.

The hard discount stores, hypermarkets, supermarkets, central stores and department stores, which represent modern distribution, represent three quarters of food distribution in France.

In spite of the different structural and organizational situation, agri-food consumption are in all the Euratlantic region involved in integration processes which tends towards homogenization of food consumption patterns. Several factors are encouraging these homogenization trends based on consumers' similarities and corporate activities.

In general terms, demand for agri-food in the Euratlantic region can be summarized in four major trends: 1) a decrease in the proportion of expenditure allocated to food already reaching very low levels, 2) a maximum level in total food consumption, in quantity terms, 3) a shift in the food consumption structure, and 4) an increase in the proportion of food consumed away from home.

The first trend follows macroeconomic growth. The second trend is the result of a situation that occurs in wealthy countries where quantity is surpassed by quality concerns; people want to eat better as their daily intake requirements diminish. The third trend is not so homogeneous and it differs from country to country, according to many distinctive aspects, but is also based on their cultural and historical evolution. The last trend is also common for all the three countries but its intensity varies among labor circumstances.

Different trends can be observed for products in the different countries (Figures 4 to 6 and Table 7).

Portugal has the biggest consumption of carcass meat, France has the biggest milk consumption and Spain has the biggest cereal products consumption. It

means that heterogeneity is the most remarkable characteristic in agri-food demand and consumption.

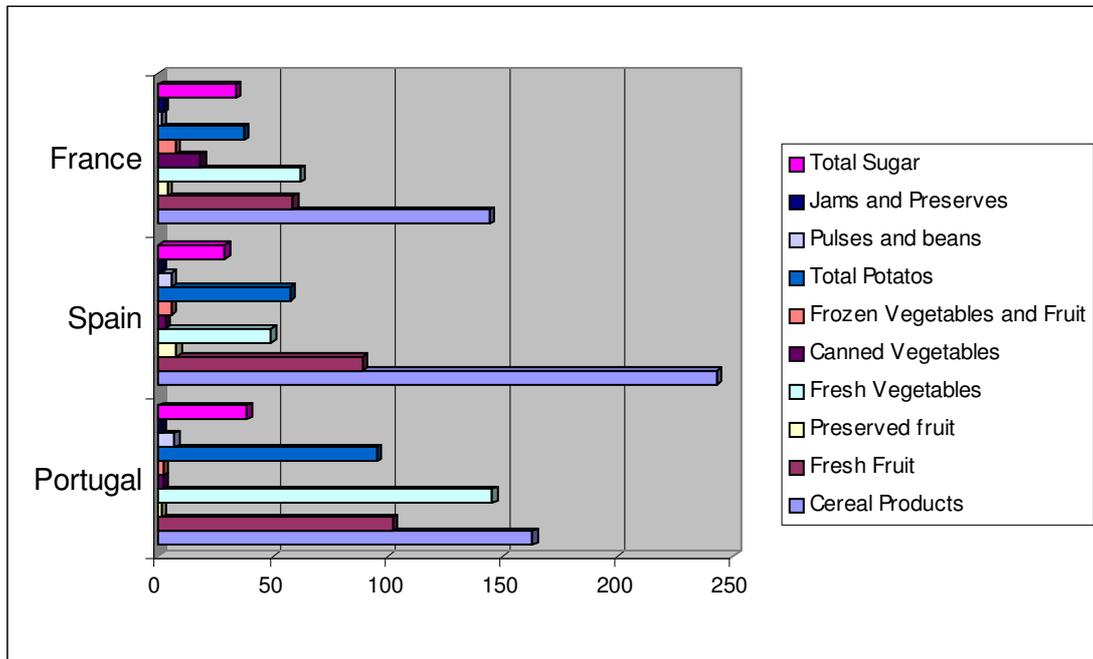
Distribution systems vary across the three Euratlantic countries (table 7), and consumers in those different countries seem to adapt to different stores and their supply. Therefore, consumers' food choices depend on retailers' strategies. Probably it does not have much influence in their diets, as the variety of food products is large all over Euratlantic Area, but it has an impact on assortment, services and prices.

Figure 4 – Euratlantic agri-food Consumption by Country (thousand tonnes)



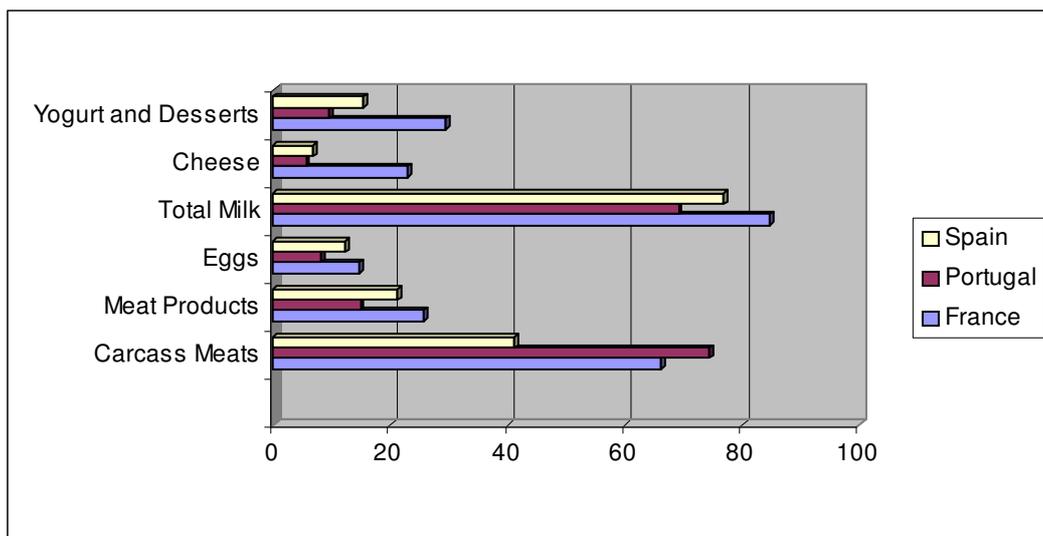
Source: AgraEurope, 1997 and European Commission Collected Data, 2004

Figure 5 - Per-capita vegetable agri-food consumption by Country and Product (Kg)



Source: European Commission Collected Data, 2004

Figure 6 - Per-capita animal agri-food consumption by Country and product (Kg)



Source: European Commission Collected Data, 2004

Table 7 – Euratlantic retailers characteristics by country

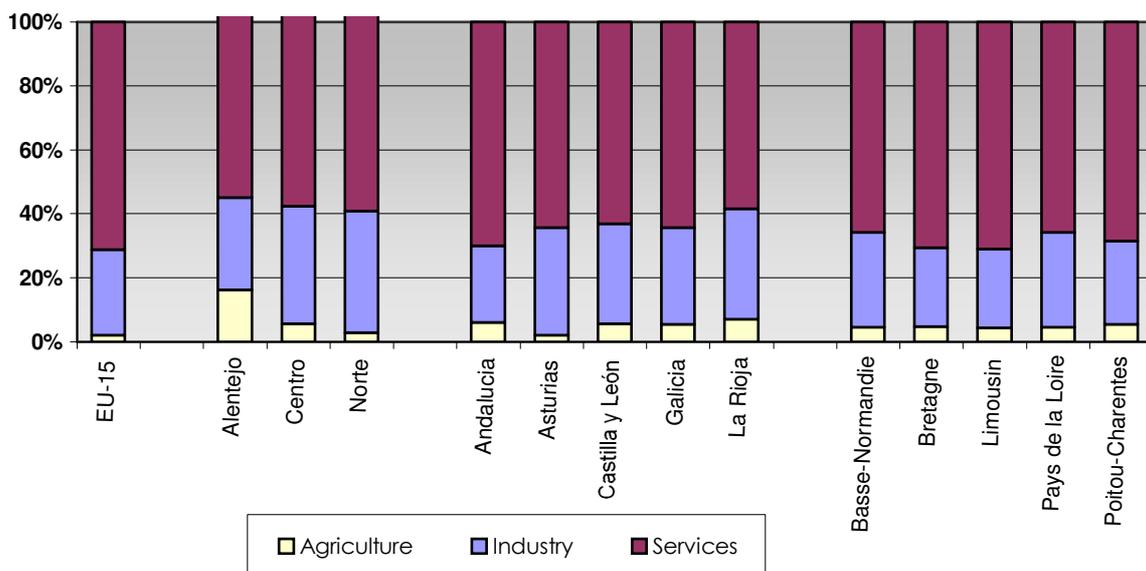
Country	Own Label Sales (%)	Three Top Retailers	Top Three Sales (%)	Outlets per 1000 habitants
Portugal	11,9	SONAE/ JMR/ AUCHAN	55	9,2
Spain	16,2	PROMODES/ EROSKI/ PRYCA	35	3,2
France	16,8	INTERMARCHÉ/ LECLERC/ AUCHAN	44	7,4

Source: A.C. Nielsen, 2002

2.4. Enterprise Structure

The relationship between agricultural sector, industry sector and commerce and services sector is presented in Figure 7. Especially in the Portuguese case of Alentejo, Norte and Centro and in the Spanish region of La Rioja, but also, with less figures, in the French Euratlantic regions, the agriculture and industry sector has an important role in the country economy.

Figure 7 –Agriculture, Industry and Commerce and Services in the Euratlantic Area and in the EU-15



Source: INSEE, INE Spain, INE Portugal, Eurostat, 2004

In Portugal, existing statistical data for agri-food are mostly not picked out by region. Nevertheless this is not a very relevant issue in this case, since only autonomous regions of Azores and Madeira, Lisbon and the Algarve region do not belong to the Portuguese Euratlantic region. Portugal has 8565 enterprises, which belong to the agri-food sector, beverages and tobacco sector. From these enterprises 76% are inside Euratlantic region and we will present data referring to Portugal that, in what concerns sector characterization, can surely be extrapolated to Portuguese Euratlantic region.

Portuguese most important agri-food industry are milk industry, breeding animals' feed industry, wine industry, cattle slaughtering industry, bread making and pastry industry, beer industry, juices and other non-alcoholic drinking industry, poultry and rabbits slaughtering industry and tea and coffee industry.

For these industries selling values were the following in 2001 (INE, 2005.a) (table 8):

Table 8 - Selling values for the main Portuguese agri-food Industries in 2001

Unit: 10³ €

Agri-Food Industries	Selling values
Milk industry	1075948
Breeding animals' feed industry	919613
Wine industry	881928
Cattle slaughtering industry	588638
Bread making and pastry industry	588001
Juices and other non-alcoholic drinking industry	504198
Beer industry	457520
Poultry and rabbits slaughtering industry	448376
Tea and coffee industry	365059

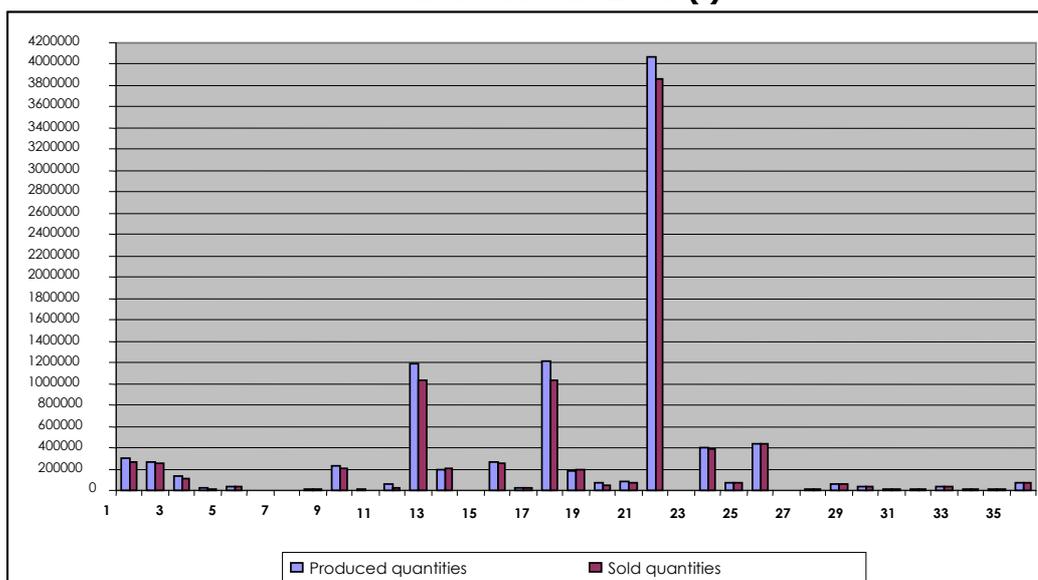
Source: INE, 2005.a

The sectors that had competitive and comparative advantages were wine, industry tomato and milk products. From these, as we could see in the previous

table, in what concerns sold value, the milk and wine industries are the most relevant. The following figures (figures 8 and 9) show us the quantities produced and sold (t and 1000 l) by Portuguese agri-food enterprises. Relevant data is in table 4, Annex 1. The products with numbers 1 to 44 are the following:

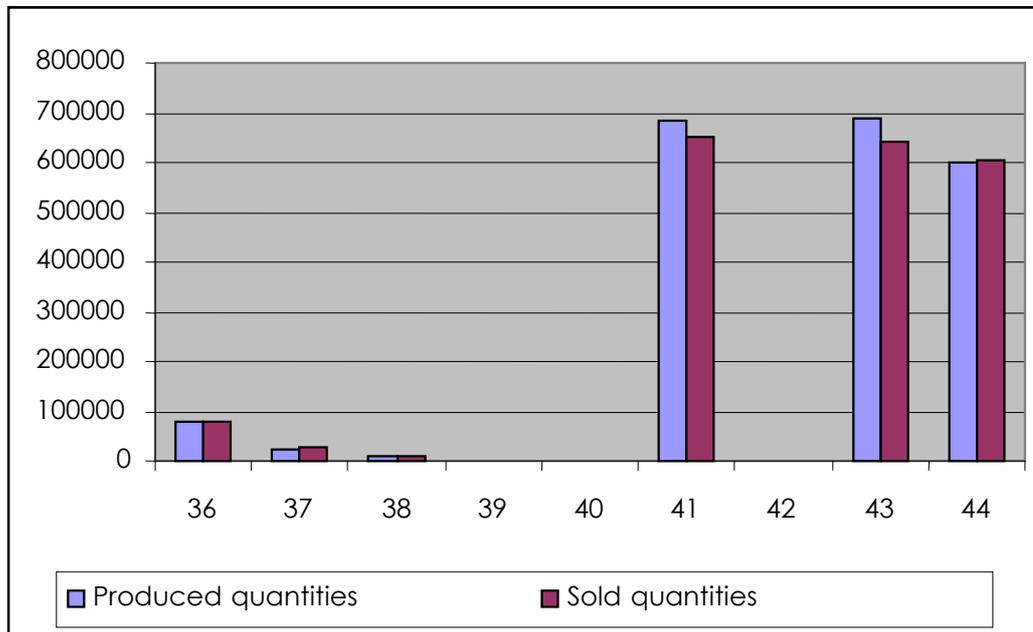
1- Slaughtered cattle	23- Bread making and pastry
2- Slaughtered poultry and rabbits	24- Production of cookies, biscuits, toasts and conservation
3- Meat products	25- Sugar industry
4- Potatoes' preparation and conservation	26- Production of chocolate and cocoa
5- Fruits and horticulture freezing	27- Production of candies
6- Fruits and horticulture drying and dehydration	28- Production of noodles, couscous and similar
7- Manufacture of sweets, jams and marmalades	29- Tea and coffee industry
8- Peeling and transformation of hard-shelled fruits	30- Production of flavorings
9- Fruits and horticulture's preparation and conservation.	31- Production of diet food
10- Oils and animals' fats production	32- Production of leavens and yeasts
11- Olive oil production	33- Production of soups and desserts
12- Vegetables oils' production (except olive oil)	34- Production of other different feeding products
13- Oils and fats' refinement	35- Wine industry
14- Margarine and similar fats' production	36- Production of citron and other fermented drinks
15- Milk industry	37- Production of distilled alcoholic drinks
16- Ice cream production	38- Production of ethylic alcohol for fermentations
17- Cereals milling	39- Production of citron and other fermented drinks
18- Rice peeling and whitening	40- Production of vermouth and other non-distil. Fermented. Drinks
19- Legumes and cereals' transformation.	41- Production of beer
20- Production of starches and similar	42- Production of malt
21- Production of farm animals' food	43- Bottling of natural mineral and spring waters
22- Production of pets' food	44- Production of cooling and other non alcoholic drinks

Figure 8– Quantities produced and sold by Portuguese agri-food industries in 2001 (t)



Source: INE, 2005.a

Figure 9 – Quantities produced and sold by Portuguese agri-food industries in 2001 (1000 I)



Source: INE, 2005.a

Portuguese agri-food industries are, at most, small enterprises. To these enterprises small dimension it is linked a reduced concentration degree with the industries spread over all the national territory, in spite of the fact that in some sectors there is a remarkable concentration, due to the specificity of the industry and its closeness to production or unload place.

The majority of Portuguese agri-food industry enterprises have less than 20 workers and there is a very small number of enterprises with more than 500 workers. We can also see that there is a big atomization in the sector, since the enterprises, which employ a bigger worker's number represent a minority of total working positions in agri-food industry. In the future, we must not expect a big concentration in this sector, since the enterprises with more workers, those, which will have bigger annual turnovers, represent a minority.

Nevertheless, inside the different sub-sectors, there is concentration, since the biggest enterprises, in what concerns annual turnover, represent an important

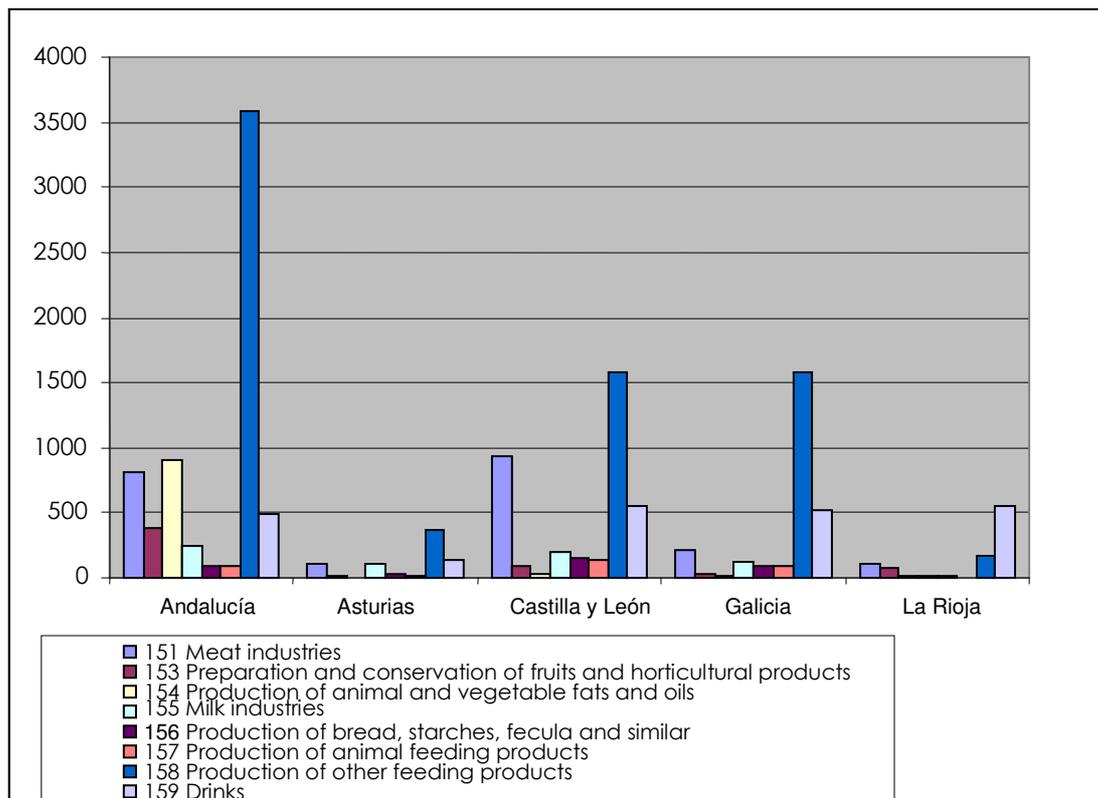
slice of its sector overall annual turnover. Indeed, a big share of the market belongs to a small number of enterprises and labels and there is a small and medium producers' universe that compete essentially for niche markets.

Gross Added Value at market prices (GAVmp), which allows the evaluation of enterprises produced health, grew for the Food and Drinking Industry Portuguese sector, between 1996 and 2000, 11,3%, which represented a bigger addition than the verified for the Processed Industry as a whole (+2,4%). This addition was mainly due to a big raise on the sector of Animals Slaughtering, Preparation and Conservation of Meat and Meat Products (24,3%) and to a raise on the sector of Transforming Industry for Fisheries and Fish Production (42,1%). Anyway, the sectors of Other Feeding Products, Drinkings and Milk Industry, are those that for all the pointed reasons are the most important on the Portuguese agri-food sector, the three that most contribute to the global GAVmp of Feeding and Drinking Industries, contributing with almost 67% of the sector's GAVpm.

The agri-food sector on the Euratlantic regions of Spain presents a lot of enterprises, in different sectors and with different employees' number. Our first concern when talking about this sector enterprises is to define how many enterprises and in which sectors. So, we can observe on Figure 10 that on the euro-Atlantic regions of Spain the existing 14653 enterprises are distributed among the sub-sectors of meat industries, horticulture and fruits' preparation and conservation, fats and animal and vegetable oils' production, milk industries, bread making, starches and starch products' production, animal foods' production, other feeding products' production and drinks production. Table 5 in annex 1, shows the relevant data.

The most important industries are meat industry, horticulture and fruits' preparation and conservation, fats and animal and vegetable oils' production, milk industries and drinks production, which is linked with the farms TEO we had seen before.

Figure 10 – Enterprise number by sub-sector of agri-food sector



Source: INE, 2005.b

The Food Drinks and Tobacco industry that we will analyse on the following tables since there is no data with higher desagregations level includes also the enterprises of fisheries preparation and tobacco. Nevertheless, these sectors are not relevant, as we can observe on table 6, Annex 1. Only the fisheries preparation has some relevance in Galicia, where it represents almost 4% of the enterprises on the sector of Food, Drinks and Tobacco industry, and in Asturias (Principado de), where it represents a bit more than 1% of enterprises on the sector of Food, Drinks and Tobacco industry.

In what concerns employed population, we can observe on the following table (Table 9) the total number of persons working in the sector of Food, drinks and Tobacco industry in each of the relevant regions. In Figure 11 we can see, disaggregated by sub-sector the number of enterprises by classes of employees. Relevant data is in table 7, Annex 1.

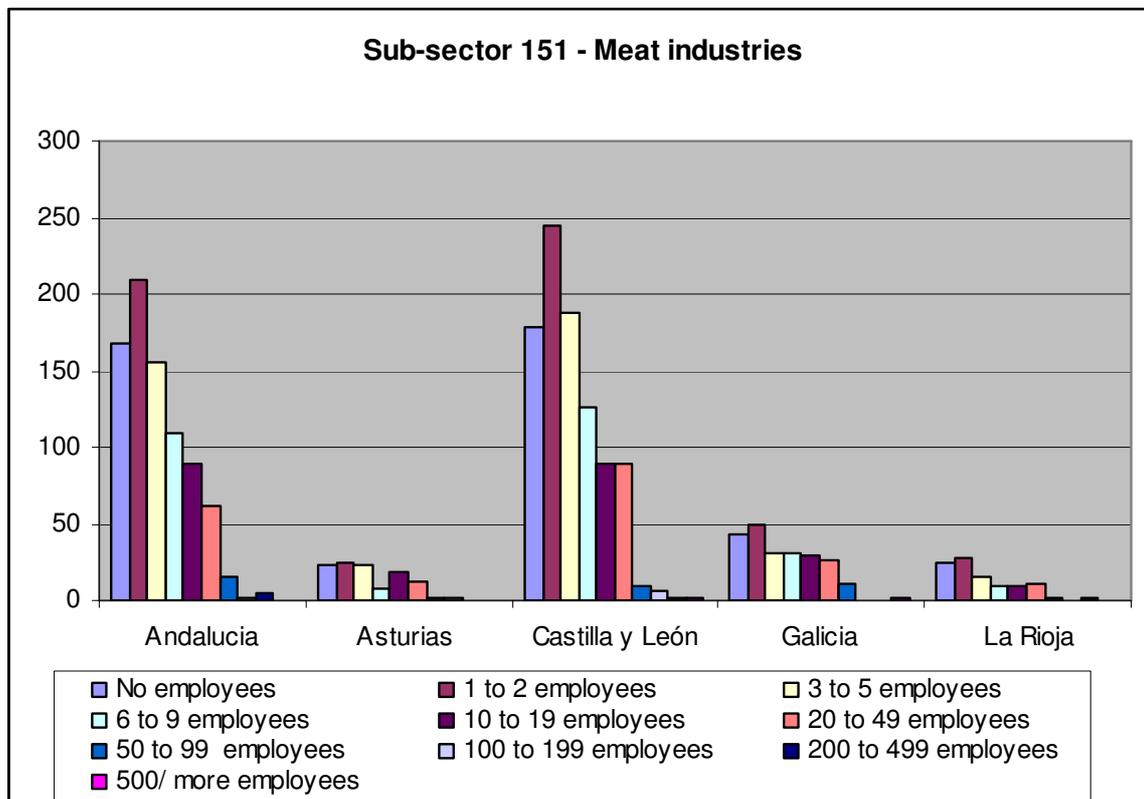
Table 9 – Total number of persons working on the sector of Food, Drinks and Tobacco (2003)

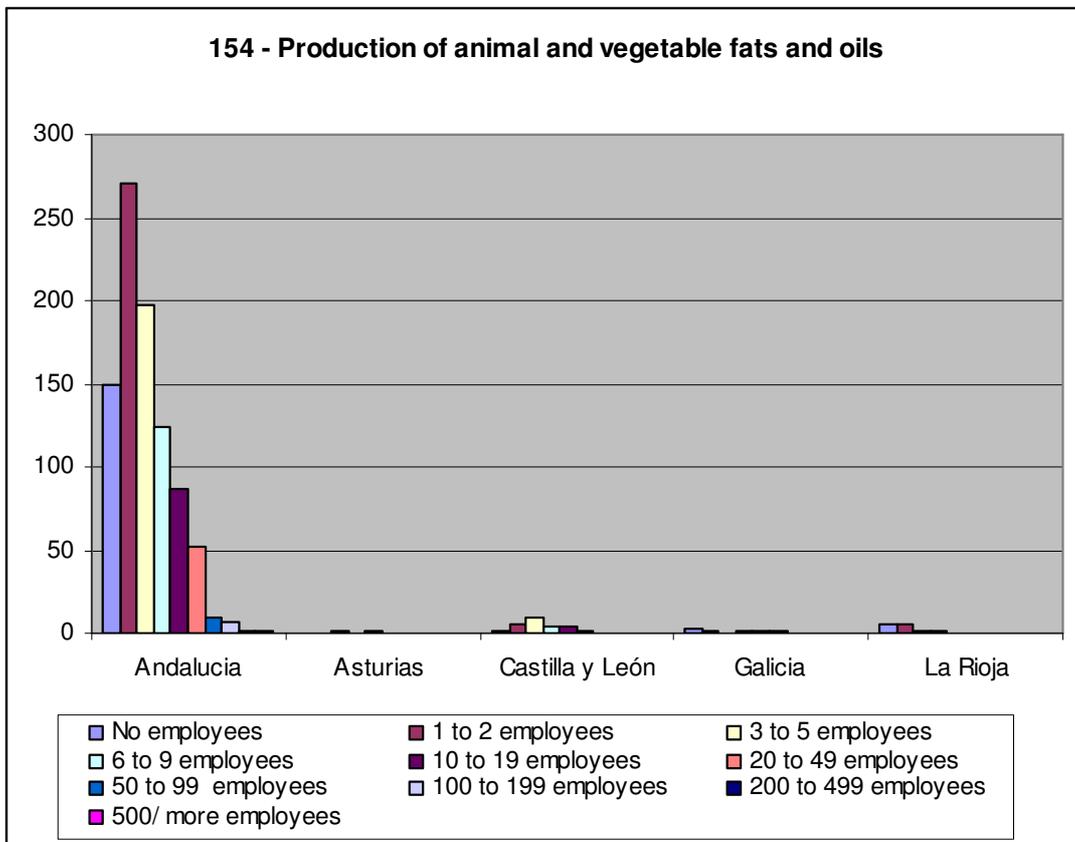
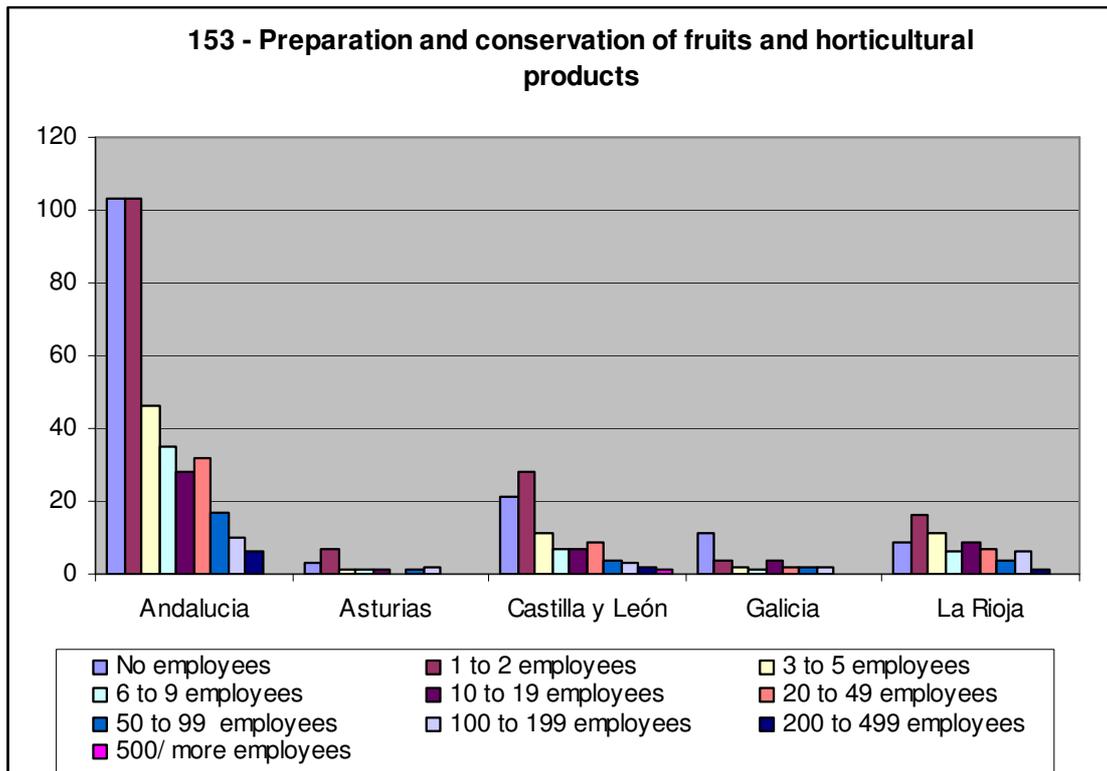
Region	Number
Andalucía	52 904
Asturias (Principado de)	7 744
Castilla y León	33 739
Galicia	27 061
Rioja (La)	7 270

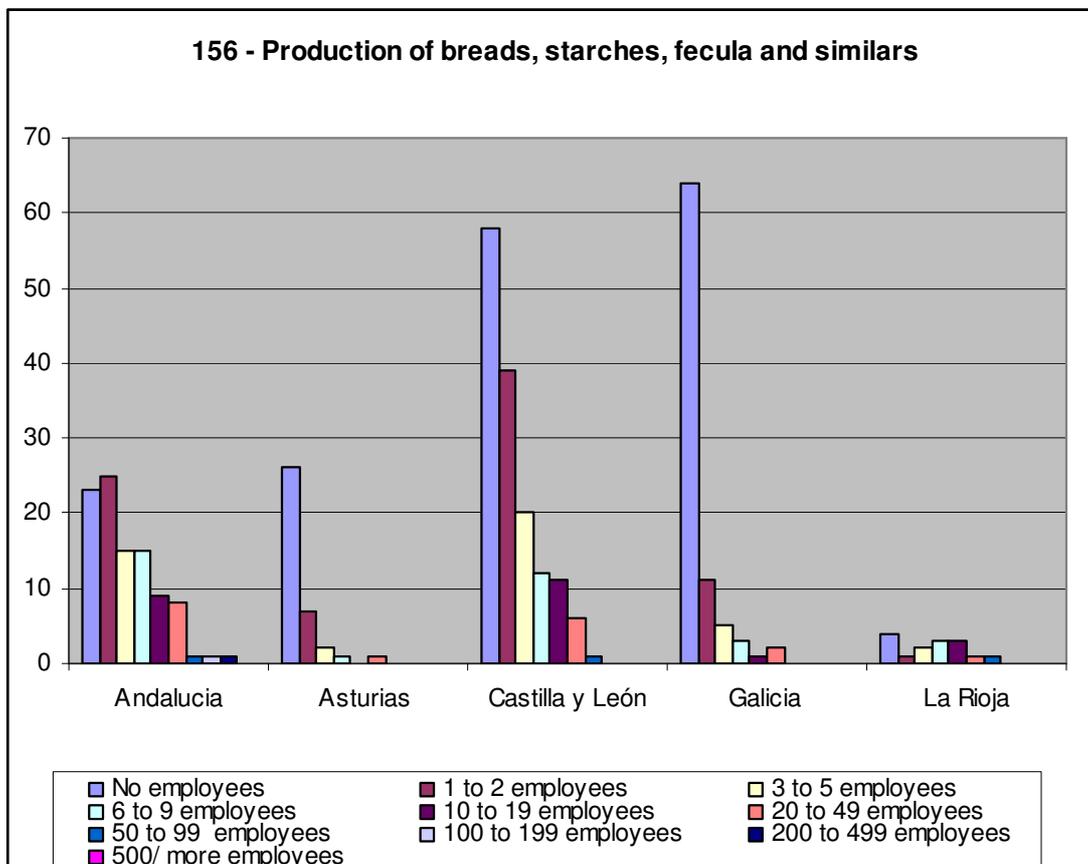
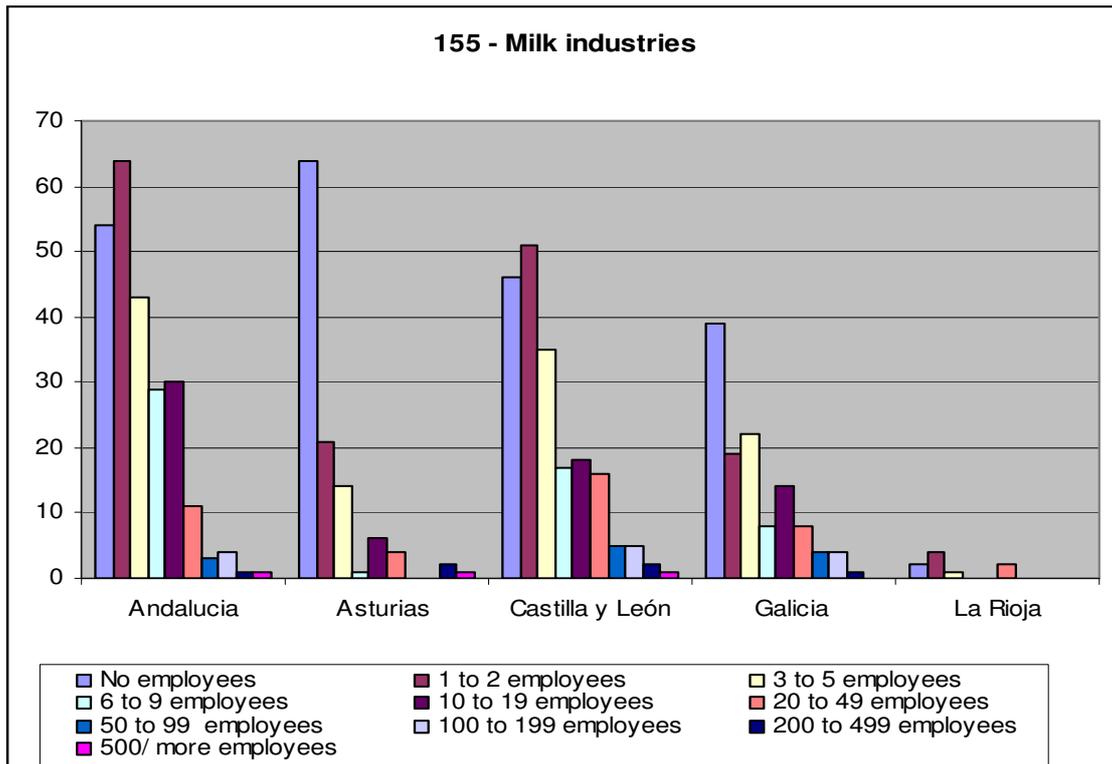
Source: INE, 2005.b

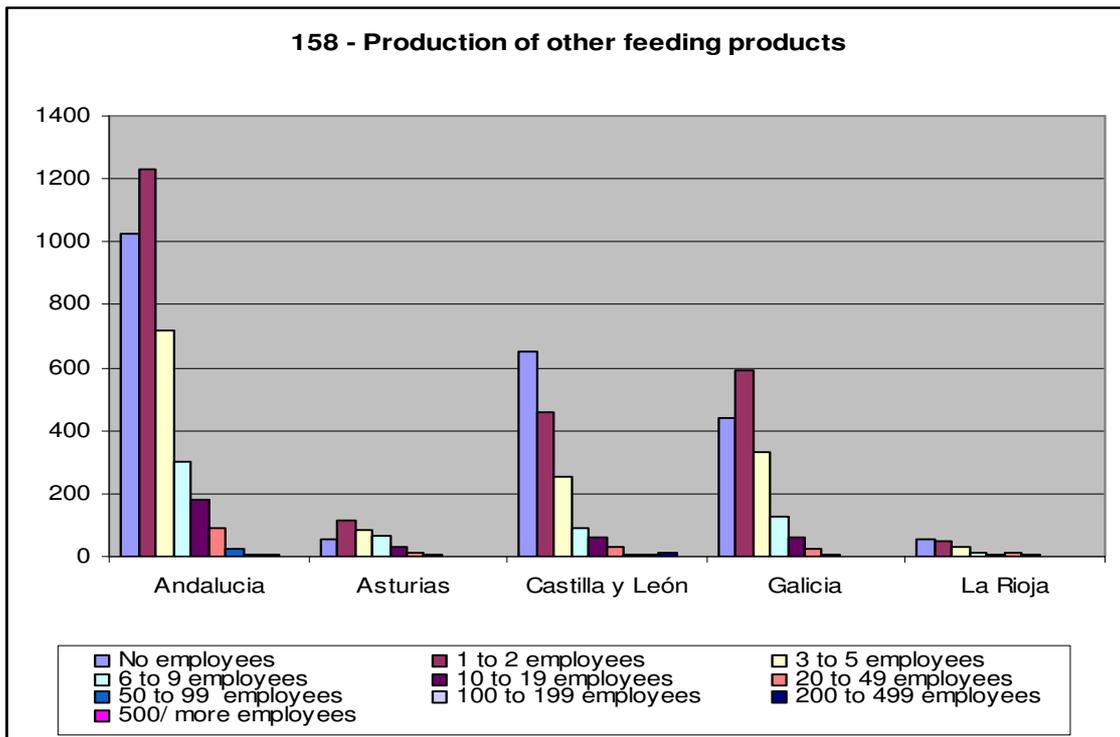
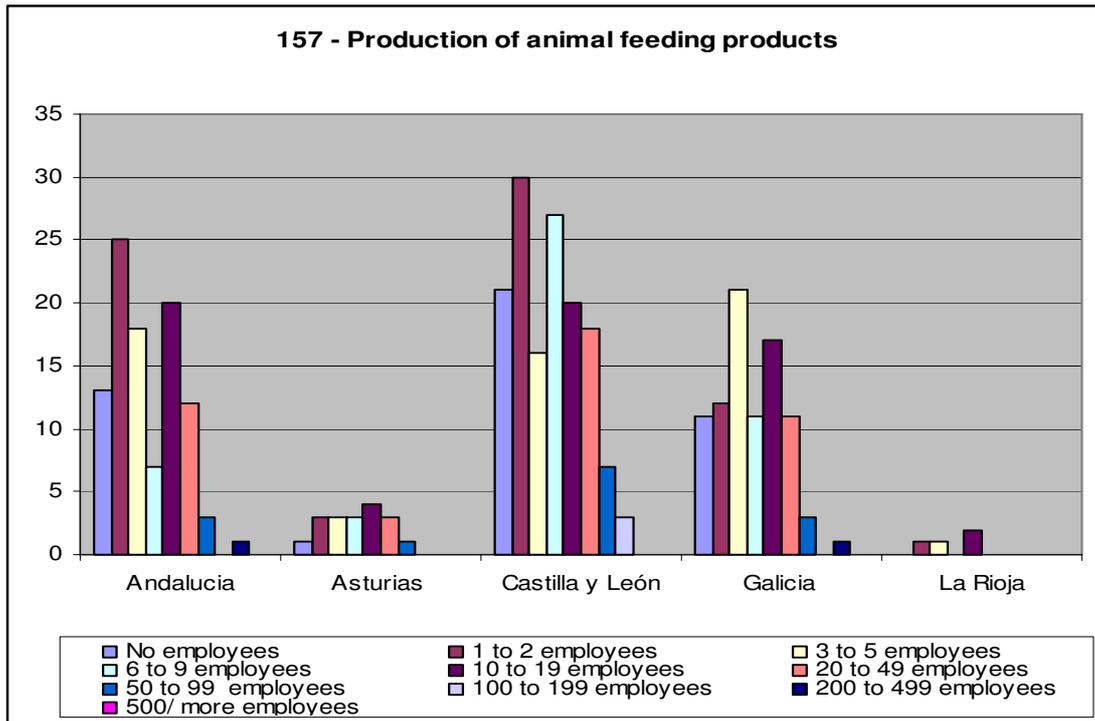
No employees	1 to 2 employees
3 to 5 employees	6 to 9 employees
10 to 19 employees	20 to 49 employees
50 to 99 employees	100 to 199 employees
200 to 499 employees	500 or more employees

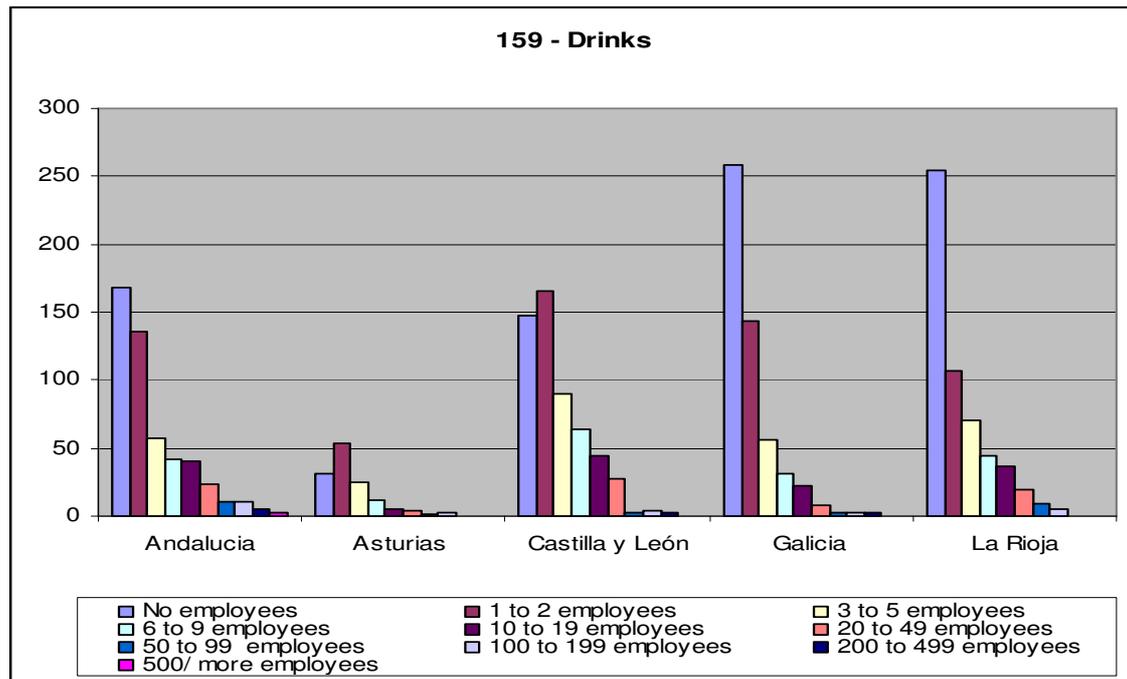
Figure 11 – Enterprises by class of employees on the relevant sub-sectors of agri-food sector











Fonte: INE, 2005.b

In what concerns the Gross Value of Production, Food, Drinks and Tobacco industry is particularly important on the Spanish Euro-Atlantic regions of La Rioja, Castilla y Leon and Andalucía, as we can observe on the following table (Table 10).

Table 10 – Gross Value of Production for Food, Drinks and Tobacco industry on the Spanish Euro-Atlantic regions, in million euros and in percentage of the Regional industry's Gross value of Production

Region	Gross Value	
	10 ³ €	% of regional industry
Food, Drinks and Tobacco		
La Rioja	1.791.698	45,7
Galicia	4.422.645	19,1
Castilla y León	6.366.773	25,4
Asturias (Principado de)	1.281.116	15,5
Andalucía	10.761.909	30,8
Spain	65.420.845	18,5

Source: INE, 2005.b

For Spain, we can observe on table 11 that Euro-Atlantic regions concentrate an important part of the Food, Drinks and Tobacco industry. In total, the five

regions belonging to the Euro-Atlantic region in Spain concentrate 37.7% of Food, Drinks and Tobacco industry.

Table 11 – Gross Value of Production for Food, drinks and Tobacco industry on the Spanish Euro-Atlantic regions, in million euros and in percentage of Food, Drinks and Tobacco Spanish industry Gross value of production

Region	Gross Value	
	Food, Drinks and Tobacco 10 ³ €	% of Regional Industry
TOTAL	65.420.845	100,0
Andalucía	10.761.909	16,5
Aragón	2.197.853	3,4
Asturias (Principado de)	1.281.116	2,0
Baleares (Islas)	472.174	0,7
Canárias	1.313.640	2,0
Cantábria	748.692	1,1
Castilla y León	6.366.773	9,7
Castilla-La Mancha	4.649.723	7,1
Cataluña	14.034.567	21,5
Comunidad Valenciana	5.668.939	8,7
Extremadura	1.088.959	1,7
Galicia	4.422.645	6,8
Madrid (Comunidad de)	3.546.171	5,4
Murcia (Región de)	2.684.269	4,1
Navarra (Comunidad Foral de)	1.703.289	2,6
País Vasco	2.688.428	4,1
Rioja (La)	1.791.698	2,7

Source: INE, 2005.b

The main economic variables for Food, Drinks and Tobacco on the Spanish Euro-Atlantic regions are the following (table 12):

Table 12 - Main economic variables for Food, Drinks and Tobacco on the Spanish Euro-Atlantic regions in 2003

Region	Annual turn over	Unid: 10 ³ €	
		Total exploitation expenses	Personal expenses
Andalucia	11.110.184	10.497.468	1.161.302
Astúrias (Principado de)	1.675.814	1.546.765	192.520
Castilla y Leon	6.979.278	6.576.538	785.440
Galicia	5.432.876	5.260.783	508.838
La Rioja	1.711.513	1.532.805	196.942

Source: INE, 2005.b

In what concerns the Gross Added Value at market prices (GAVmp) on the sector of Food, Drinks and Tobacco, we can observe a continuous raise, except in Andalucía that seems to be recovering by now. To the other regions, the sector registered significant raises on the regions of Asturias (Principado de), Castilla y Leon and Galicia (table 13).

Table 13 – GAVpm at base prices

Unid: 10³ €

Region	1995	1996	1997	1998	1999	2000	2001	2002
Andalucía	2.133.107	2.153.698	2.237.159	2.279.402	2.095.523	2.089.534	2.253.336	2.314.329
Asturias (Principado de)	326.984	330.661	343.273	349.308	345.724	366.053	382.278	392.729
Castilla y Leon	1.228.321	1.245.443	1.293.197	1.316.442	1.388.056	1.499.548	1.531.488	1.573.969
Galicia	750.294	757.901	786.885	800.991	808.580	866.335	996.706	978.420
La Rioja	249.098	254.417	264.884	271.015	243.674	286.215	312.474	287.901

Source: INE, 2005.b

After all the Spanish agro-industrial enterprises' concentration degree is low, but we can observe a high concentration phenomenon when the analysed object becomes the different sub sectors.

Nevertheless, the concentration degree of the agri-food sector as a whole is increasing, mainly due to the pressure from modern distribution and the necessity to approach new markets in the face of internal demand stagnation. Due to referred factors, concentration has raised on the sectors of sugar, drinks, soft drinks and beer, which represent a high supply concentration. On the other extreme, we have the sub sectors of bread, wines and those linked with animal products.

We must point out that the majority of the main multinational feeding industry groups at world scale are also in the Spanish market and almost one third of the sector's annual turnover come from these enterprises. The foreign capital most representative sub sectors are drinks and soft drinks, beer, ice creams and alcoholic drinks, sectors with high concentration degree. On the other hand, there is almost no foreign capital on the wines, canned fish and meat products' sub sectors.

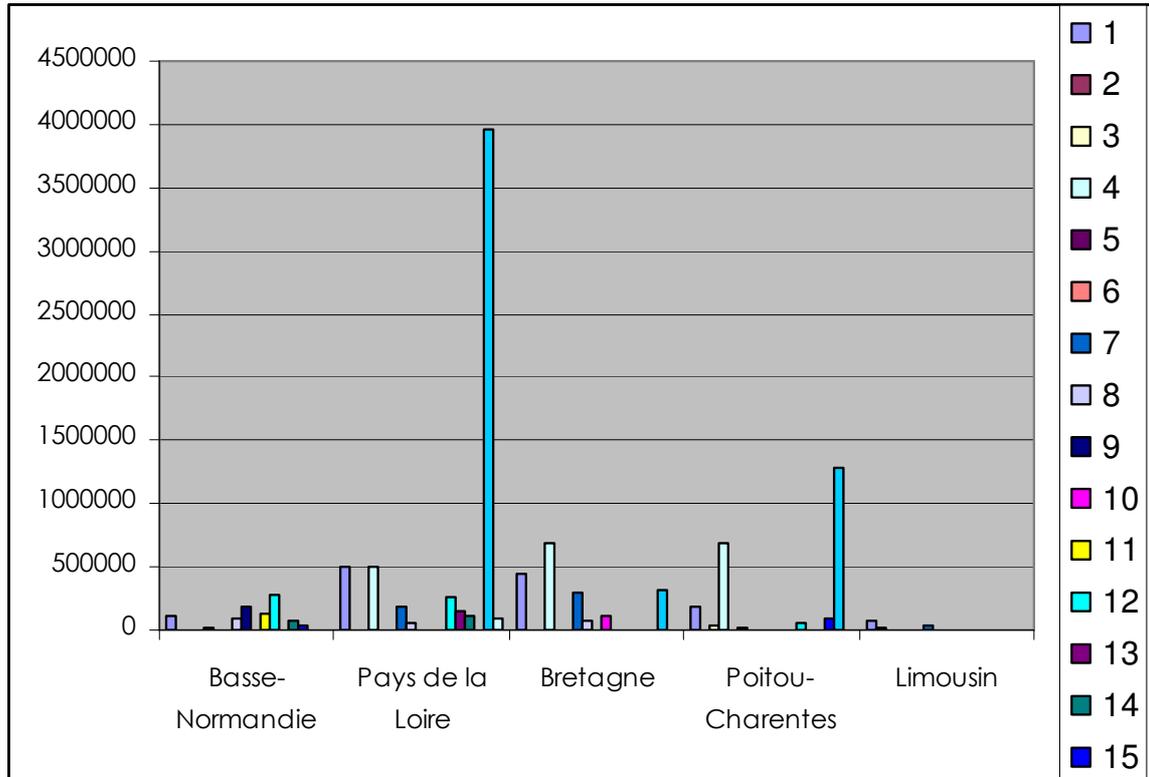
Industrial structure of French agri-food sector can be divided into four big groups:

- A first group is constituted by French enterprises with big dimension, high turnovers and workers' number. To this group belong the big French multinational companies from agri-food sector;
- A second group is constituted foreign capital enterprises strongly established in France;
- To the third group belong small and medium size enterprises, which represent the majority of the agri-food sector enterprises;
- Finally, there is a fourth group, constituted by cooperatives.

This sector represents in France 3205 enterprises and it is characterized by a high rate of SME (90% of the enterprises have less than 250 employees). The agri-food industries sector is strongly implemented in five French regions, of which two – Bretagne and Pays de la Loire – belong to the Euro-Atlantic region. On total, almost 28% of agri-food French enterprises are established in the Euro-Atlantic regions. The main productions of these territories are meat and milk products, although drinks sector is significant in Pays de La Loire and Poitou-Charents. The following figures (figures 12, 13 and 14) show us the productions of French agri-food industry (t, millions of l and hl). Relevant data is show in table 8 in annex 1. The numbers from 1 to 21 correspond to the following productions:

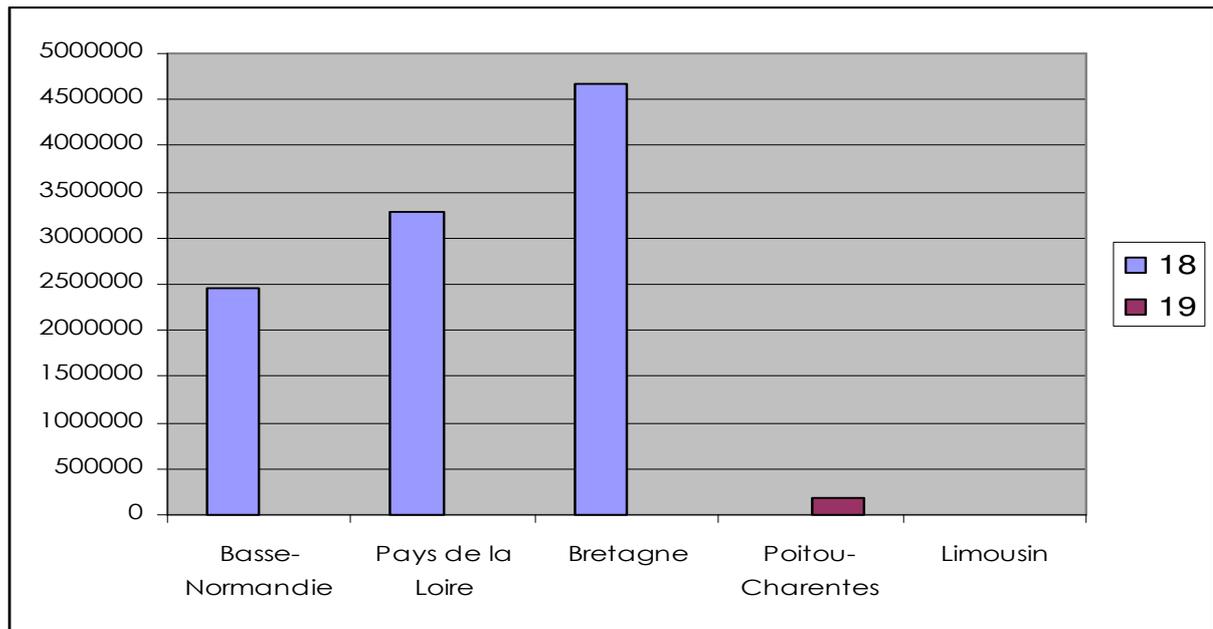
1- Cattle slaughtering	12- Cow's milk cheese (except fondant)
2- Veal slaughtering	13- Fermented milk (yoghurts and others)
3- Turkeys slaughtering	14- Lacto serum powder
4- Poultry slaughtering	15- Milking food
5- Slaughtering of chickens, cocks and hens	16- Animals' food
6- Rabbits slaughtering	17- Biscuits
7- Sausages and canned meat	18- Deliveries of dairy milk
8- Butter	19- Deliveries of goats' milk
9- Fresh milk products	20- Liquors (not cassis)
10- Hard cheese	21- Cognac (selling)
11- Cows' fresh cheese	

Figure 12 - Agri-food industries' productions on the French Euratlantic Area (Ton)



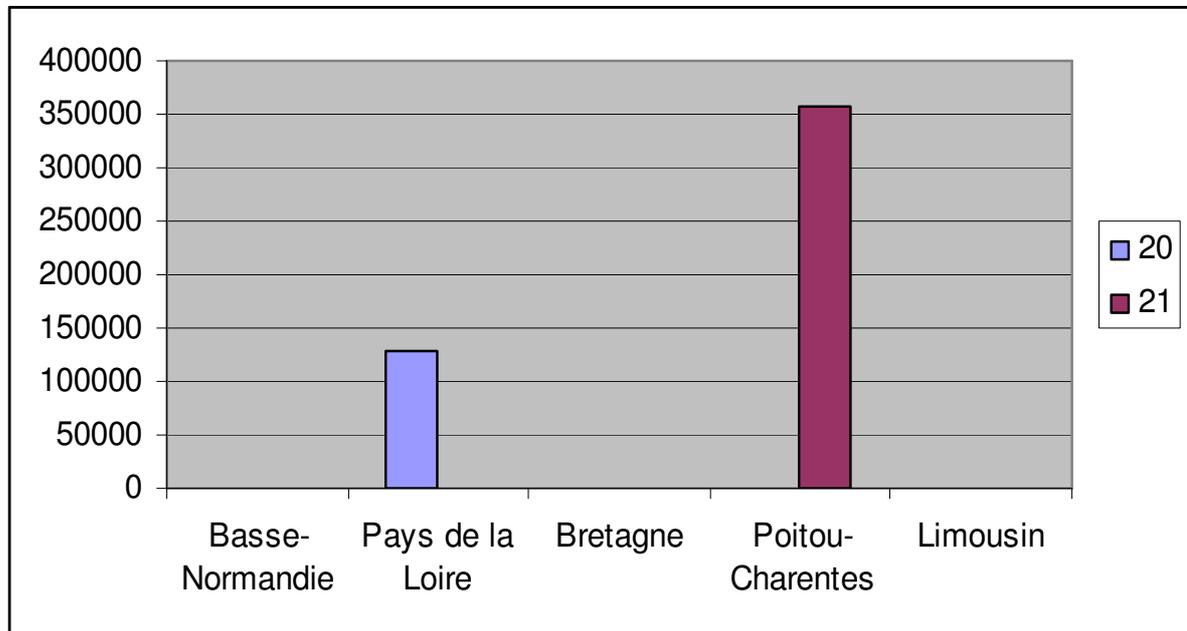
Source: Agreste, 2005

Figure 13 - Agri-food industries' productions on the French Euratlantic Area (millions of l)



Source: Agreste, 2005

Figure 14 - Agri-food industries' productions on the French Euratlantic Area (hl)



Source: Agreste, 2005

The key-numbers for French agri-industry are the following (table 14).

Table 14 – Key-numbers for French Euro-Atlantic regions' agri-industry with more than 20 employees

Unit: Millions of €

France Region	Key-numbers			
	Nº of Enterprises	Employees	Annual turnover	Gross Added Value
Basse-Normandie	95	13780	3949	588
Bretagne	336	61351	16619	2363
Pays de la Loire	264	39815	10425	1632
Poitou-Charentes	142	12502	4302	1008
Limousin	45	3128	852	143
France	3217	396400	124172	23794

Source: ANIA, statistiques industrielles 2003

As we can see, Euro-Atlantic regions, which we had already referred to represent 28% of the French agri-food sector in what concerns the enterprises' number, represent 33% in what concerns employees. In what concerns economical variables, we can say that these regions do have a great importance – they represent 29% of the annual turnover of French agri-food industry and 24% of this sector's GAV. These facts are especially relevant considering that the French agri-food sector is the third industrial sector of the country (www.frenchfoods.com). Having no regional data, it is important to consider that there are some agri-food industries of which Euro-Atlantic production's is especially representative on the total production. In French Euro-Atlantic regions are slaughtered 94% of the poultry slaughtered in France, is produced 64% of the butter, almost 51% of the cheese, almost 77% of the swine food, almost 66% of the poultry food and around 88% of cognac selling. Therefore, it is interesting to analyse these sectors in detail (including the drinks sector), even if it is at national level (tables 15 and 16).

Table 15 – Relevant economical data for the poultry, butter, cheese, animal food and drinks sectors in France

Unid.: Millions of €

Production	GAV	Commodities Selling's	Exports annual turn over	Commodities Acquisition	Raw materials and other provisioning acquisitions
Poultry production	900	509	1149	443	3347
Butter production	109	59	216	44	1596
Cheese production	1392	1156	1705	855	6073
Poultry food Manufacture	661	1566	212	1250	3682
Drinks	4644	2495	5412	1582	7696

Source: INSEE, 2005

Table 16 – Enterprises data for the for the poultry, butter, cheese, animal food and drinks sectors in France

Production	Enterprises			Enterprises with a employees number between						
	Individual Entrepreneur	Corporations	Other	0-5	6-19	20-4	50 – 249	250 –499	500– 1999	> 2000
Poultry production	74	357	29	204	88	57	81	15	13	2
Butter production	1	18	7	7	4	2	9	3	1	0
Cheese production	107	457	303	504	173	85	75	18	10	2
Poultry food Manufacture	33	399	52	187	128	98	63	5	3	0
Drinks	914	1249	1318	2640	497	206	112	13	11	2

Source: INSEE, 2005

In general, on the Euratlantic area as a whole, we must point out the agri-food industry importance, which has a very relevant place in Spain and France, and has some important sectors in Portugal. The data corroborates the conclusions of chapter 2.3 and we can see that the main sectors are meat industry – with particular importance in the french regions of Limousin (cattle) and Poitou-Charents (poultry), the portuguese regions of Alentejo and the spanish regions of Andalucía and Castilla y León; horticulture and fruits' preparation and conservation - with particular importance in the french regions of Basse Normandie, the portuguese region of Norte and Centro and the spanish region of Andalucía; fats and animal and vegetable oils' production – with particular importance in the french regions of Basse Normandie, Pays de La Loire and Bretagne, the portuguese regions of Norte e Alentejo, and the spanish regions of Andalucía; milk industries – with particular importance in the french regions of Basse Normandie, Pays de La Loire and Bretagne, the Portuguese regions of Norte and Centro and the Spanish regions of Asturias, Castilla y León and Andalusia; and drinks production – with particular importance in the french regions of Pays de La Loire and Poitou-Charents, the portuguese regions and the Spanish regions. We already knew that the Euratlantic regions belong to the

EU world's largest wine and olive oil producing area with more than one half of total world production. The main part of the production is used in Europe, although exchanges with other continents (particularly America and Asia) are increasing. Nevertheless, we can clearly observe that the provisioning conditions direct us for some other very specific sectors – allbight the importance of the wine and the olive oil sectors can not be neglected, we can point out also the horticultural sector, the fruits and related products sector, the meat sector and, finally, the milk and related products sector as sectors where the competitiveness advantages in what concerns provisioning conditions are a reality.

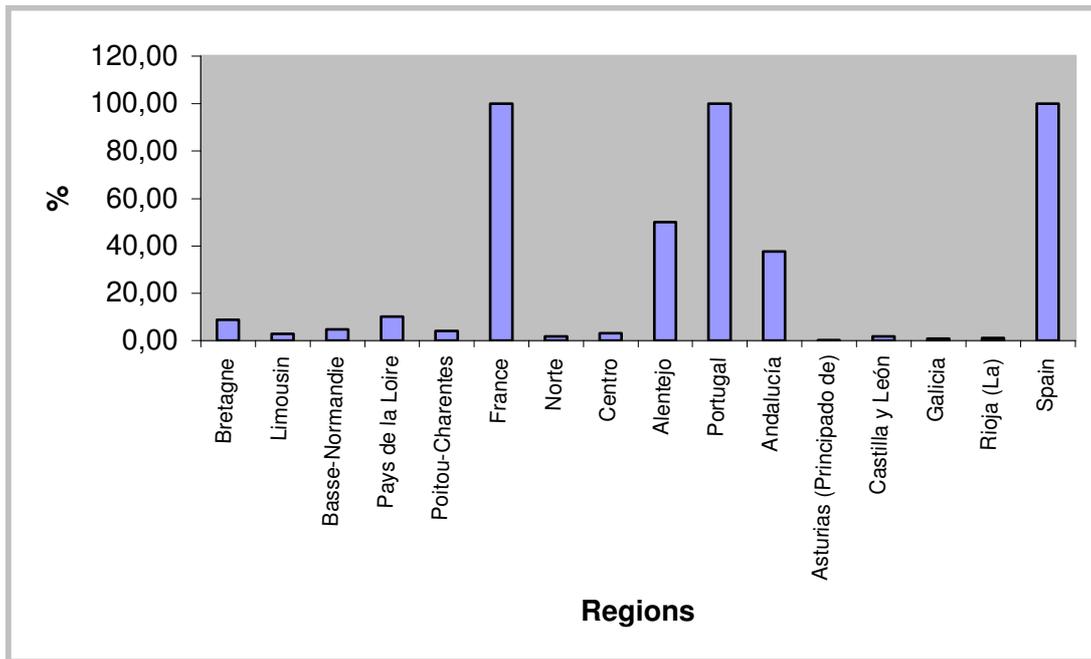
2.5. Emerging Sectors

Organic agriculture (Figure 15) and qualified products (Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) or Traditional Speciality Products (TSP) and also the designations Label Rouge Certificat de Conformité de Produit of French certification system (Figure 16), represent products with emerging quality on Euratlantic area, that can be then considered a leader in food safety.

Associated to environmental protection and to a diversity of offered products, we must underline the answering capacity of organic agriculture and traditional production processes to the burdening of consumers exigencies in what concerns quality and food safety.

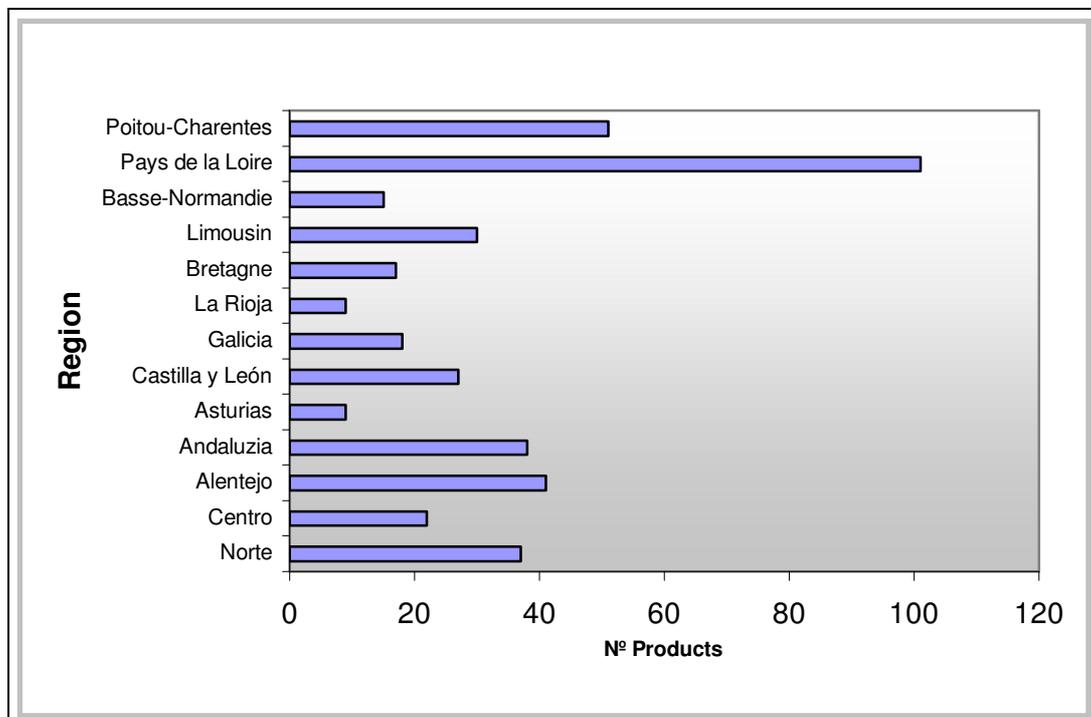
In France, Pays de la Loire has the first national position in what concerns qualified products (PDO, Label Rouge, Organic Agriculture, Certificat de Conformité de produit), with more than 100 products in 20% of the farms and representing 1 to 1,2 thousand Euros of total 19,8 thousands in all France. In what concerns organic agriculture, the region concentrates 12% of national surface in this way of production (2,3% of regional surface), on poultry and ewes, cereals, forages, protein seeds and wine (Direction Régionale de l'Agriculture et de la Forêt Pays de la Loire, 2003).

Figure 15 - Representativeness of organic agriculture area by region



Source: FRAB, 2004, Agencia Bio and HIDRHa, 2004

Figure 16 – Qualified products in Euratlantic area in 2003



Source: IDRHa, 2005, Agreste, 2005 and Ministério Agricultura Espanhol, 2005

In Spain, Andaluzia and Castilla y León concentrate the majority of quality products and Organic Agriculture products. In Portugal Alentejo is the leader, dominating the qualified products and the Organic Agriculture products. In Annex V, Table 1 presents all Country Region Products (Protected denomination of origin, protected geographic indication and traditional guaranteed speciality products) by region. Table 2 shows information about the Country Region Destinations.

Although these ways of production on the total agricultural area of each country are small, we can see that in these regions the diversity of local knowledge's and flavours together with the effort and dynamism of producers organizations to preserve and qualify local products are surely points of socio-economic differentiation and tourist attraction, directed to specific niche markets.

In Organic Agriculture we can identify institutional differences in the three countries, but there are always two kinds of institutions: The Organizations to Organic Agriculture, depending on the Ministry of Agriculture, and the Control Organizations that makes the control.

Systems, productions and activities diversification seems to be a good solution to the regions where quality products will allow a better return to producers and more environmental friendly techniques. Organic Agriculture is no doubt a way to answer the challenge of a sustainable development. Its expansion needs an organization of commercial circuits and development of actions among potential consumers.

An equilibrium between distribution channels organization, production development, and regulations among Euratlantic area, to allow organization at this level, must be attained to allow this niches to become important in Euratlantic are as a whole.

2.6. Biotechnology

The European Commission recognised, in 2002, that life sciences and biotechnology are “the next wave of the knowledge-based economy, creating new opportunities for our societies and economies”⁸. Although this, Europe has not such development in these technologies. However, the biotechnology sector is one of the highest growth prospects in the Euratlantic area over the coming years. This embraces wide and diverse areas such as: health (genomics and proteomics), agriculture (genetic engineering), food (new foods), environment and new materials. That's why this is one of the opportunities for the American companies invest in these Euratlantic regions. In other hand, biotechnologies should have some importance in agri-business. We are talking, in example, about Genetic Modified Organisms (GMO), a very sensitive debate area in the sector. In the following sections, we will analyse the state of art of biotechnologies in the three Euratlantic countries.

The creation of new varieties of vegetable that are adapted to their environment, the optimization and improvement of crop performance and environmental improvement, due to a reduction in the use of chemical products such as herbicides and pesticides or the reforestation with more resistant plants, are important biotechnological agriculture issues in the Euratlantic area, with positive impact on the environment. Special in France, but also in Spain and in the North of Portugal, biotechnological advances lead to the design of new foods (healthier and more nutritious or used as vectors for medicines that treat and heal specific illnesses) and to find new materials, that will be used in different products, packaging and distribution channels.

Historically, is closely related to food production both in the selective breeding of food plants and animals and in food processing using microbial enzymes.

⁸ Life sciences and biotechnology – A Strategy for Europe, available at http://europa.eu.int/eur-lex/en/com/cnc/2002/com2002_0027en01.pdf

Traditional selection techniques have been employed to develop a great variety of plants, animals and microorganisms for the production of a wide range of food products and ingredients for processed foods. These conventional techniques are widely accepted and do not cause public concern. But this is not the case of genetic modification techniques. These are now being used in the production of new foods and drinks and have become a subject of public apprehension and debate. Table 17 lists examples of genetically modified crops. These and other products are still largely at the research and development stage with few having yet reached the market. They can be divided into three main categories with the use of genetic modification varying considerably among them: 1) manufactured foods and drinks by grinding, mixing etc. (eg noodles, soft drinks); 2) bio-processed foods and drinks by using micro-organisms (eg cheese, alcoholic drinks) and 3) fresh foods and drinks (eg vegetables, meat, fruit juice).

Table 17 – Overview of Research on genetically modified crops

Product/Food	Action/Application
Apples	Insect resistance (bacterially-derived)
Bananas	Integrated pest management of viruses, fungi and nematodes
Broccoli	Slow ripening for longer freshness
Celery/Carrots	Crispness retention
Chicory	Increased availability of fructans
Coffee	Better flavour, higher yields and lower caffeine
Cole Crops	Resistance against insect predators
Corn	Insect resistance
Cucurbita	Viral, fungal and bacterial resistance
“Euromelon”	Ripens on demand
Grappes	New seedless varieties
Lettuce	Smaller size and insect resistance
Potato	Several disease resistances
Rapeseed	Production of hard fats in the plant. High temperature frying oil, low in unsaturated fats
Raspberries	Slower ripening through ethylene control
Soybean	Herbicide resistance
Strawberries	Soy oil with lower palmitic acid content
Sunflower	Frost resistance
Tomatoes	Lower saturated fatty acid content
Wheat	Improve colour and flavour, slow down softening. Resistance to viral diseases
	Herbicide resistance

Source: European Federation of Biotechnology, 2005

There is great need for public discussion and debate about these technologies because of their potentials, their possible risks and the public concerns. Present-day consumers are highly heterogeneous with differing and changing perceptions about food preferences, safety and quality. A common factor in Euratlantic area is that most consumers have become increasingly discerning irrespective of genetic modification. Conventionally- produced artificial additives such as flavorings and colorings appear occasionally to have had adverse effects, eg hyperactivity in some children, although such links have never been demonstrated by controlled studies. Residues of conventionally produced compounds used during production processes, eg pesticides, hormones or antibiotics, have sometimes led to temporary withdrawal of certain products from the market. In some cases or situations public opposition has led to the banning of food irradiation. The result has been to make the public want to know about the contents of food products and their production methods.

In Portugal it exists a highly developed “upstream” infrastructure promoted by the government, but there is no “downstream” infrastructure for companies creation and for turning science into products. The lack of start-ups in Portugal is somehow linked to a lack venture capital and in general the lack of a nurturing environment for promotion of entrepreneurship (in example, with the fear of failure) and stimulation of the sector. Pedro Noronha⁹ refers that fact is due to the lack of stimulation of the sector downstream, *i.e.* at the level of company's creation, incubation and at the level of helping and advising young scientists/entrepreneurs in turning “good-science into good products”. The cultural aspects don't help either. The “fear of failure” attitude, existing amongst investors, scientists, entrepreneurs, university sta. and governmental bodies is the hindering fact behind the development of such an industry.

This is odd for people once renowned to be fearless seafarers. Even more odd is the fact the entire basic infrastructure upstream of the market seems to be in place, and Portugal is renowned for the high quality of its science and the ability for establishing international collaborations. Also in regulatory and legal

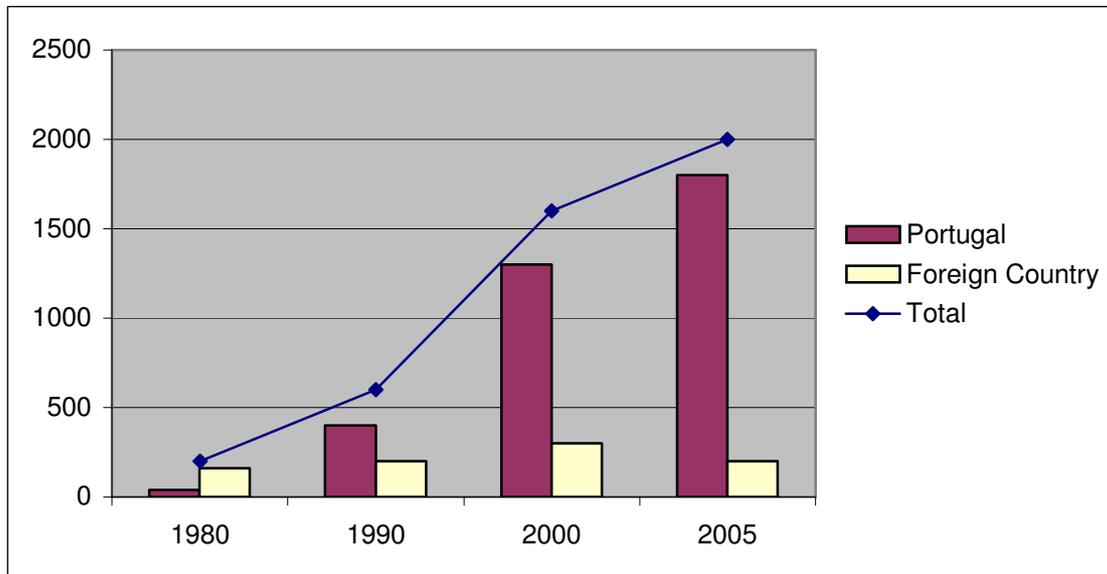
terms Portugal is compliant with the rest of the European legislation and in most cases it has successfully transposed most of the sector directives that have not yet been transposed in other European countries.

Besides this, Portuguese government wanted, as today, to increase this type of investment. Strong government support for high technology has been a focus for the Portuguese government since the early 90's. With this scenario, appears the Innovation Agency (ADI). One of the objectives of ADI is to take an advantage of the increasing of PhD's in the Portuguese society, creating opportunities for them to work in companies. This intention of increasing investment in the area is also visible in the creation of several programs. Even though R&D spending was only 0.68% of the gross domestic product (GDP) in 1997 compared with an average of 1.84% in other EU countries, the Portuguese authorities have recently significantly increased spending. Thus, the budget devoted to research centers more than tripled between 1995 and 2000 (from 7 million Euros to 30 million Euros). According ADI, the total budget for science and technology in 2004 was estimated to be EUR 600 million. Furthermore Forty percent of Portuguese graduates obtain their PhDs abroad—an unusually high figure for a European country. Increase Portugal's competitiveness in this area was the creation of qualified human resources able to respond to the requests of this highly. Figure 17 shows, the number of PhDs in Portuguese Universities between 1980 and 2005.

The Portuguese Bioindustries Association (APBio) has been over the last few years the main and probably the only driver for the creation of new biotech companies, not only by direct support but also by setting up initiatives for promoting entrepreneurship. Nowadays, some universities in the Norte, Centro and Alentejo regions of Portugal teach scientists at universities to become entrepreneurs. Technology, people and money, are three key parts for the success of any knowledge-based industry. They exist in Portugal but are not well integrated. Norte is the most productive and technological Portuguese region with several international companies working there with excellent productivity rates and TECMAIA is the only quality business park, which deserve mention.

⁹ dequim.ist.utl.pt/bbio/75/pdf/BiotechInPortugal.pdf

Figure 17 – Number of PhDs in Portuguese Universities and in Foreign Countries Universities between 1980 and 2005



Source: Pissarra, 2002 and FCT, 2005

As Pedro Noronha¹⁰ refers, there exist in Portugal sufficient and various people to these types of projects. The proof is that in Portuguese universities, there are some research centres¹¹. Because of this, the author concludes that promoting downstream private initiative and foreign investment should be the next priorities.

Biotechnological sector is an opportunity sector in Portugal, but it is clear that this is a sector which as to aproveitar the existence of scale economies. So, Antonio Menéndez-Ponte¹² refers that Portuguese and Spanish companies should joint efforts to develop projects in this area. It is also important because 40% of these projects in Spain are in the agriculture sector and 15% in the food sector. The Figures 18 to 20 shows the main biotech companies, laboratories and research centers in the Euratlantic regions.

¹⁰ dequim.ist.utl.pt/bbio/75/pdf/BiotechInPortugal.pdf

¹¹ See http://centrim.mis.brighton.ac.uk/research/Rise/clusterPT_biotech_appx_1-2.pdf

¹² dequim.ist.utl.pt/bbio/76/pdf/biotech%20espanha.pdf

**Figure 18 – Main Biotech Companies, Laboratories and Research Centers
in the Euroatlantic Portuguese regions**

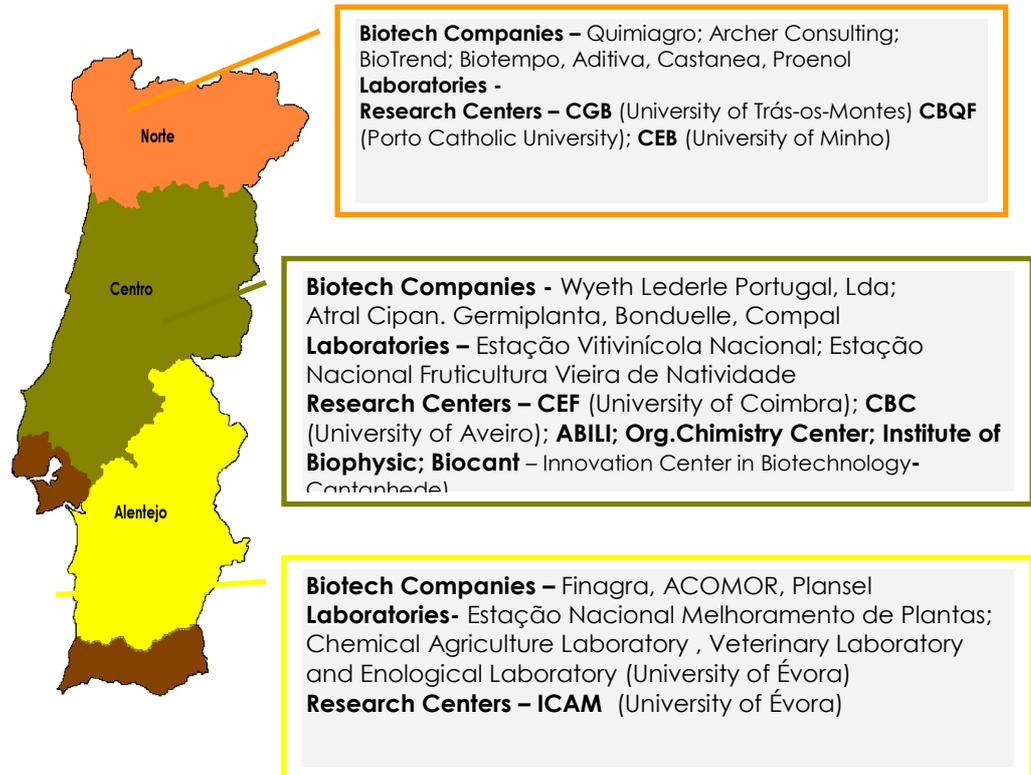


Figure 19 – Main Agri-Food and Biotech Companies, Laboratories and Agri-Food Research Centers in the Euratlantic Spanish regions

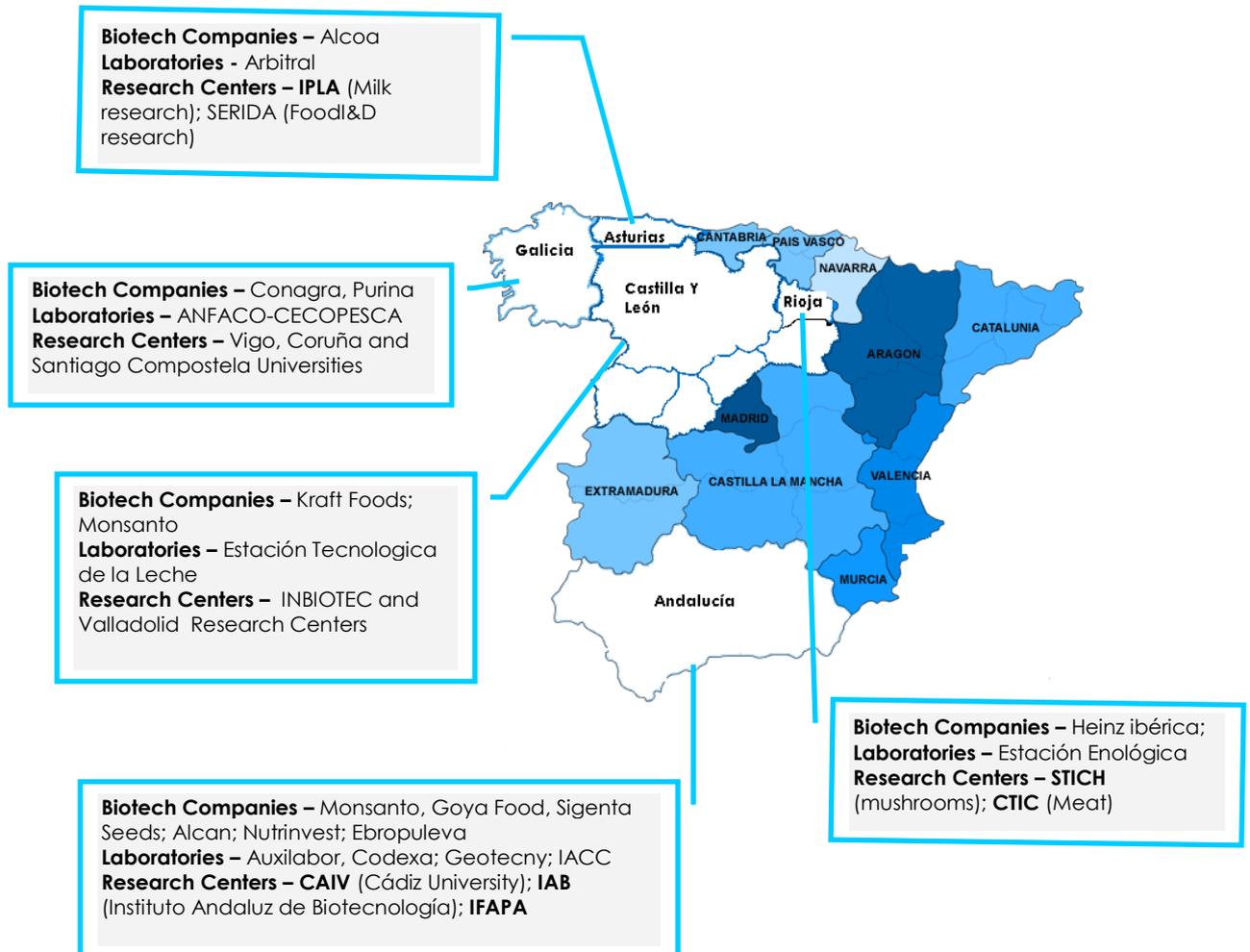
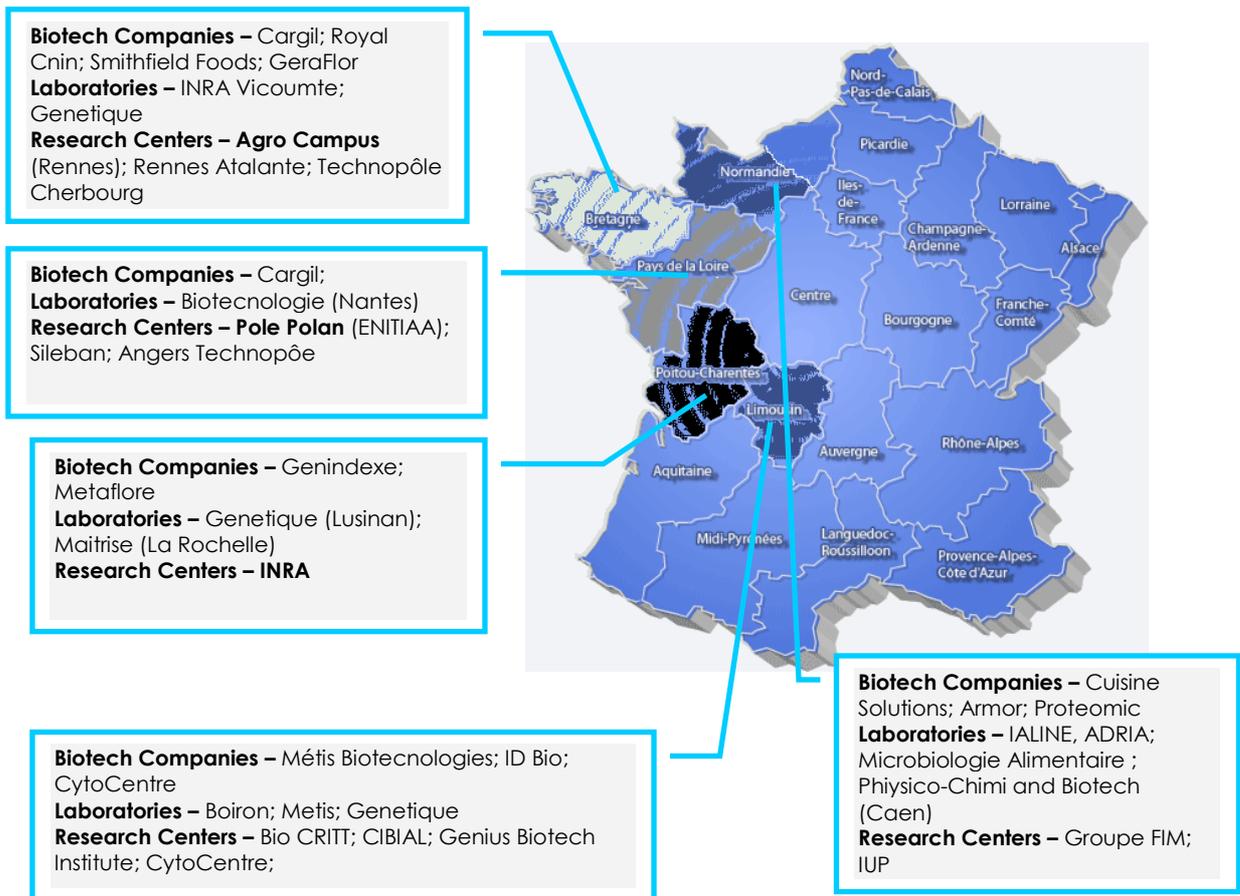


Figure 20 – Main Agri-Food and Biotech Companies, Laboratories and Agri-Food Research Centers in the Euroatlantic French regions



France has about 239 Biotech companies, Portugal 45 and Spain has 225 Biotech companies. The main activities are agriculture, health, food and environment plus others. Considering the origin of the companies operating in Euratlantic Area, about twelve are American Food Companies. Compared with Portugal, Spain and France have more strong biotechnological sectors. With an exception to Bretagne, which has the bigger importance and tried to promote the region as a biotech area, the Euratlantic regions have relatively low impact and image as a biotech area.

The more important biotech Spanish Euratlantic region is Andalucía, in France is Bretagne and in Portugal is Norte region. The scientific research and the biotechnology sector are strong sectors in France. One of the examples is the pharmaceutical industry, heavily involved in biotechnology (Rhone-Polenc Rorer, for example, dedicates an annual budget of US\$ 60 million in R&D). Another example is the food industry, with applications supported by European programs and national scientific institutions. The city of Nantes, in one of our Euratlantic regions, has acquired certain know-how along, with potential in Research & Development. Since 1997, with the introduction of a Bristol-Meyers Squibb R&D center (the 5th pharmaceuticals group in the world) in Saint-Nazaire, Nantes has a world-class center for the health care industry¹³.

In Spanish' biotech field, the creation of new varieties of vegetable that are adapted to their environment (18%), the optimization and improvement of crop performance (18%), the introduction of new tillage and other new technologies and best practices (17%), the use of specific pesticides and fertilizers (14%) and different levels of diagnosis (14%), are the main biotechnological activities.. Last two sub-sectors representing almost 90% of the industry profitability. In terms of exports, with 29% of the total of sales, the primary destination is Europe (46% of the products go to the European Union countries and about 32% to the others European countries).

2.7. R&D Policy

Market is the essential motor for innovation on agri-food industries, generating a dynamic that is many times even stronger than technology. An agri-food industry innovates to enlarge their range of products or the burden its commercial position.

¹³ <http://www.business-in-europe.com/adean-gb/innov.htm>

Analysing table 18, we can see that the expenses with research and development have substantially risen on the analysed countries during the last years. Between 1982 and 2002, the expenses with research and development raised 197% in France, 706% in Spain and 1133% in Portugal. On the regions that belong to the Euratlantic area the evolution have also been positive. For the period where there is data disaggregated by region, from 1991 to 2002, we can observe that R&D expenses raised 150% on the French Euratlantic regions and 207% on the Spanish regions, a raise much better then the global for these countries, in the same period – 48% and 93%. On the Portuguese regions it is not possible to make the same analysis, since the data only is disaggregated in one year. Nevertheless, since a great majority of the Portuguese territory belongs to the Euratlantic space, we can surely say that the evolution has also been very positive (tables 19 to 21). For year 2003, we can show some indicators, like R&D expenditure (as percentage of GRP), private R&D (business R&D, as percentage of GRP) and number of patents.

In the Euratlantic regions, the total expenditure in R&D amounts for 0,85% of the Euratlantic GDP. This compares poorly to the 1,93%, average for EU-15 countries. Similarly, the expenditure made by private businesses in the Euratlantic Area totals 0,35% of the Euratlantic GDP, which compares very poorly with the EU-15 average of 1,3% of GDP. Note that in Portugal the large part of R&D is made for public agents. Private initiative of this type of expenditures is low. Results of these can be seen in the total patent applications, where Portugal is the country with less number of patents.

In what concerns human resources employed in science and technology, it is possible to verify that, in the last year for which there is Eurostat data – 2003 (verified in August 2005) – these resources represented 39,6% of active population in Spain, while in the Spanish Euro-Atlantic region this percentage is a little bit lower – 37%. In France, the human resources employed in science and technology represented 41,7% of the active population, representing 34,7% of active population on the Euro-Atlantic regions of this country and in Portugal these resources represented 19,2% of active population, representing on the Euro-Atlantic region of this country 18,8% of the active population.

Table18 - Amount expended in R&D, for country and region

Unit: millions of euros

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Espanha	893	844	997	1.203	1.438	1.621	2.091	2.602	3.290	3.731	4.074	3.738	3.449	3.624	3.988	4.051	4.692	4.995	5.719	6.227	7.194
Galicia	:	:	:	:	:	35	44	54	68	84	127	104	89	121	128	142	152	165	209	240	293
Asturias (Principado de)	:	:	:	:	:	27	32	48	52	63	65	58	50	59	66	61	68	74	115	99	99
La Rioja	:	:	:	:	:	1	3	4	4	7	7	10	8	12	14	14	20	20	27	23	30
Castilla-la Mancha	:	:	:	:	:	9	16	17	20	27	32	31	29	68	69	91	89	65	119	72	105
Andalucia	:	:	:	:	:	124	157	204	245	278	314	350	284	352	392	397	463	475	542	538	586
França	11.637	12.505	13.999	15.587	16.657	17.516	18.565	20.438	22.730	23.387	24.733	26.187	26.671	27.448	28.119	27.533	28.139	29.529	30.954	32.887	34.527
Basse- Normandie	:	:	:	:	:	:	:	:	:	112	119	133	134	162	162	192	228	244	270	277	290
Pays de la Loire	:	:	:	:	:	:	:	:	:	305	321	363	411	427	459	601	587	654	728	741	685
Bretagne	:	:	:	:	:	:	:	:	:	505	576	662	695	671	698	884	824	849	1.032	1.01	1.112
Poitou- Charentes	:	:	:	:	:	:	:	:	:	125	122	134	151	152	155	207	217	225	227	266	293
Limousin	:	:	:	:	:	:	:	:	:	37	50	48	50	64	67	91	93	89	102	105	115
Portugal	84	0	98	0	135	0	176	0	287	0	460	0	0	470	0	582	0	815	0	1.038	1.036
Norte	:	:	:	:	:	:	29	:	53	:	101	:	:	97	:	116	:	169	:	213	:
Centro (PT)	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	338	:
Alentejo	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

Source: Eurostat, August 2005

Table 19 - French Regions 2003

	Region					Total Regions	Comparison	
	Basse-Normandie	Bretagne	Limousin	Pays de la Loire	Poitou-Charentes		France	EU-15
R&D Expenditure (%)	0,97	1,74	0,78	0,93	0,86	1,06	2,19	1,93
Business R&D (%)	0,62	0,99	0,46	0,71	0,43	0,64	1,38	1,3
Patent Applications	66,1	108,1	50,7	61,7	70,7		71,5	145,3

Source: European Innovation Scoreboard 2005

Table 20 - Portuguese regions 2003

	Region				Total Regions	Comparison	
	Alentejo	Centro	Norte			Portugal	EU-15
R&D Expenditure (%)	0,30	1,49	0,61		0,80	0,79	1,93
Business R&D (%)	0,06	0,20	0,16		0,14	0,27	1,3
Patent Applications	0,6	6,3	5,9			4,3	5,5

Source: European Innovation Scoreboard 2005

Table 21 - Spanish regions 2003

	Region					Total Regions	Comparison	
	Andalucia	Asturias	Castilla y León	Galicia	La Rioja		Spain	EU-15
R&D Expenditure (%)	0,62	0,65	0,81	0,79	0,65	0,70	1,11	1,93
Business R&D (%)	0,17	0,28	0,42	0,19	0,29	0,27	0,50	1,3
Patent Applications	7,1	7,8	10,2	4,1	7,5		7,3	24,1

Source: European Innovation Scoreboard 2005

Having no objective data about R&D in agri-food industry, there are anyway some differences between countries that we must point out. Portuguese agri-food enterprises' R&D policy has different strategies and dimensions

accordingly to their size – small or medium enterprises or big and multinational enterprises.

National enterprises usually research and develop new products individually inside the enterprise or in cooperation with Universities or other institutes, through protocols. Many times the objective is to adapt their products to increasing demand sophisticated exigencies. Product innovation is not only a matter of its characteristics improvement, but also a matter of design and attractive packing ways. Another innovation strategy has been the use of certification labels, reinforcing the quality image.

In general we can state that Portuguese agri-food enterprise efforts in what concerns R&D is very low when compared to what is done in big international enterprises. Only some sectors' national enterprises, such as sugar and beer, have relatively active R&D programmes.

Multinational enterprises operate in Portugal through commercial or industrial branches or agreements with Portuguese enterprises that get the licenses to produce and/or commercialize their products. In most cases, multinationals develop their R&D activities abroad Portugal. For instance, technical centres for enterprises such as Coke, Nestlé and Provimi are installed on their origin countries.

On the agri-food products innovation, marketing as also attained a very special role. Through frequent and regular promotion operations has been possible to introduce new products and new consumption habits. Promotion operations associated to big distribution are actually an important way for enterprises to communicate and perceive their products attributes.

Spanish R&D policy, despite having some similarities with Portuguese situation, namely in what concerns multinational enterprises' strategies, have produced important results in what concerns automation processes and commodities flows organization.

In Spain, in a more intensive way than in Portugal, concurrence pressure forced a raise on productive processes, which led to agri-food industries automation. Investments were mainly in installations and equipments modernization, to raise work and rolling capital productivity, as well as to raise production, packing and preserving capacities.

Beside the industrial processes development, there has been a raising concern with environmental impacts, especially in food fat and oil sectors.

One of the success factors of the Spanish agri-food sector is in the commodities flows organization. The establishment of logistic operators to answer the raising demand for services related to non-business specific activities, such as expedition transports, has strongly benefited Spanish agri-food industry. We must underline the emergence of platforms associated to buying centrals that allow the accession of small industrials to modern distribution channels, since they can operate with cost

Like in Portugal, commercial and marketing areas have been vital on the agri-food industry innovation processes. A lot of enterprises do understand that they have to actively intervene in these areas and follow the demand necessities evolution. Nevertheless, Spanish managers have preferred the fall in prices as a competitiveness factor, instead of added value associated to a raise in product quality and services to customer.

French agri-food sector R&D policy is marked by the dichotomy of big budgets on big enterprises and low resources to these activities in small and medium enterprises. This situation surely contributed to reinforce the technological gap and we can presume that in a near future it will have remarkable market effects.

Big enterprises use important financial resources in R&D actions and have good laboratories and highly qualified human resources. These resources allow to efficiently following science and technology developments and a close and profitable relationship with Universities. In the enterprises' majority, food or

equipment producers, there is already a long tradition in cooperation with R&D structures. These enterprises are strongly linked with new processes technologies and biotechnological and genetic engineering applications' development, mainly in the milk, meat and fermented products' sectors.

There are some other interesting initiatives that show a great dynamism in Euratlantic regions, linked with R&D, innovation and IT activities. Based on our survey and research, we must underline some conclusions regarding the following aspects of Euratlantic economics dynamics:

- There exist some 'knowledge institutes' and technology centers specific to the agri business, showing a focus on research in this area, which could be interesting in this project.
- All regions have available space for companies to install in their technology parks and cluster, also in the referred sectors.



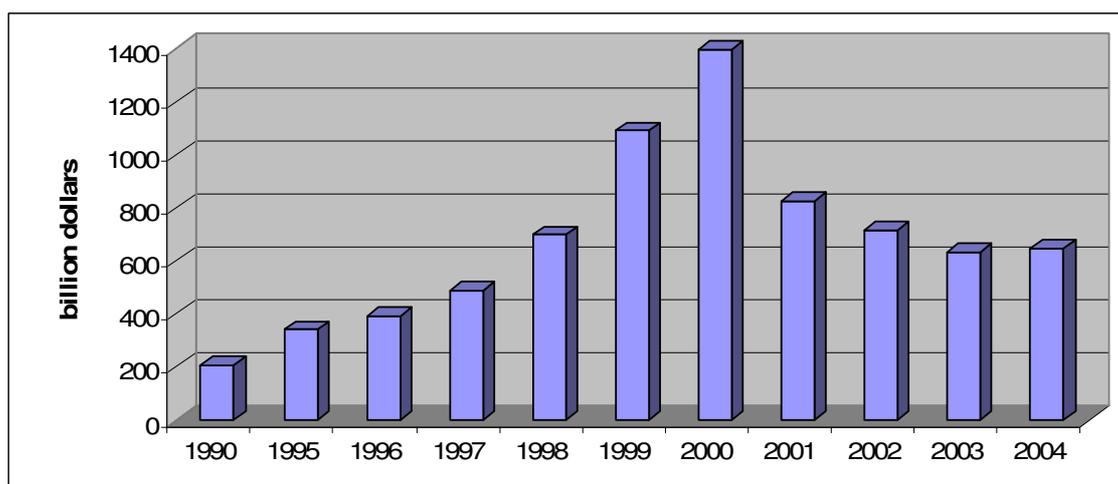
Foreign Direct Investment

3.1. FDI Flows and its Determinants

3.1.1. FDI Flows

During the decade of 1990, the world had observed rising levels of FDI and a growing role of transnational corporations, as consequences of globalization. In 2000, FDI inflows passed \$1.3 trillion. The FDI flows didn't stop increasing even with crisis like those which occurred in Mexico and Asia. After 2000, FDI fell, because cross-border mergers and acquisitions (M&A) decreased and because world economy had slowed, resulting in the diminishing of FDI and of business strategies being re-tooled. The worldwide FDI flux from the nineties to 2004 is illustrated in Figure 21 below.

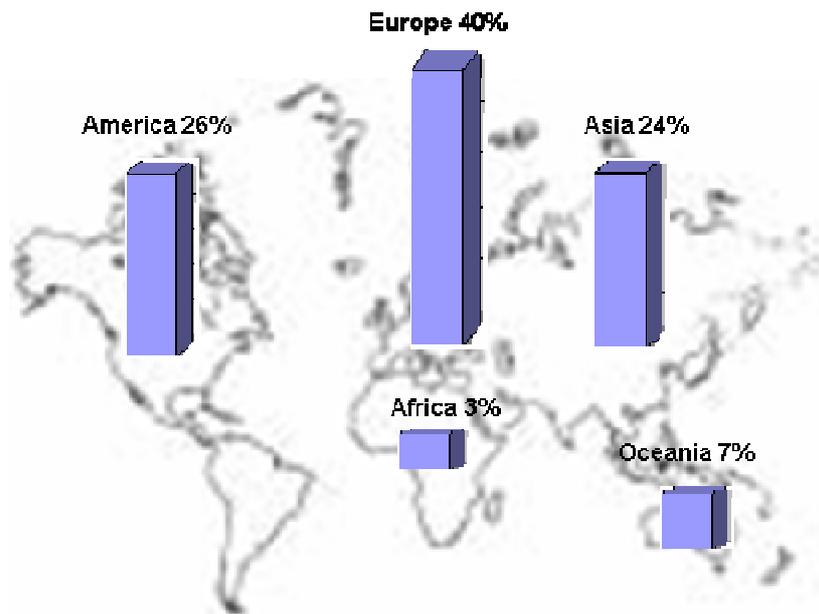
Figure 21 – World FDI Inflows



Source: UNCTAD

The principal form of FDI is the cross-border M&A. Another way of FDI is the Greenfield investment (direct investment in new facilities or the expansion of existing facilities), which maintained relatively constant in last years. The large part of FDI goes to developed countries. In example, more than US\$1 trillion of the \$1.3 trillion of FDI flows in 2000 went to developed countries¹⁴ (Figure 22).

Figure 22 – Share of FDI inflows in the world, 2004

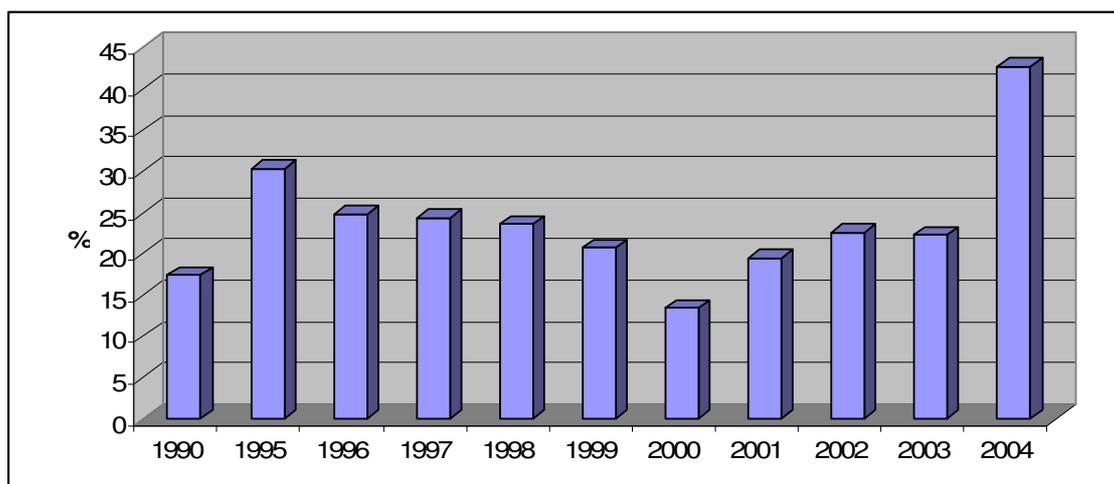


Source: UNCTAD

USA and Canada, in common, are one of the principal source countries in which FDI outflows constitutes a substantial part of total FDI, as we can see in Figure 23. This is one reason, as we pointed earlier, for the project to focus on the North American countries as region of interest to devise a promotional strategy to attract FDI.

¹⁴ This paragraph is based on *Foreign Direct Investment Survey, 2002*, The World Bank Group.

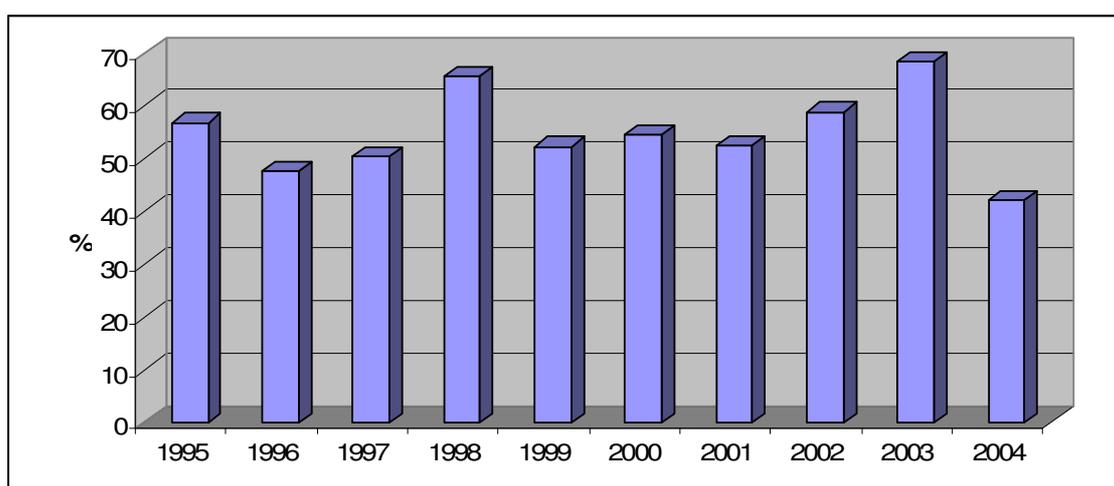
Figure 23 – Percentage of North-American outflows in World Total inflows



Source: UNCTAD

Europe is the principal destination of USA's FDI. The percentage of net outflows with destination in Europe used to be around of 50%. Only in 2004 has this decreased a bit (Figure 24, 25 and table 22). The agro industry sector has been steadily gaining advantage (Figure 26¹⁵).

Figure 24 – Percentage of FDI inflows with Europe as destination



Source: www.bea.gov

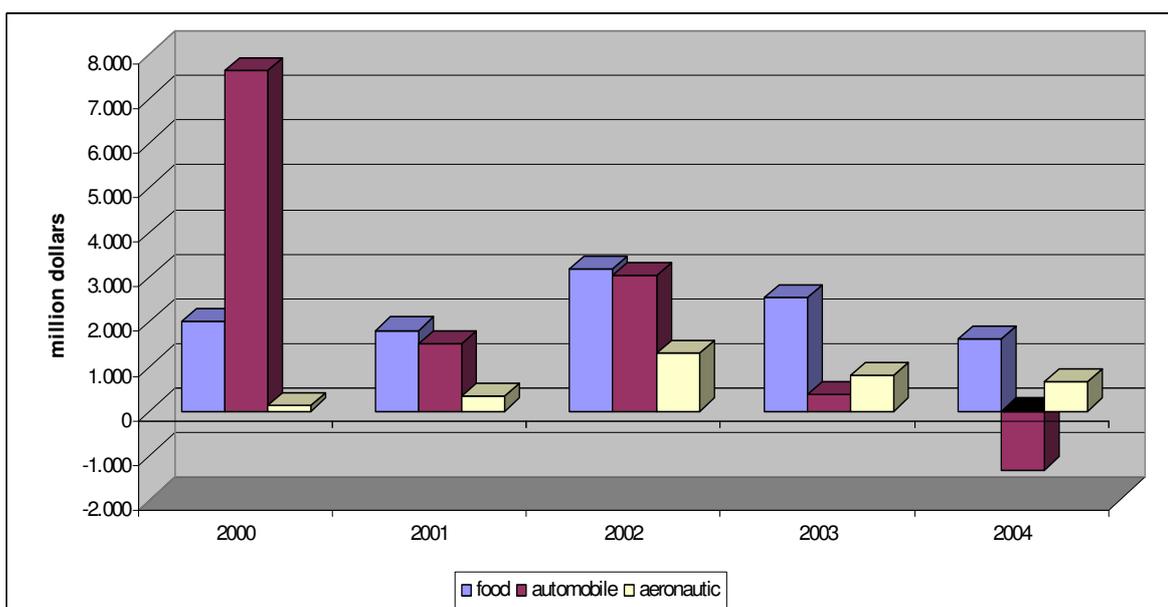
¹⁵ We made analogy of automobile with the division of "Motor vehicles, bodies and trailers, and parts", in www.bea.gov. We made the same with aeronautic and "Aerospace products and parts".

Figure 25 – USA Capital Outflows in Europe, 2004 (million dollars)



Source: www.bea.gov

Figure 26 – FDI in three sectors



Source: www.bea.gov

Table 22 – USA Capital Outflows in Europe, 2004 (million dollars)

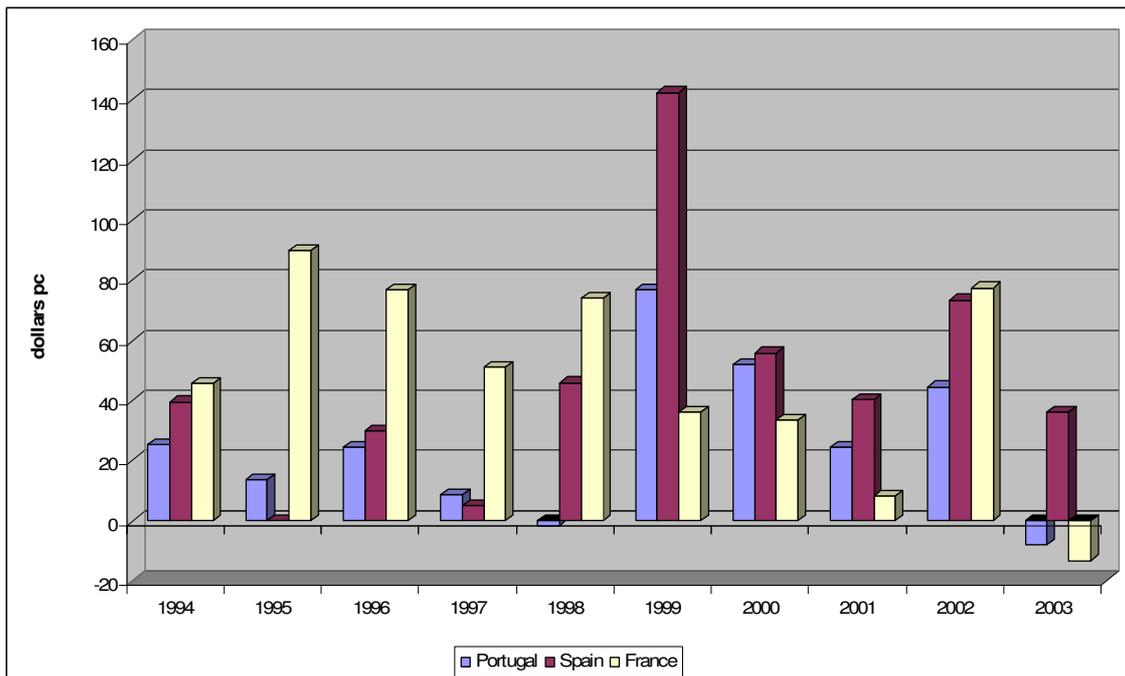
Country	Outflow
United Kingdom	22.926
Netherlands	12.598
Switzerland	10.602
Ireland	10.449
Germany	9.956
France	9.757
Luxembourg	4.533
Spain	3.953
Italy	3.477
Sweden	1.883
Belgium	1.310
Norway	1.152
Poland	758
Russia	554
Denmark	375
Hungary	375
Finland	373
Czech Republic	331
Austria	303
Turkey	182
Greece	136
Portugal	-12

Source: www.bea.gov

When comparing Portugal, Spain and France, as destinations of US FDI we can conclude that overall, Portugal has not been a favored receiver of American FDI, in terms of FDI per capita. On the other hand, in the last 6 years of our sample, Spanish economy has turned out to be more attractive than the other two countries. This can be explained, for example, by the efforts of Spanish authorities to aggressively court foreign investment. Data is presented in Figure 27.

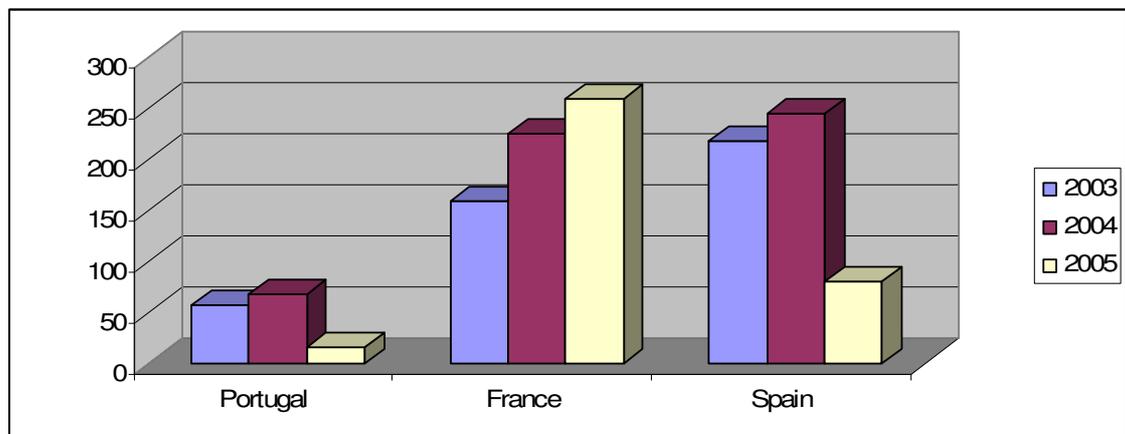
Since 2002 one source, Locomonitor has tracked 185 FDI projects in Portugal, 782 in France and 695 in Spain. From figure 2.8 we can see that in Portugal and Spain in 2005, the number of projects decreased when compared with to the previous two years. For the year **2005** (up to the month ending October), in the case of France, there was a very positive development in terms of the number of FDI projects, as illustrated in the Figure 28.

Figure 27 – FDI (originating from the USA) in Portugal, Spain and France¹⁶



Source: www.bea.gov

Figure 28 – Number of FDI projects



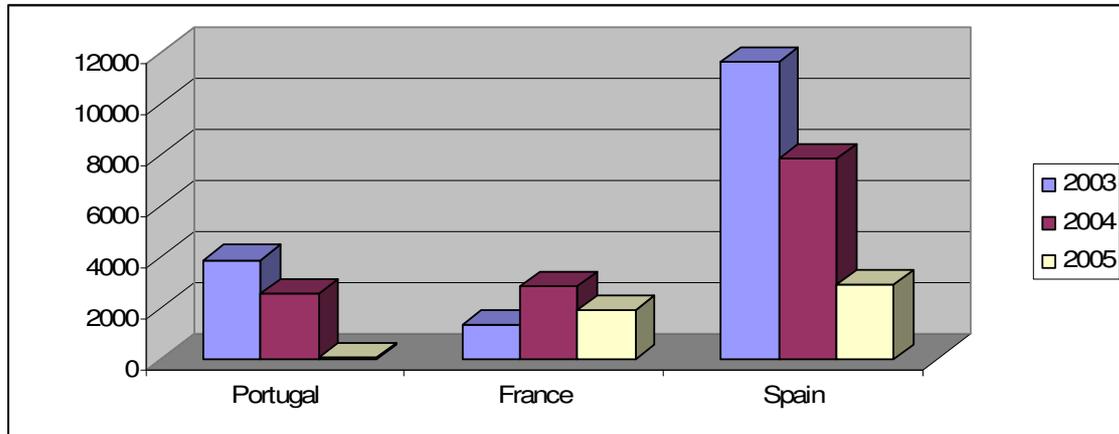
Source: Locomonitor

In terms of the value of capital invested, data shows a decrease in the total investments. In the case of France there has also been less investment than in the previous years. But, taking into account the months of November and December, it is possible that the value added is up roughly in relationship to the

¹⁶ Negative values imply net inflows

previous years. Figure 29 below presents the value in capital investment in these three countries.

Figure 29 – Capital Investment (million USD)



Source: Locomonitor

In spite of France being the country, which attracted more projects, Spain is the leader in terms of amount of investment. Portugal, especially in 2005 has had a poor record in this regard.

In Portugal, Azkar is the company, which has more FDI projects since 2002: 5 projects (source: Locomonitor). Spain is the principal source country of companies investing in Portugal (30). USA shares with France the second place, with 22 projects. Property, Tourism & Leisure is the principal industry cluster of investments in Portugal (29 projects), followed by transport equipment (26) and light Industry (22). Linked with agro-business sector, we have the cluster Food/Beverage/Tobacco sector, with 16 projects.

In France, the top multinational companies investing there, since 2002, are INCAT International and Toyota (5 projects). USA is the principal investor in France (with 241 projects), showing the interest that this country has in France. The 3rd World Investment Conference in La Baule puts emphasis in the reinforcement of Siemens investment in France with 400 million euros over 2005, 2006 and 2007. Compared to other sectors, the Food/Beverage/Tobacco sector has had just 30 projects in the last three years. This is a possible indicator of the potential that exists in attracting investment in this area in France.

In Spain, Bayer is the first multinational company investing in the country, with 8 projects. As in France, in Spain too the USA is the major investor, followed by Germany and the United Kingdom. The Food/Beverage/Tobacco cluster is the fifth sector since 2002, with 66 projects. 3rd World Investment Conference gives emphasis to the investments made by GE in Spain, making of this country “a centre of excellence in plastics business” (pp. 88).

Using another data source, European Investment Monitor (EIM), we find that FDI across Europe increased largely because of increased cross border investment between European companies while north-american FDI fell. France is in the second position as an attractive country to invest with 17% of FDI in Europe going to France. Other Euratlantic countries have fewer levels of FDI investment across Europe: Spain has 4% and Portugal very little. Historically North American has been the principal source of FDI investments. Besides this, from the European Investment Monitor we find that its proportion is decreasing, principally because the investment across European countries is increasing. North-american share was 44% in 2000 and in 2004 it was 27%. Countries like China and India appear in the top 20 sources of FDI in Europe.

In the specific case of the food sector, in 2004 EIM found 180 FDI projects in this sector, the largest number ever in any sector. One cause is continuing development of new products, like for example biological products, in order to satisfy consumers' preferences. USA is the principal source of food related projects, while France was, in 2004, the principal destination of food FDI projects, with almost 20% of the total projects (Spain reached 9%).

According to the report Informe Económico de la Industria Alimentaria, shows some trends in the Spanish FDI in the agro-food sector¹⁷. In 2004, FDI showed an upward trend, showing competitiveness of this particular sector.

An important index, which investors take in account to evaluate in their investments decisions, is the Confidence Index, calculated by the firm AT

¹⁷ Informe Económico de la Industria Alimentaria, 2004, FIAB.

Kearney¹⁸. This index, calculated for 2004, says that India and China are the two most preferred locations for FDI actually, followed by United States. In spite of this, France is in the top of the table. The war in Iraq reduced FDI North-American FDI flows to Europe, but after the first impact, these flows increased again, and now USA investors remain to be the first investors in France, and created nearly one-quarter of the new FDI-related jobs in this country. Spain has also benefited from this increase of FDI flows, and is now the 11th economy in terms of FDI flows from USA.

3.1.2. FDI Determinants

One of these determinants is the existence of *qualified technicians* (which can be derived, for example, if the scientific community is active and collaborating), an *economic environment* with good promotional perspectives (which can be obtained, for example, with fiscal benefits), *good market access* (not only in what concerns rough materials access but also good physical access) and *competitive input products*.

From the human resources point of view the synergies at the University level can be profitable, with the creation of new courses and the realization of different studies. For example, in the agrifood industry, the research on seed quality could be promoted.

In relation to the economic environment, market dimension is surely the most important factor. There should be no problems in this aspect, since production would be directed towards markets with a great purchasing power and buying capacity. Nevertheless, it is necessary to have a production and public procurement support, through the development of a friendly industrial environment.

Another important factor of localization choice is of course the fiscal environment. Usually enterprises that make big FDI projects take advantage of

¹⁸ <http://www.atkearney.com>

their bargaining capacity to obtain special conditions in regards to taxation issues.

The intention of having competitive input products can be attained with traditional products (the cases of olives in Portugal and Spain or wine in France and Portugal), which could be specially benefited. With entrance of big enterprises, promotion of these products should be facilitated, since these enterprises are already in the market, and though the introduction of products would be easier. The creation of a common label could be another step, with the producers union.

Generally we can summarize the determinants to be:

- Transfer of technology factors from one region to other;
- The market size;
- Level of economic development. Indicators like GDP, GDP per capita are taken in account;
- Accessibility and infrastructure;
- Qualitative potential of the labor market in order to take production more efficient and specialized, as well as labor productivity;
- Governmental policies (tariffs, subsidies, taxes, regulatory regime and privatisation policy)
- Liberal degree of trade regime, because it promotes the economic integration between nations; investors are more likely to invest in the countries which have been opened up to the outside world;
- Technology development, management skills and know-how;
- Natural resources; existence of resources near companies could reduce transport costs;
- Political stability, which confers stability to investors;
- Bureaucracy and public efficiency (in example, the time of a Project implementation);
- Receptivity to external capital;

- Complementary production factors: local raw materials needed for internationally competitive production;
- Presence of organizations which could contribute to products' development (like universities, clusters or technological parks, in example)

At a micro level, our research threw some interesting light on the issue. One of enterprises we surveyed, which has activity in seed and chemicals, said that the three main determinants for their investment in Europe (they invested in France and Spain) **were the improved market access, the prospects of growth and the development of new product lines.** They point also to the importance to the access to raw materials. In a decision of invest in a foreign country, they want to be well informed about country and region economy, about FDI laws and regulations and contacts about information for investment promotion agencies. When questioned about their decision in a scenario of economic downturn, they answered something that we knew: they shift the geographic focus of the expansion. This is very important for these three countries. With the challenge of the enlargement, it is very important to these countries to invest in their image and in their development.

Most North-American investors are large economic groups, with a high number of enterprises and employees, which can make great impacts in the destiny countries. Some North-American groups are satisfied with their investments made in the Euratlantic regions. In many cases they have also interest to investing and expanding in these regions and to develop technologies.

The preferred strategy of investment of these groups is to expand the existing companies and not invest with merger and acquisitions. They prefer sectors like wine and olive oil, because of the excellent conditions of production. Other important sectors are the fruit sector and the cereals transformation.

3.1.3. FDI: From which regions of North America?

As we saw, United States is the biggest investor in European Union. The economic importance of the EU market for American investors is enhanced by the maturing of the deepening of markets of the EU, which reached its peak with the single currency, the euro, which was launched on 1999.

This project has the goal of developing a territorial marketing effort to attract North American investors towards the thirteen Euratlantic regions. USA is composed by fifty states, with marked heterogeneity among them and with different relationship with the European Union and with the three Euratlantic countries in particular.

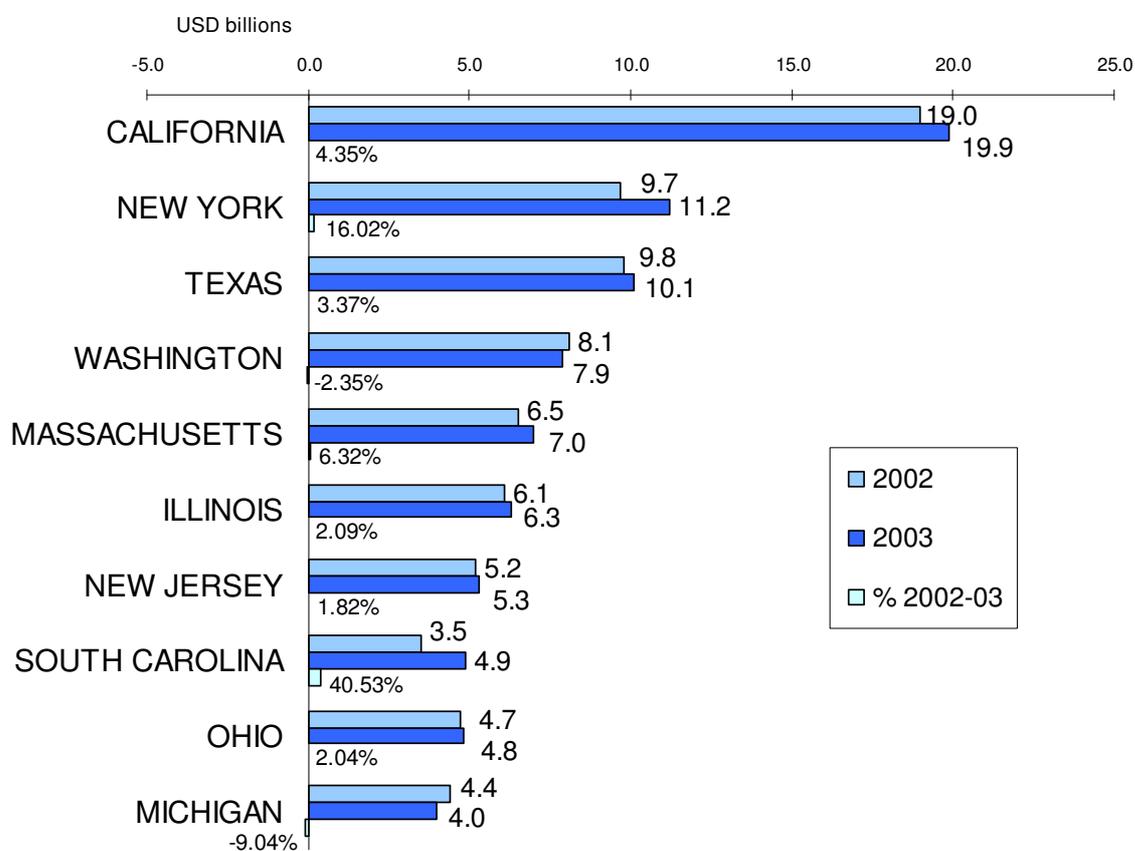
Individual data of states exporting capital is hard to come by and we used exports of goods as one proxy of which states have large exporters of the sectors in our focus.

From Figure 30, we see that the principal European partners are California, New York and Texas, each of them with a share of exports greater than 10%, in 2003. Washington, Massachusetts, Illinois, New Jersey, South Carolina, Ohio and Michigan complete the other top 10 states. More interesting that the exports to EU are the exports for each Euratlantic country in the Euratlantic region (Table 23 and Figure 31).

As we see from the figure 31 and Table 23, North-American exports to Portugal, Spain and France, after a decrease at the beginning of the millennium, raised in 2004. This shows an increase of the relationships between these countries, which is consonant with the expected increase of FDI for the next years, reported by UNCTAD.

In the same source, we can see also the ranking of the states. The top ten for each country is specified in table 24.

Figure 30 – Top 10 States Exporting to EU25, 2003



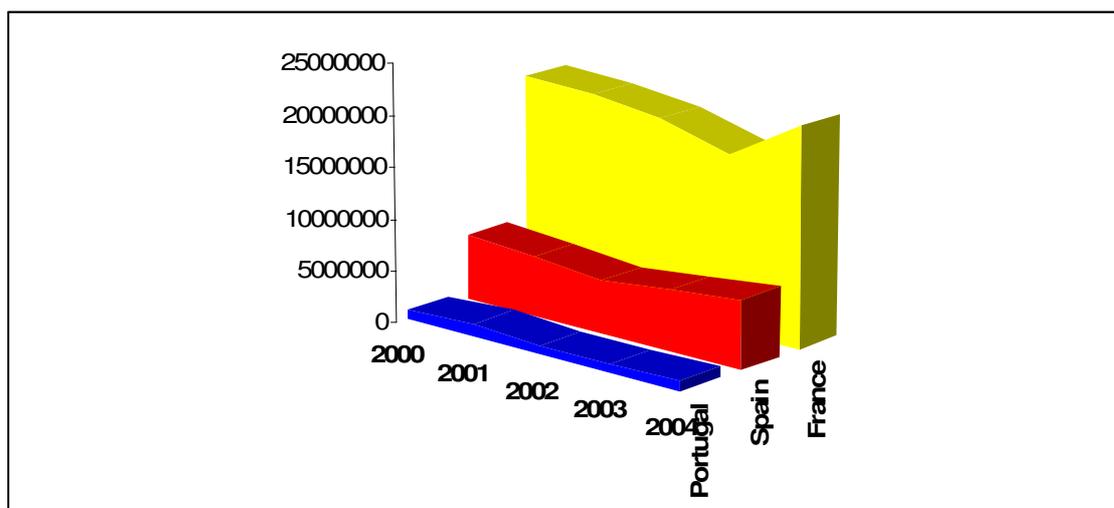
Source: www.eurunion.org

Table 23 – USA Exports for Portugal, Spain and France (million USD)

	Portugal	Spain	France
2000	957	6323	20253
2001	1258	5811	19896
2002	863	5226	19019
2003	863	5935	17068
2004	1046	6640	21240

Source: <http://tse.export.gov>

Figure 31 – USA Exports for Portugal, Spain and France (thousands USD)



Source: <http://tse.export.gov>

Table 24 – Top 10 States Exporting to Euratlantic countries, 2004

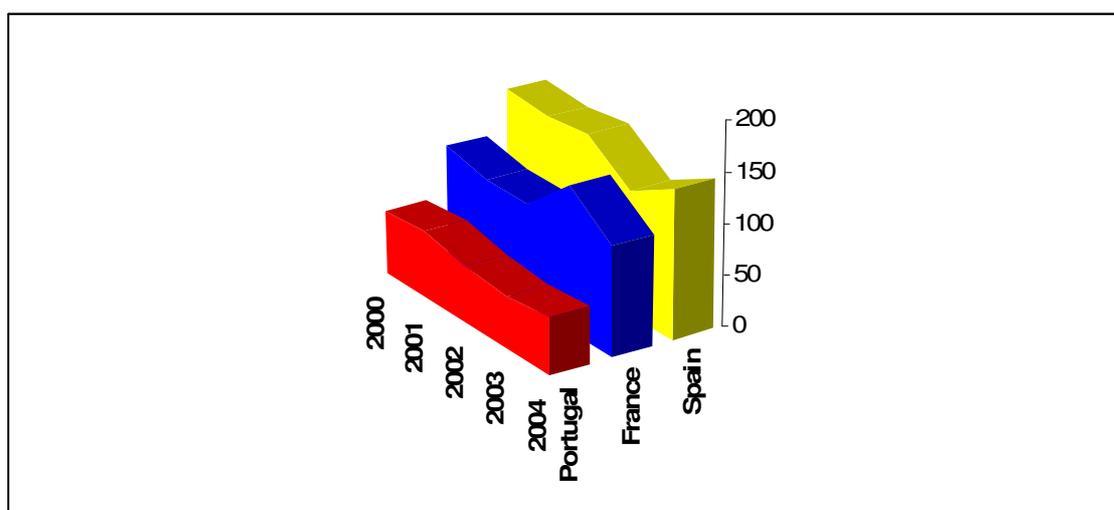
Portugal	Spain	France
Louisiana	Califórnia	California
Arkansas	New York	Washington
California	Florida	New York
Georgia	Washington	Connecticut
Kansas	Texas	Indiana
Arizona	Louisiana	Texas
Texas	New Jersey	Kentucky
New York	Indiana	Ohio
New Jersey	Illinois	Massachusetts
Indiana	Geórgia	Puerto Rico

Source: <http://tse.export.gov>

We can confirm that the three main exporters to EU, in Figure 32 and Table 25 (California, New York and Texas), are ever present in the top ten of each Euratlantic country. If the objective is to have special activities in the most important states, then this table is of extreme interest in terms of focusing marketing efforts.

We can do a similar analysis specifically for products of the agro-food sector. We reinforce that we are using export flows instead of FDI flows, where we use it as an indicator of the relationship between states and each country. Compared with the others three, Spain is the country, which has more exports of this type of products.

Figure 32 – USA Exports of Food Manufacturing products for Portugal, Spain and France (million USD)



Source: <http://tse.export.gov>

Table 25 – USA Exports of Food Manufacturing products for Portugal, Spain and France (million USD)

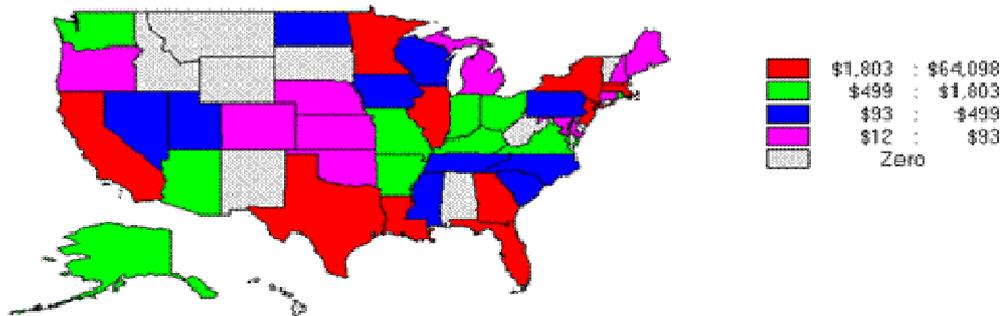
	2000	2001	2002	2003	2004
Portugal	64	67	57	52	56
France	113	102	102	144	108
Spain	155	150	155	122	147

Source: <http://tse.export.gov>

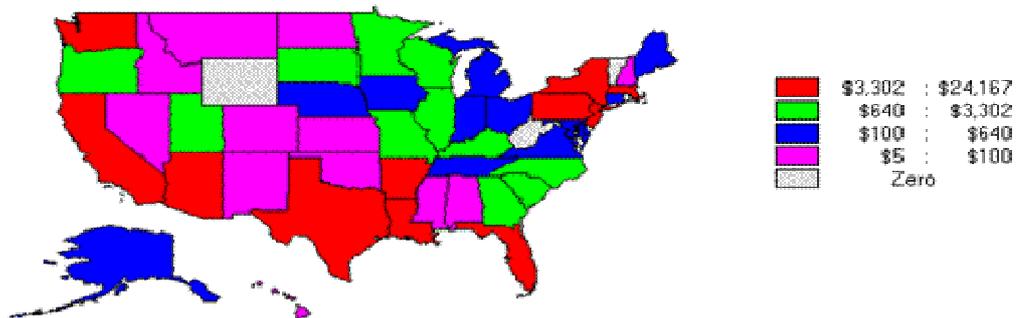
Once again we believe that it is interesting to see the behavior of states with respect to exports of these products for the three Euratlantic countries. The Figure 33 shows the distribution of exports of food manufacturing products by state's source, with destination for each one of the three Euratlantic countries.

Figure 33 – USA states Exports of Food manufacturing products for Portugal, Spain and France (thousand USD), 2004

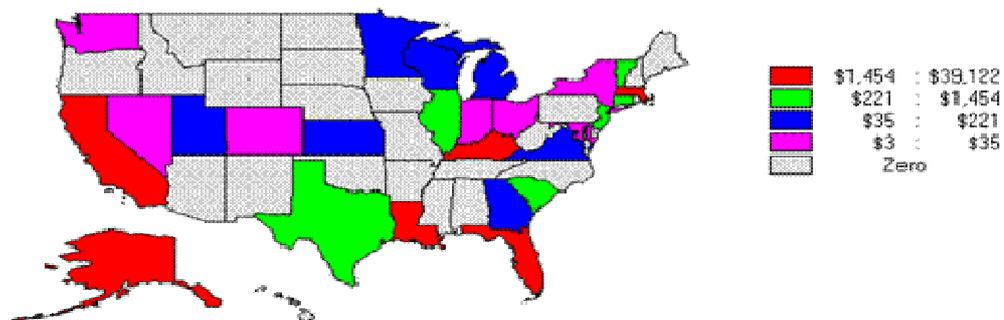
Spain



France



Portugal



Source: <http://tse.export.gov>

Once again we can rank the top 10 states (Table 26). In that table Louisiana has the principal place, once it is the leader exporter for each country. States like Texas, California, and New York continue to show their importance in the relationships with EU. In the particular case of food manufacturing products, besides Louisiana, Florida, New Jersey and Massachusetts seem to be important states to have attention in strategies to attract investments in this area.

Table 26 – Top 10 States Exporting to Euratlantic countries, Exports of Food Manufacturing products, 2004

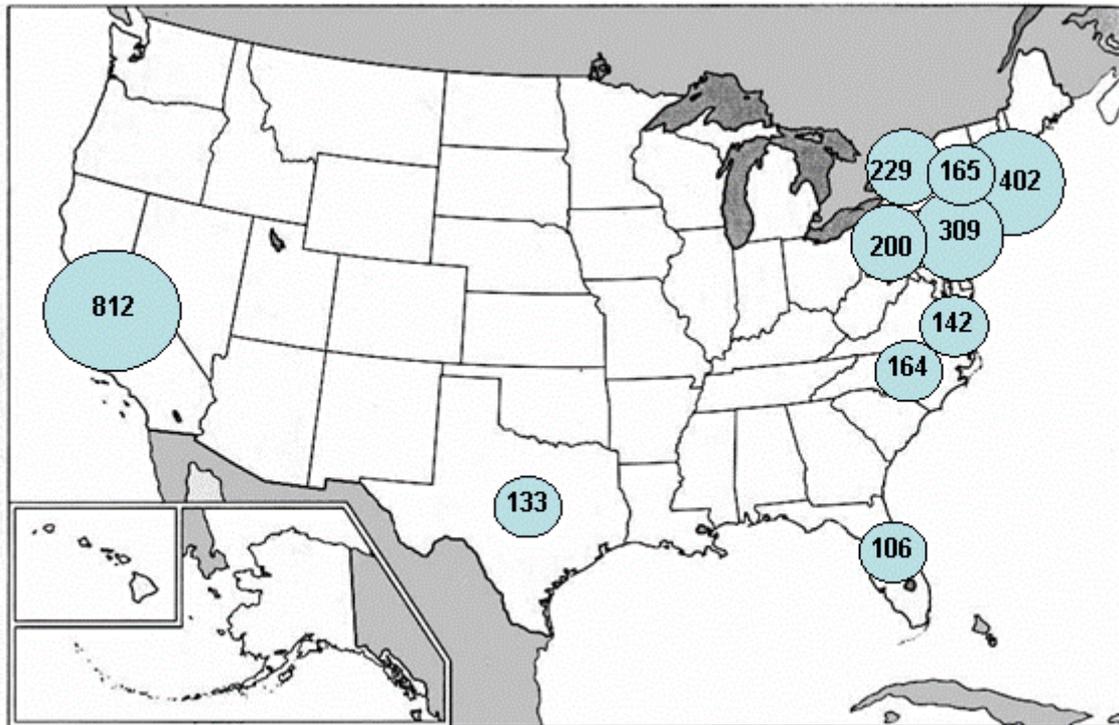
Portugal	Spain	France
Louisiana	Louisiana	Louisiana
Texas	Florida	California
California	Kentucky	Minnesota
New York	Massachusetts	New Jersey
Arizona	California	Texas
New Jersey	Alaska	Georgia
Florida	Connecticut	Illinois
Massachusetts	Texas	Florida
Arkansas	New Jersey	Massachusetts
Washington	South Carolina	New York

Source: <http://tse.export.gov>

This is information for one of our sectors: agri-food business. We can make a similar analysis, although with other type of data, for biotechnology sector. Consulting Informagen¹⁹, we find that the most important states with respect to USA biotechnology companies. Once again, if the objective is to have specific measures for states, which have more possible FDI investors, we have to evaluate the number of possible companies. In this particular sector, Informagen has listed in their website 812 companies in California, 402 in Massachusetts, 309 in New Jersey, 229 in New York, 200 in Pennsylvania, 165 in New Hampshire, 164 in North Carolina, 142 in Maryland, 133 in Texas and 106 in Florida. In all other states there are less than 100 companies listed in Informagen (see Figure 34).

¹⁹ http://informagen.com/Resource_Informagen/states.php

Figure 34 – Biotechnology enterprises in USA



Source: Our estimations based on data from informagen

3.2. Euratlantic Regions general Overview

We have already listed some determinants, which are factors for FDI attraction. Now we shall observe some economic and social indicators, which could be linked with those determinants.

3.2.1. Gross Regional Product (GRP) and Gross Regional Product Growth Rate

The Table 27 shows us GRP and GRP growth rate. Clearly, French regions are the regions with greater GRP per capita. In second place appear Spanish regions (in italics) and in the last place are the Portuguese regions.

About the GRP growth rate, the Spanish regions have the highest rates, ranging from 5,9% to 7,6%. This is a clear sign that Spain has been making strong economic progress in its growth, when compared to other regions. Normally

regions (and countries) with higher GRP face lower growth rates. This is illustrated for example, in the Spanish regions, in Figure 35. However, Portugal is behind Spain in this particular aspect. This can possibly illustrate that Portuguese regional economics is not receiving particular attention from its government. This is all the more reason to make a concerted effort to boost investment, primarily foreign direct investment from the United States.

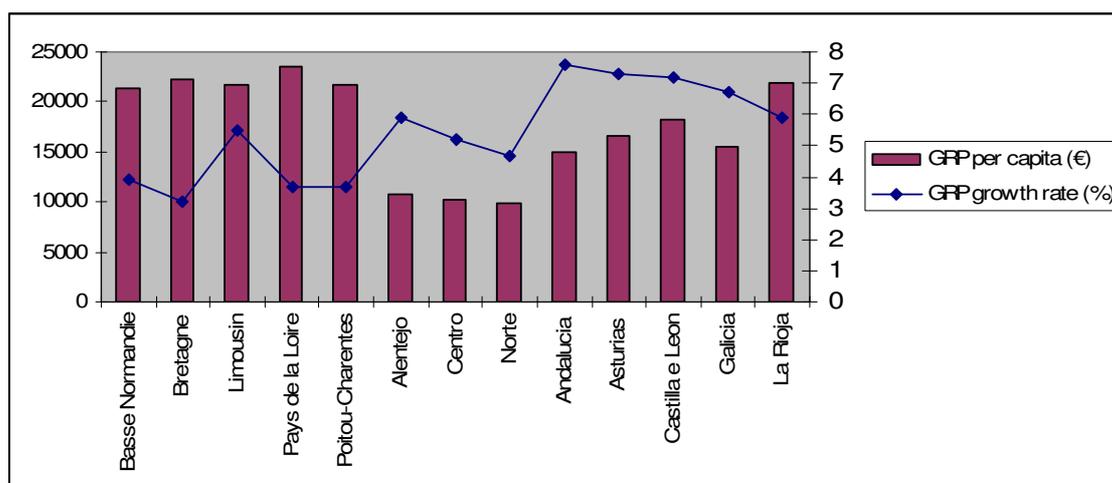
Table 27 – GRP pc and GRP growth rate

Regions	GRP per capita (€)	GRP growth rate%
Basse Normandie	21371	3,9
Bretagne	22281	3,2
Limousin	21638	5,5
Pays de la Loire	23556	3,7
Poitou-Charentes	21645	3,7
<u>Alentejo</u>	<u>10700</u>	<u>5,9</u>
<u>Centro</u>	<u>10200</u>	<u>5,2</u>
<u>Norte</u>	<u>9900</u>	<u>4,7</u>
<i>Andalucia</i>	<i>14876</i>	<i>7,6</i>
<i>Asturias</i>	<i>16633</i>	<i>7,3</i>
<i>Castilla e Leon</i>	<i>18199</i>	<i>7,2</i>
<i>Galicia</i>	<i>15482</i>	<i>6,7</i>
<i>La Rioja</i>	<i>21941</i>	<i>5,9</i>

Source: INSEE, INE (Spain), INE (Portugal)

Notes: Portugal – 2002; Spain – 2004; France – 2003 (GRP) and 2004 (GRP growth)

Figure 35 – GRP per capita and GRP growth rate in Euratlantic Regions



Notes: GRP per capita in the left side; GRP growth rate in the right side

In most of the regions the GRP per capita is below the country average. This is another reason to try to make from these regions, a great attractive area, as a

development strategy. FDI can serve as leverage to these regions, to achieve national averages.

3.2.2. Labor force and University Students

Another important determinant of FDI is the quality of the labor force and also the number of employees available to work: in theory, regions with more unemployment could be more interesting to invest. But it is also important the qualifications of these workers. Because of this factor, we study the number of university students as an indicator of the quality of emerging labor force (Table 28 and Figure 36).

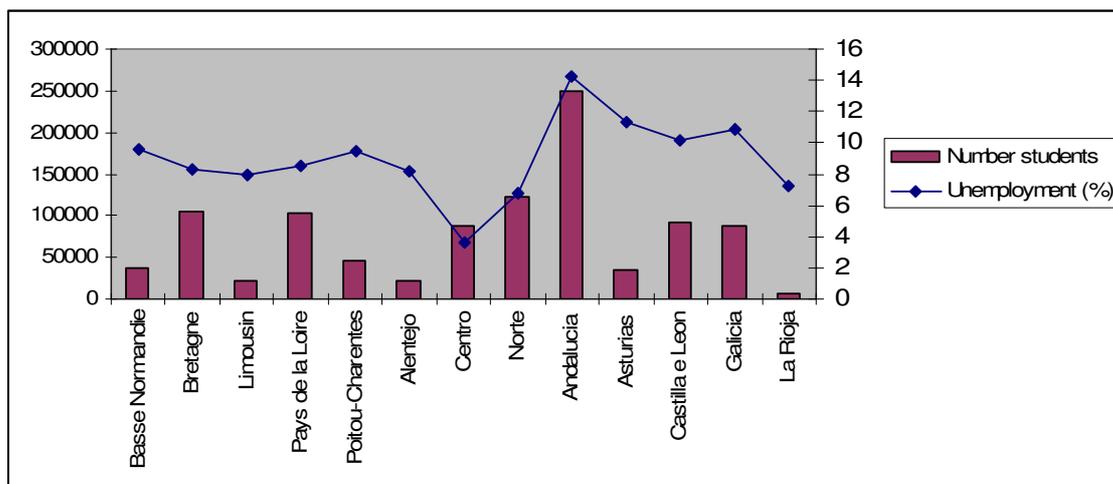
Table 28 – Number of students in university and unemployment rate

Regions	Number students	Unemployment (%)	Universities
Basse Normandie	37211	9,6	Rouen University, Caen University, Le Havre University
Bretagne	105435	8,3	Université de Bretagne Occidentale (Brest), Université de Bretagne Sud, Rennes University, Haute Bretagne University
Limousin	21537	8	Limoges University
Pays de la Loire	103179	8,5	Angers University, Maine University, Nantes University
Poitou-Charentes	45709	9,5	Poitiers University, La Rochelle University
Alentejo	21864	8,2	Évora, Moderna, Beja (polytechnic), Portalegre (polytechnic)
Centro	87078	3,6	Aveiro, Beira Interior, Coimbra
Norte	122427	6,8	Minho, Porto, UTAD, Católica, Bragança (polytechnic)
Andalucia	248587	14,24	10 public universities
Astúrias	35195	11,28	Oviedo
Castilla e Leon	92486	10,11	Leon, Valladolid
Galicia	87919	10,9	Vigo, Coruña, Sant. Compostela
La Rioja	6903	7,29	La Rioja, UNED

Source: INSEE, INE (Spain), INE (Portugal);

Notes: Number of students – 2002/2003 for all regions; Unemployment rate: Portugal – 2003; Spain and France – first three months 2005

Figure 36 – Number of studens and unemployment rate in Euratlantic Regions



Notes: Number of students in the left side; Unemployment rate in the right side

If high unemployment is a bad economic indicator, on the other hand it could make these regions attractive, because it is available to a large amount of labor force. On the other hand, we have some regions where the number of students in the university could be a decisive factor for north-american enterprises. For example, Andalucia has almost 250000 of students in universities, which could, when finish their courses, enter in the labor market with a great potential and with lower cost for enterprises.

*Another important factor is the labor cost in countries. Of the three partners, **Portugal has the lower labor cost index, followed by Spain, while France has the highest index value.** This is a very strong point in favour of Portugal as a **destination for labor-intensive agro based FDI.***

One of the causes of these results could be the low R&D undertaken by the Portuguese regions, in particular, and by the Portuguese economy in general. In Portugal only 0,32% of GDP is used by business in R&D, lower than the 0,56% in Spain and 1,36% in France.

Despite this, our survey and research find some conclusions regarding the following aspects of Euratlantic economics dynamics:

- *there exist some 'knowledge institutes' and technology centres specific to the automotive and agro business, showing a focus on research in this area, which could be interesting in this project.*
- *All regions have available space for companies to install in their technology parks and cluster, also in the referred sectors.*
- *There exist some IT and R&D initiatives in Euratlantic regions and other industrial initiatives, in the thirteen regions.*

Another possible determinant for FDI attraction is the dimension of the economy in terms of the number of enterprises. This could be important because of scale economic factors. Enterprises and investors like to be situated where they have more enterprises, because they can take advantages on different aspects. Share distributional channels, in example, are one of the advantages (table 29 and Figure 37).

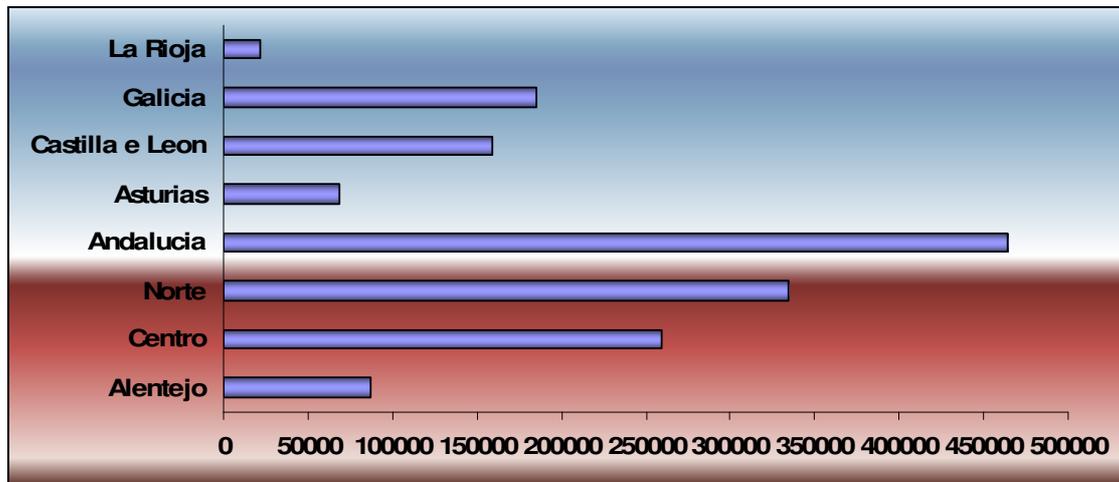
Table 29 – Number of enterprises in Spain and Portugal

Regions	Number of enterprises
<u>Alentejo</u>	<u>87526</u>
<u>Centro</u>	<u>259779</u>
<u>Norte</u>	<u>334916</u>
<i>Andalucia</i>	<i>464179</i>
<i>Asturias</i>	<i>68175</i>
<i>Castilla e Leon</i>	<i>159196</i>
<i>Galicia</i>	<i>185722</i>
<i>La Rioja</i>	<i>21598</i>

Source: INE (Spain), INE (Portugal)

Notes: Portugal – 2002; Spain – 2005. Because French data is not comparable, we didn't used it in this table

Figure 37 – Number of enterprises in Spain and Portugal



Source: INE (Spain), INE (Portugal)

For example, agri-food is a very important sector in the French economy, where American enterprises can find a great number of possible partners. In Table 30 we can see some examples of suppliers in agri-food and biotechnological sectors in Basse-Normandy and Limousin.

In the same context, it is also important the existence of big cities. They are important not only for access to labor market but also to sell companies' products. There are no large or famous (populous) cities in these regions, but there are cities in expansion in demographic and industrial aspects (Nantes, Porto, Leiria or Sevilla), and also cities with high quality of life. In other hand, some regions are near from big cities (in example, Lisboa).

3.2.3. FDI in R&D: Mission Possível

In a world marked by increasing competitiveness, European countries in general and Euratlantic regions in particular are making emphasis in invest in the knowledge-based economy. One of the objectives of the 2000 Lisbon strategy is to make Europe a competitive knowledge-based economy by 2010, with the intention of invest more 3% of GDP in R&D. For this, European countries are very well placed to both increase their own investment, as well as attract foreign, especially North American investment.

Table 30 – Agri food and biotechnology suppliers

Basse-Normandy	Limousin
Lactalis	Madrangé
Compagnie Laitière Européenne	Bledina
Compagnie des Fromages	Société Lachaise
Montblanc/Nestlé	Charal
SOCOPA	Correza Conserves
SOVIBA	Madeleine Bijou
Saumon de France/Inaq	
Frial	
Gastronomie des Fjords	
Ferrero	
Saint-Louis Sucre	
Dupont d'Isigny	
GPLM	
Lesaffre Normandi	
Degussa Texturants	
Wild	
Manchinox	
Le Capitaine	

One of the R&D indicators is the number of patents per million inhabitants. While in EU-15 it is 158 patents, in France is 147, in Spain 25 and in Portugal 4. In the US it is 155²⁰. So, why invest in these countries? According to United Nations, FDI in R&D is increasingly determined by the existence of talented research manpower. Currently, the European Commission is creating “poles of excellence”, certainly very interesting for investors in general and North American ones in particular. The objective is to reach the purposes of Lisbon Agenda. But for this, EU in general and Euratlantic countries in particular, has to invert one statistics: the number of researchers, which go to foreign countries.

These countries have to combat the absence of skilled people in science-based activities, increasing simultaneously the R&D expenditures.

One of the objectives of the Lisbon Agenda is to increase of R&D investment, which reaches 3% of GDP. For this, European Commission wants to help with some initiatives like the modernization of the competition rules. In the three Euratlantic countries, France is the one which has the largest share of R&D in the GDP – 2,16%, while Spain has 1,06% and Portugal 0,79%. The problem is that trend is not to the numbers which European Commission wants. Only Spain has a relevant growth of R&D investment: 6,7%. France has 1,4% and Portugal has a decline in the R&D expenditures (-0,1%). Thus it is clear that there is both a need in Euroatlantic for R&D investment as well as an infrastructural capacity to support such an investment. Our analyses of the knowledge economy in these regions, as well as the universities and research centers that exist in the Euroatlantic regions in the previous section, strongly points to its attractiveness as a favorite destination. This makes attracting foreign investment in R&D centers all the more important as well as attractive given that our studies shows that all the major elements required to set up R&D centers exist in the thirteen Euroatlantic regions, as the following sections demonstrate.

3.2.4. Physical Infrastructure

The existence of physical infrastructure in the regions could be a focus of attraction for American investors. Accessibility is one of these conditions. In example, it is very important to transport inputs to companies (in the case of industrial ones) and also outputs for the destiny markets, which should be countries of destiny of FDI but also host countries and, in a world of globalization, the entire world.

For the transport of materials and products, it is important for there to exist infrastructures like airports and sea ports. Airports like Porto, Malaga, Seville or Nantes are not very large airports, but have substantial traffic. In the Euratlantic regions, exist just six international airports. Andalusia is the unique region with

²⁰ Source: Eurostat, 2002 values

more than one airport (it has three). In all the French Euratlantic regions there exists only one airport (Nantes), the same that occurs in Portugal (Porto). In the Spanish North Euratlantic regions exists also just one airport too (Santiago de Compostela). But is clear that is no difficult to access all territories, since there exists some other international airports near these regions: Lisboa and Faro (that caters to Portugal and Spain), Madrid and Bilbao (Spain) and Bordeaux and Paris (France).

Once we look at the coastal regions (only Limousin, La Rioja and Castilla y León do not have access to the sea), it is obvious that these regions have a good maritime access, benefiting from its strategically located position, near the Atlantic Ocean, Northern Europe and Mediterranean Sea, with access to all the Western coast of America and access to Africa.

All the investments made by governments in the last decades in highway network are also very important. Transport of products by truck is a common means of transport, and it is just possible due to the existence of a good infrastructure. Other investments should be made in the next few years, like those, which are planned in the high-speed train (TGV) in Portugal and Spain. Spain had also the largest logistic platform in Zaragoza.

It is important, in order to attract foreign capital, the existence of infrastructures specific to the installation of North American enterprises. For example, technological parks are very useful for technological development. In Asturias exist two of them (Llanera and Gijón). Castilla has three (Burgos – in project, León and Valladolid), Galicia has one (Ourense) and La Rioja has two under construction. Andalucia is the unique region with a technological park linked with aeronautic sector (Sevilla). There also exists a technological park for agro-food and biotechnology promoted by the government and other public and private entities in order to create an excellence space for research enterprises, and another two parks in project, like in La Rioja. In Portugal, Alentejo, a Technological Agri-Industrial Park (Parque Agro-industrial do Penique) is under construction.

Another important issue is the **existence of clusters**, ideal locations to develop high technological activities. According to our study just in Andalucia there exist more than 18 clusters with more than 126 thousand jobs. In Asturias exist 4 clusters, one of them linked to the agro-food area. Castilla has clusters linked to automobile, agri-food and aeronautics. In Galicia exist 5 clusters, two of them linked with our interest areas, the same that happens in La Rioja, which presents 8 clusters. These clusters don't work alone: they are linked with research centres. Linked to the agro-food and biotechnologies, there exist some of them: 10 in Andalucia, 5 in Asturias, 4 in Castilla, 5 in Galicia and 6 in La Rioja.

In France, Basse-Normandy has the following research centres: Groupe F.I.M. (Sales managers and Logistics experts' training for the food processing industry), I.U.P. in Caen (Food & Biotechnology), "Lycée" Saint-Lô Thère (Food and agriculture Education & Training) and Esitpa (high-engineering school specialised in general agriculture engineering).

In Portugal, Centro region, we have AIBILI – Associação para Investigação Biomédica e Inovação em Luz e Imagem, Centro de Química Orgânica Produtos Naturais e Agroalimentares, the Institute of Biophysics and Biomathematics of the University of Coimbra and Centro de Biologia Celular (University of Aveiro). In North we have: Escola Superior de Biotecnologia da Universidade Católica (ESB), Centro de Engenharia Biológica (CEB) of Minho University, Instituto de Ciências Biomédicas Abel Salazar (ICBS) of Porto University and Centro de Genética e Biotecnologia (CGB) of University of Trás-os-Montes. In Alentejo, we have ICAM (Instituto de Ciências Agrárias Mediterrânicas) with scientific domains of sciences and technology of engineering in agriculture systems, agro-sylvo-pastoral systems, food safety and technology and mediterranean horticulture. All are research centers linked with agri-food sector.

3.2.5. Regional incentives, taxes and other initiatives

The existence of regional incentives, like subventions and/or reduction of taxes, could be other important factors to attract investors. Despite this, it is true that great FDI investors could exert economic pressure on economic agents to reduce taxes. In the different countries and regions, these incentives are different and quite heterogeneous. However it is important to note that these incentives are present in all the countries under the purview of our study.

In the case of France investors have several forms of financial support, available to encourage companies to invest, to create jobs and even to train their employees. It can be made with subsidies, soft loans or tax credits, among others. France has priority development areas (PDA) areas, some of which are in the Euratlantic project. Here, more assistance schemes are offered and allowable assistance rates are more attractive (table 31).

Table 31 – Incentives in PDA Areas, France

11.5% to 23% of the investment in land, plant and equipment for large corporations
Small and Medium Enterprises (SME) have greater incentives: from 21.5% to 33%
Rest of the country: 7.5% to 15%, only SME

Source: PDA Areas in France 2000-2006

Furthermore, for the creation of new companies and for the transfer of existing companies to some zones, the government allows taxes and social security exemptions that could extend up to five years.

Portugal is characterized by a variety of incentive programs and a large number of entities, which evaluate investments proposals. The PRIME Project (Programa de Incentivos à Modernização da Economia) is one of these programs, integrating some economic policy instruments to sectors like industry,

energy, construction, transport, tourism, commerce and services. Its objectives pass to support the effective merit and value-adding ability of the projects, once incentives are calculated with base of one merit index. PRIME budget consists of national and community funds.

Like in France, Portugal has also defined priority areas. For these areas we have, in example, the PRASD programme (Programa de Recuperação de Áreas e Sectores Deprimidos). It defines several areas that benefit from regional positive discrimination, with some fiscal and financial measures. PRIME projects located in PRASD benefit from a majoration of 10%.

AGRO and AGRIS are specific incentives' programmes for agricultural and rural activities. Their objective is the modernization and competitiveness of Portuguese agriculture, promoting the sustainable development of rural territories in environmental, social and economic vectors.

For large investment projects (greater than €25 million) there exists the Portuguese Investment Agency (API), which has the ability to promote a direct negotiation with companies developing large investment projects in Portugal. A recent (May 2005) initiative of the government is PIN (Projecto de Interesse Nacional), whereby any project deemed to be of great interest to the nation is quicken a 'fast forward' approval process. This can be especially relevant for many large-scale agro industries FDI from North America, whose investors are typically averse to red tape!

In Spain, all Euratlantic regions except La Rioja are still eligible for Objective 1 incentives. Here, the amount of non-reimbursable funding is calculated as a percentage of investment spending, and awarded according to certain criteria. The support for these projects varies from 40% to 50% of approved investments. Grants are also generally offered for the acquisition of land, or the installation of several services like gas or electricity, civil engineering for plants, offices or warehouses, capital goods and other fixed assets, project design and planning, as well as R&D and training activities. In the eligible sectors, certain food processing activities, in example, are included.

Spain and also Portugal, offer a number of training and employment initiatives, and also for promoting equality between men and women as well as a large number of incentives and grants for investment in research, innovation, quality and technology.

In terms of specific incentives, Basse Normandy has the following incentives:

- Basse Normandy: National Development Grant – “P.A.T. Industries”
 - o Industrial project, from 4,000 to 11,000 Euros maximum per job, depending on the nature of the project, the total being limited from 17% to 23% of total investment
 - o State grant
- Regional Estate Grants
 - o 17% or 23% of the real estate cost (land, premises)
 - o from local authorities and regional council
- National Grant on Production Equipment – “F.D.P.M.I.”.
 - o From 7.5% to 33% of the new equipment production cost
 - o State grant
- National Development Grant on R&D and services projects – “P.A.T. Tertiaire”
 - o From 17% to 23% of total wage costs over 2 years
 - o State grant
- Regional grant on new employment, based on R&D development
- Regional employment grant for new business activities
 - o Up to 35,000 Euros for the first 9 jobs created
- Innovation grants, from ANVAR
 - o Supporting studies and innovative research programs and technology transfer
 - o Direct grants (R&D employment)
- Exemption from Business Tax – (Taxe Professionnelle)
 - o 5 year exemption, for creation, development or acquisition of companies in difficulty
- National Tax Credit, for Research and Development
- FRED
 - o Up to 2,700 Euros per job in specific territory
- Loans
 - o No interest rate
 - o From local and regional authorities
- Training grants
 - o Up to 100%
- P.O.A.-F.E.O.G.A.

Besides these incentive programs, there are also regions, which made other industrial initiatives. The government of Andalusia has established accords with major firms to contribute to develop the region, for instance with Telefonica, Vodafone or Iberbanda, in order to develop all the economy and to raise the R&D. They have also a program to create technological base enterprises (to raise patents, in example), with 11 enterprises already created, linked with 9 universities and other agencies. For example, they have developed the following projects:

- an enterprise to product aeronautic pieces in carbon fibre;
- an enterprise to design software for cars (in example, for radio, CD and DVD reproduction, linked with Dutch Philips);
- an enterprise, spinoff of Almeria University, that has in their principal activity treatment of micro seaweeds for food products.

Andalusia refers that they have the objective of support strategical sectors, including aeronautic, agro-food and biotechnological. They have non-reimbursable funds and also reimbursable funds, granted money interests, risk capital and other ones, in projects of creation, modernization, cooperation and R&D. They have also programs of professional formation for workers in general and for youth people, women and disabled people.

Basse-Normandy makes Export Promotion for local food industries, by the Agribusiness Committee, with information, advertising and collective participation to food fairs. They have the Gourmandie, quality label for regional food products, by the Regional Food-processing Quality Institute, and they have also Training and employment Committee, by the ARDEFA and the main Human Resources Managers (25 companies).

3.2.6. Relevant Prices

When investors make an investment, they decide also according to prices they have to pay, in example, in the construction of offices (or renting them) and

also the costs they face with utilities. These answers were taken from surveys that we made. Unfortunately, we could not have comparable results for all the regions but based on the surveys conducted for this project, we came up with our own analyses.

Rent of offices, prices vary from 6€ or 16€/m²/month, in Andalucia, depending if they are in the city center or in the technological park. For sale, prices vary from 1500€ to 2450€. For storages, rents vary from 11€ (East zone) to 82€/m²/month (centre) and sale prices goes from 1800€ from 16500€ m². In Asturias, the price ranges from 6 to 9€ in Oviedo and Gijón to 4/6€ in other cities. In Castilla prices are around 6€/m² renting and in La Rioja, for offices, prices range from 9-15 €/m² in Logroño and 5-6 €/m² in other cities.

In Basse-Normandy the rent of a storage building is between 1,000 and 3,000 square meters, from 30 to 50 Euros (excluded tax) per year out of agglomeration and from 40 to 60 Euros (excluded tax) per year within the agglomeration. For offices, prices vary between 20 and 100 square meters, from 80 to 100 Euros (excluded tax) per year out of agglomeration and from 100 to 160 Euros (excluded tax) per year within the agglomeration. For construction of storage buildings, prices vary from 440 to 460 Euros (excluded tax) per sq. m and, dedicated to food-processing industry, prices vary from 800 to 840 Euros (excluded tax) per sq. m. These prices don't include architects' fees, amounting to around 15%.

Because we don't have comparable prices for utilities in different Euratlantic regions, we present prices just for a few regions (Table 32). Regarding electricity prices, ENDESA offers 6% discount in electricity and 8% in electricity plus gas.

Table 32 – Utility prices

Region	Electricity	Water	Gas
Andalucia	0,05€/kWh	0,495€/m3	0,04165 or 0,024209€/Kwh (depending consumption step)
Asturias	-	0,2120€/m3	0,022293€/Kwh
Castilla	-	-	-
La Rioja	0,082€/kWh	0,4€/m3	-
Galicia	0,096€/kWh	0,95€/m3	0,0155 or 0,0242€/Kwh (High or medium pressure)
Basse-Normandy	0,0691€/kWh (include tax)	0,495€/m3	0,04165 or 0,024209€/Kwh (depending consumption step)
Limousin	0,0765 to 0,0943€/kWh (depending potency)	2,217 to 2,60 €/m3 (depending region)	0,0318 to 0,0616€/Kwh (depending consume)

Source: Our analyses

3.2.7. American enterprises in Euratlantic regions

The Table 33 shows some examples of successful American and Canadian enterprises in France and Spain (for Portugal, surveys were not answered in this question).

Table 33 – Some examples of American and Canadian enterprises in Spain and France

Andalucia	GENERAL MOTORS FORD EASTMAN CHEMICAL ABBOT RAYTHEON GOYA FOOD SYGENTA SEEDS PIONEER DOW AGROSCIENCE METAL IMPROVEMENT COMPANY (MCY) RÍO NARCEA GOLD MINES
Asturias	ALCOA BECTON DICKINSON CSC DUPONT DE NEMOURS FLUOR CORPORATION PRAXAIR PLASTICOS ABC ARVINMERITON LVS

Castilla	DUO FAST JOHNSON CONTROLS KRAFT FOODS KIMBERLY-CLARK LEVI STRAUSS MICROSOFT RALSTONE PURINA CO CONAGRA INC
Galicia	OTIS ELEVATOR COMPANY GENENTECH SYKES ENTERPRISES STREAM SERVICIOS DE APOYO INFORMÁTICO OFFICE DEPO
La Rioja	LEAR CORPORATION COLLINS & AIKMAN HEINZ IBÉRICA HONEYWELL COOPER STANDARD AUTOMOTIVE KEY PLASTICS
Basse-Normandy	OXFORD AUTOMOTIVE GDY AUTOMOTIVE TYCO ELECTRONICS JOHNSON CONTROLS TECNOV-DONALDSON SCHWAN'S CARGILL (AMONG OTHERS) GROUPE BORG WARNER AUTOMATIVE
Limousin	LEMAN CAPITAL

Beside these North American enterprises, there exist more foreign companies in euratlantic territories. Because our objective is not to make an extensive identification of them, we just note some of the most known enterprises: Bosch, Knorr, Thyssenkrupp, Amcor, Segafredo, Ferrero, Nestle, Volvo or Unilever Bestfood, among others. All the agri-food enterprises (manufacturers and distributors) in Euratlantic Region, by sector of activity and workforce are presented in Annex VI (Table 1 and Table 2).

3.3. Swot Analysis

Nowadays, the agri-business sector has some factors that are of interest to enterprises:

- Competition is severe and companies are fighting for margins to survive;
- Growing interest on health and natural food;
- More interest for ethnic and novelty foods;
- Increasing importance of biotechnological applications;

- Industry is moving from supply chain driven to consumer driven;
- Mergers and acquisitions dominate investments
- Food companies are especially investing in emerging countries, e.g. Central and Eastern Europe.

Specifically in the Euratlantic region, we can see that there exist a very diversified range of agro business industries, with the regions having well developed food industries and a very *broad offer of agricultural based raw materials* (including fishery). With European companies, other North American companies like Cargill, DuPont or Royal Canin, among others, share this sector's market. Once again there exist several technological centers and parks, which collaborate with these companies.

As we saw in EIM, France is the Euratlantic country which as more FDI investments in this sector. This is not a coincidence. France is the world's second-largest agricultural producer, just after the United States. They have traditional skills and expertise combined with the most innovative technologies and with the advance of time; industry gains new markets and development of products.

For this sector we can also made a brief SWOT Analysis. On the strengths and opportunities of the agri-business sector, we can denote:

- Very wide range of raw materials available (in example fruit, meat, olive oil, among others);
- Leading food exporter (France and Spain);
- Strong quality image;
- Well developed distribution channels.
- Low energy and water costs.
- Quality food, eco-food, environmental friendly;
- USA still have a great deficit on agrifood products and have great influence in the world, specially in Southeast Asia, which can also be a good opportunity to European products;

- geo-strategic factor, with Atlantic Ocean and the Atlantic vocation of the considered regions as a proximity factor between the two Continents.

In the weaknesses and threats sides we have:

- Quota on products like fish, meat and milk.
- Agro business is not a strongly growing industry in Europe.
- Liberalisation of the sugar market.

It has other negative points like relatively high labor costs (but a relatively highly productive workforce), unionisation/labor disputes, low productivity in Portugal, existence of few US companies and R&D poor in Euratlantic regions.



4.

Territorial Marketing Guidelines

4.1. Orientation principles and grounds to define a territorial marketing strategy to the Agri-Food and Biotech Euroatlantic area

Upon the characterisation we made through out this report in what concerns Portuguese, Spanish and French regions that belong to the Euratlantic area Agri-Food/Biotechnology sector, and considering the importance that, objectively, this sector has in this set of regions, we consider that any territorial marketing strategy developed for this area should underline this economic sector.

Building territorial marketing strategies in the frame of national and regional spaces has the objective of promoting a specific characteristics' valorisation strategy, through the burdening of the territories visibility, including at international scale, and, as a consequence burdening their attractiveness for investment or other proposes.

As such, constructing territorial marketing strategies at national/regional level is a process of planning and valuing the territories' stocks of resources and infrastructures, which should be carried out through consensus development between the main economic agents and the most relevant territorial institutions. Consensus and strategic options, territorially legitimated, which should be developed to allow the way: i) from identity to specificity; ii) from intentionality to visibility; iii) from visibility to attractiveness and competitiveness.

This means territories should be able to start from their identity and specificity (in sector and economic terms), as well as from their stock of resources and

material and immaterial competencies to conquer, in a programmed and intentional way, their international visibility. And this way they will be able to attain interesting attractiveness limits, which guarantee their more important economic sectors competitiveness.

Territorial marketing strategies conception and development, their capacity to build a territorial image and territorial brands, consist on the definition of planning strategies based on five territorial dimensions:

- i) A real dimension, which consists on what is the regional territory in what concerns infrastructures, human resources, enterprises - the specific territory, quantifiable;
- ii) A symbolic dimension, which is the result of a dominant image that characterises the territory and turns it attractive or not;
- iii) A potencial dimension, usually very associated to the symbolic dimension and that consists on the characteristics, real or potential, which conduct the institutional decision makers and enterprises to look at this particular territory as a set of potentialities.
- iv) A relational dimension, associated to the kind of institutional and inter-organizational relations (such as the participation on inter-institutional and inter-organizational networks at different geographical scales at local, regional, national or international level) in which the territory and territorial relevant institutions are involved; these relations are often decisive to the building of attractiveness;
- v) Finally, a virtual dimension, which is the result of the territories' use of information and communication technologies, as well as their applications to power and give visibility to their potential and competencies.

The communication strategy should rest in a fundamental point - the territory image. And this image is the result of a qualitative representation, build from objective indicators, but also based on symbols and symbols associations

between reality and imaginary, developing a set of representations. Through the development of territorial marketing, these representations or symbols, of each territory, are progressively generated as products. The territories earn, artificially or not, a differentiated specificity and a vocation.

Defining territorial marketing strategies to supranational regional territories, such as Euratlantic area, is of course a more complex task, as it involves regions belonging to different countries and then a multiplicity of institutions, economic agents and political-administrative authorities from different nationalities.

Euratlantic area regions are, from a political-administrative point of view, very different in what concerns the institutional model of territorial organisation and administration. There are territories with no regional governments, such as Portuguese territories (which mean regional territories with no political-administrative autonomy) and regions such as French and Spanish those do have regional governments but also very different realities in what concerns their specific organisation model.

This a very relevant issue for our task since these different models and autonomy levels may be the cause of some difficulties to anchor on each region's political-administrative authorities the decision making processes to define a joint territorial marketing strategy.

With such a framework, it seems particularly adequate that the Euratlantic project may evolve in what concerns institutional formalisation to become the Euratlantic Network. In other words, we suggest that the different regional development agencies and entrepreneurial associations that are partners in this project may consider the hypothesis of constituting, between them, a network, an institutional, transnational and interregional co-operation structure.

We also think that the regional development agencies and the entrepreneurial associations are entities particularly well positioned and able to design and

conduct territorial marketing strategies such as the one that is ambitious with this project.

The suggestion of creating the Euratlantic Network is justifiable also as a way to concentrate the process of building and administrate the territorial marketing strategy in only one institution - Euratlantic Network and the set of its member-institutions. This will ensure continuity, co-ordination and strategic intentionality logics', as a whole, to the territorial marketing strategy to implement. In the beginning phase the target market would be the north-American market but, in the future, this strategy could be expanded to other markets, such as south-American or others.

On the other side, we must be aware that at sectorial organizational models' level in agri-food/biotechnology sector there are very distinct realities between the considered regions and also between the countries to which these regions belong.

These differences are very significant at sector organisational models' level and also in what concerns quantity, diversity and complexity of enterprises, institutions, investigation and technology transference centres that exist in each region, as can be confirmed trough out this report. Also regional realities in what concerns kind and characteristics of the sector's representation involved (see, on this subject, Annex III).

Again, we must emphasise that there is a strong justification to create an Euratlantic network as a way to articulate, around each regional development agency/ entrepreneurial associations of each represented region, the different institutions and regional/national interests.

Regional development agencies and entrepreneurial associations are usually very well positioned entities to function as strategic interfaces between private

and public sectors. Also for this reason these are entities that on this matter could contribute to define regional (public and private) consensus around the strategy to define and its administration and implementation model - again, this justifies the creation of an Euratlantic Network.

The model to build and implement a territorial marketing strategy to the Euratlantic area based and focused upon an entity such as the Euratlantic network, composed by the different regional development agencies and entrepreneurial associations would also have the advantage of functioning on a logic and based on principles of co-ordination and articulation between sectorial and regional/national interests and sectorial and whole territorial interests.

In spite of the Atlantic and European characteristics which are a common denominator, each of this territories as identities, images, attractivenesses and specificities very different, which are the result of the countries they belong to as well as of there individual characteristics.

Each of the Euratlantic area regions' has already very strong territorial images and very distinct territorial identities. So, the attempt to create a new brand to the group of Euratlantic area shouldn't compromise the international visibility of some of this regions and/or products.

We then suggest that the brand or designation to adopt on the construction of a territorial marketing strategy to promote on USA and Canada should be developed around the generic designation of **Atlantic Regions of Europe**, which do not affect the international individual recognition of each of these regions.

The international visibility that some of these regions already have can be seen on the fact that, as it has been demonstrated on this report, some of them already captured a significant level of north-American investment.

The use of the generic designation **Atlantic Regions of Europe** should be developed to ensure also a great individual visibility in what concerns each of the regions involved on this territorial marketing strategy showing, and giving visibility, to the huge diversity of territorial and sectorial realities that compose Euratlantic area.

The option for a generic designation such as **Atlantic Regions of Europe** would value and give special emphasis to their common geographic characteristic - European and Atlantic - and would assume the intention of being a territorial based strategy in which would be pursued the promotion of the different sectors and investment opportunities these regions present.

According the results of the Discussion Groups and Delphi Method and the data collected in the Qualitative Interview (Annex IV), in a sentence, the territorial marketing strategy to the Euratlantic area shouldn't have a sectorial focus but a territorial focus, with the aim of internationally promote a transnational territory, composed by a group of regions that have different economic sectors with strategic relevance.

This way, the strategy contained on the whole territorial promotion model for these regions would emphasize the strategic value of a territory – Euratlantic area – composed by a diversity of regional realities that enclose, together, many opportunities and competitive advantages.

And, in this case, the Euratlantic area image should be a set of territorial images of each of the involved regions.

In the Euratlantic area regions, and in what concerns agri-food sector, exists also a multiplicity of enterprises (see point 3 of this report) with different dimensions and relevance, as well as commercial brands , with a very different visibility level in what concerns national economies scale or international scale

and a huge variety on the destination markets for exported products (see Annex V).

Some of these brands have already a high international visibility and shows the great potential that agri-food may represent to the Euratlantic area regions and to their promotion in the north-american market.

And given the international relevance of some of these brands, any Euratlantic area agri-food sector territorial marketing strategy to be built and implemented should be anchored on the promotion of these products, brands and the entrepreneurial groups they belong to.

These brands should be central elements of the marketing strategy and should be promoted in a very visible way.

This group of regions has also an enormous potential associated to the fact that they have a large set of territorial brands (Protected denomination of origin, protected geographic indication and traditional guaranteed speciality) in the agri-food sector (see annex V).

Although many of the productions associated to these territorial brands have a very low production capacity in what concerns quantity they reveal the richness of these regions in agri-food sector and should also be mentioned and promoted at international scale.

We should be aware that these territorial brands can, on one hand, constitute important attractions to foreign investment in these regions, directed to these products exploitation and valorisation and, on the other hand, because these products, given their high quality and rarity may constitute productions to be commercialised on the north-american market among a very sophisticated segment of consumers.

Any marketing strategy developed to this supra-national set of regions should be supported on the principle of co-ordination and articulation between territorial marketing strategies already being carried out or to be developed in each region.

This way, territorial marketing strategy to Euratlantic regions, in what concerns agri-food sector should be designed to conciliate natural principles of concurrence between productions and enterprises of each regions and the initiatives that may promote new articulation and complementarity's strategies between regions.

As well as we must take a particular care on the creation and utilisation of a territorial brand Euratlantic as this brand may directly concur, or even determine some reduction on the visibility of already existing territorial brands of each region or even to some commercial brands from products already particularly known in international terms.

The same cares, for the same reasons, should be taken with the markets where these joint territorial marketing strategies are to be promoted, so that the joint strategy should not rival with entrepreneurial individual strategies already carried out with success.

4.2. Agri-food and Biotech sector territorial marketing strategy framework for Euratlantic area

All the reasons pointed out in the previous point advice that the territorial marketing strategy developed for Euratlantic area should have, as a departure pre-condition **the transformation of Euratlantic Project on the Euratlantic Network**, as the formal inter-regional and transnational structure of co-

operation between the involved regional development agencies and entrepreneurial associations.

Euratlantic Network would then have, beside the normal competences associated to regional development agencies and entrepreneurial associations, now developed at transnational scale with the principle of co-operation and articulation between each member, also the responsibility of functioning as a transnational structure to support commercialization, distribution and investment.

In this sense, Euratlantic network would also have a specific vocation in what concerns the concentration and co-ordination of a collective territorial marketing strategy. In the same way it would have later the mission to continuously and sustainable support the regional and entrepreneurial initiatives to conquer new markets that its members - enterprises or regions - could develop.

The Euratlantic Network would have the responsibility of:

- i) Capture foreign investment and entrepreneurial initiatives to be installed in the involved regions;
- ii) Developing searching functions on new markets for the products and productions of the regions and enterprises involved;
- iii) Supporting the processes of commercialisation and distribution for external markets of these products and productions of the regions and enterprises involved;
- iv) Supporting the internationalisation processes of the enterprises involved;
- v) Manage and co-ordinating the territorial or sectorial joint marketing strategies definition addressed to external markets, to be defined to the regions and enterprises of Euratlantic area.

The image of the brand Atlantic Regions of Europe should correspond to a selected set of images representative of each of the regions involved, assuming clearly the territorial base of the strategy.

With the institutional framework of Euratlantic Network and under the generic promotion designation of Atlantic Regions of Europe, the territorial marketing strategy to develop for the Euratlantic area – Atlantic Regions of Europe -, in the north-American market, and agri-food+biotech sector should be developed around three intervention areas:

- i) **Area 1** – Attraction of entrepreneurial investment
- ii) **Area 2** – Main enterprises, products and brands;
- iii) **Area 3** –Each region specific products and productions and organic farming products;

Intervention in **Area 1** would have the objective of showing to north-American investors the investment opportunities on the sectors (agri-food or, eventually, others) and regions of Euratlantic area and to support the process of materialization of these investments.

Intervention in **Area 2** would be directed to the promotion of the main productions, brands and agri-food products of Euratlantic area and support the commercialisation and distribution of these products and productions on north-american markets.

Intervention in **Area 3** would be focused on the promotion and support to commercialisation of each region's agri-food products and productions and organic farming products in the north-american market. In what concerns specific products and productions, and specially for products with very high standards of quality and specificity, the strategy should be to support their

commercialisation in consumer segments much specific and exigent, functioning these products and productions as excellence references for the considered territories. This intervention Area should also be concerned with the captation of north-american investment directed to entrepreneurial initiatives associated to this kind of products and productions.

A central element to implement this territorial marketing strategy to the Euratlantic area is the **creation of a territorial promotional kit for Euratlantic area.**

This kit should be composed of:

- i) **An Investor Guide** – as a way to communicate and promote the regions that compose Euratlantic area in what concerns, among others, the following aspects: **1)** Main characteristics of the regions belonging to the Euratlantic area; **2)** Their main economic sectors; **3)** Their main enterprises; **4)** Their investment opportunities; **5)** The regions' quality of life; **6)** Their culture and patrimony; **7)** Their know how and their main institutions and their main science and technology and teaching and researching infra-structures; **8)** Their accessibility and transport infrastructures; **9)** The main infra-structure and welcoming conditions for enterprises in each Euratlantic region; **10)** Each region's enterprises' location and installation incentives; **11)** Each region's and country's labour, entrepreneurial and fiscal laws; **12)** European Union most relevant labour law; **13)** The burocratic procedures and main region's contact institutions if there is an interest to create or localize an enterprise;
- ii) **A CD ROM for agri-food sector main enterprises, main products and main brands propagation and promotion** – A CD ROM with a directory, a data base, with the identification of main enterprises, main products and main brands of the Euratlantic area regions, including their contacts (address, telephone, fax, e-mail, web page);

- iii) **A CD ROM for main agri-food products with Protected Designation of Origin, Protected Geographical Indication or Traditional Speciality Products propagation and promotion** – A CD ROM with a directory, a data base, with the identification of the main agri-food products with these characteristics in the Euratlantic area regions, including their contacts (address, telephone, fax, e-mail, web page)
- iv) **A CD ROM for main agri-food products from Organic Production propagation and promotion** – A CD ROM with a directory, a data base, with the identification of the main agri-food products from Organic Production in the Euratlantic area regions, including their contacts (address, telephone, fax, e-mail, web page)
- v) **A CD ROM with the Euratlantic area regions' general presentation** – A CD ROM with a regions' multimedia general presentation, essentially with objectives of promotion and touristic propagation.

Naturally, as an instrument to co-ordinate and make the general articulation of Euratlantic Network functioning activities, this Network should create its web page and respective intranet. So, in what concerns territorial marketing strategy to develop and promote Euratlantic area regions, based on agri-food sector, the promotional kit information should also be available on the web page.

In a competitive and transnational environment, Euro-Atlantic territorial marketing strategy requires integration of traditional instruments with interactive web tools for communication and transaction services, specifically designed to promote a region and to attract new investments. The final result should be a tool - VETA (Virtual Euroatlantic Territorial Agency) - for building a local Euroatlantic Territorial Marketing Agency, to be replicated in the diverse Euroatlantic regions. This common framework will merge all existing data and services into a suitable platform, actively involving political and business decision makers, and will offer concrete marketing services to a large array of investors.

Beside the promotional kit Euratlantic Network should also develop, on the scope of this territorial marketing strategy, the following associated activities:

- i) Participation and presence of Euratlantic Network on some of the main agri-food sector's fairs and competitions in North-American continent;
- ii) Publicity in North-American strategic communication means.
- iii) Development of an Euratlantic store – Atlantic regions of Europe – in a group of north-American cities where permanently and continuously the key-factors of attractiveness of the territory should be presented and also function as a meeting point for potential investors. That could also function as promotion of main products and main brands or specific products;

In a competitive and transnational environment, Euro-Atlantic territorial marketing strategy requires integration of traditional instruments with interactive web tools for communication and transaction services, specifically designed to promote a region and to attract new investments. The final result should be a tool - VETA (Virtual Euroatlantic Territorial Agency) - for building a local Euroatlantic Territorial Marketing Agency, to be replicated in the diverse Euroatlantic regions. This common framework will merge all existing data and services into a suitable platform, actively involving political and business decision makers, and will offer concrete marketing services to a large array of investors.

4.3. Developing an Agri-food and Biotech sector territorial marketing strategy in Euratlantic area

This section presents the information needed to develop and implement a territorial marketing strategy action. This is the result of the analysis carried out on the secondary and primary data collected before. The data has been analysed, transformed and compiled into the basic set of internal information needed to develop and implement external communication and promotion materials, for the total Agri-food and Biotech Euratlantic Area.

The objectives are targeting investors in Agri-Food and Biotech sector, identifying a limited number of products, sectors, sub-sectors and/or business propositions in which the Agri-Food+Biotech Euratlantic Area is able to be attractive. The target groups are essentially food processing and packaging, organic and qualified products, green biotechnology, food equipment and machinery, logistics and R&D.

The information presented focuses on the image (positioning and recognition) of Agri-Food+Biotechnology Euratlantic Area in the international business, in general, and in the US and Canada business, particularly.

4.3.1. what is Euratlantic Region?

I- A region at the border of the Western Europe:

- Euratlantic is not a region in the administrative sense;
- Euratlantic is the name chosen by the Euratlantic Project to integrate three regions in Portugal (Alentejo, Center and North), five in Spain (Andalucia, Asturias, Castilla y León, Galicia and La Rioja) and five in France (Bretagne, Basse-Normandie, Limousin, Pays de la Loire and Poitou-Charentes) to devise a concerted strategy to create and develop territorial marketing to attract North American investors.
- Euratlantic region combines a ten coastal regions (with Porto, Coimbra and Évora as capital cities in Portugal, Sevilla, Oviedo and Santiago de

- Compostela as capital cities in Spain, Rennes, Nantes and Poitiers as capital cities in France);
- Euratlantic region covers an area of about 400,000 sq. Km (comparable to Germany) and it hosts about 30 million residents (comparable to California). It is a relatively populated area with about 75 person/sq.km or 195 person/sq.mile (comparable to California, Michigan or Indiana);
 - It is located in a geo-strategic position for product transport and distribution chains to the American continent, with good connections to Central and Northern Europe and the Mediterranean and proximity to the main European capitals.
 - Euratlantic region has considerably higher economic growth (1,8% in 2002) compared with the EU-15 average (1,0% in 2002) or EU-25 average (1,1% in 2002). Spain has the highest economic growth and similar to the national average and France and Portugal regions have considerably higher rate than the country average.
 - The total GRP in Euratlantic region was 500 billion Euros in 2002 (comparable to Netherlands and the American state of Indiana).
 - French regions are clearly the regions with greater GRP per capita. In second place appear Spanish regions and in the last place are the Portuguese regions. The average GRP per capita of the Euratlantic Area was € 15,600 in 2003.

II- A cost-effective alternative region in Western Europe:

- A region with 15 million of total labour force, 13 million of total employment and unemployment rate equivalent to the EU-15. , wich represents one-third of the total labour force in Spain, two-thirds in Portugal (comparable to Benelux countries);
- Euratlantic is a region with labour costs lower than the average. Vary from 82% of national average in Portugal (Norte region) to 100% of national average in Spain (Asturias). Of the three partners, Portugal has the lower labor cost index, followed by Spain, while France has the highest index value. This is a very strong point in favour of Portugal as a destination for labor-intensive agro based FDI.

- A region with qualified and experienced workforce and a higher weight of industrial sector;
- A region with a very important agri-food and biotechnological sector, where American enterprises can find a great number of possible partners;
- A region with good infrastructures for the transport of materials and agri-food products and distribution channels, such as trucks infrastructures, airports (ten international airports: Porto, Malaga, Seville, Santiago de Compostela, Jerez de la Frontera or Nantes are not very large airports, but have substantial traffic), commercial seaports (only Limousin, La Rioja and Castilla y León do not have access to the sea), the high-speed train, logistics platforms, and agri-food technological parks in all Euratlantic regions (5 in Spain, one in Portugal and nine in France);
- A region with a great dynamism and continuing impulse in terms of R&D, innovation and IT. The total expenditure in R&D in the Euratlantic regions amounts for 0,85% of the Euratlantic GDP. This compares poorly to the 1,93%, average for EU-15 countries. Similarly, the expenditure made by private businesses in the Euratlantic Area totals 0,35% of the Euratlantic GDP, which compares very poorly with the EU-15 average of 1,3% of GDP;
- A quite large portion of the knowledge and technological centres are focused on the agri-food sector which means that Euratlantic region can provide investors with a specific and focused research and development base to support agri-food sector;
- A growth presence of cluster initiatives in agri-food sector, ideal locations to develop high technological activities (Wine and cork in Portugal, Sea ('Mer'), Brittany Valorial, Brittany and Pôle Végétal, Angers, Pays de la Loire in France and wood, sea products, wine and olive oil in Spain);

III- A Region with quality of life, economic growth and attractiveness of landscapes that attracts people

- Euratlantic is the Grand Lake region - the biggest artificial lake in Europe with its 250 km², situated in Alentejo region of Portugal, near the Spanish

border, is 83 km long and has a perimeter of 1160 km. The water has an incredible quality and great potentialities from tourism and leisure activities, agriculture and agri-food business, energy production and others.

- Euratlantic region present excellent performance in quality of life index. It has a higher index than the national ones.
- Euratlantic region showing great economic growth and a highly attractive land with strong demographic growth in France and a strong touristic growth in Spain and Portugal;
- Combines quality of life and economic development, Euratlantic region is one of the major locations for summer or winter holidays and tourism. Consulting the regional tourism offices in each country and region provides more information about tourist activities and alternatives in Euratlantic region;
- Euratlantic regions are ranked in first for best places to live in each country. Reasons for that are low-stress environment, friendly weather conditions, good food and regional delicacies, safe and secure environment, dynamic, cultural and recreation events, quality of education, relatively low prices and very low pollution indexes.

IV- A Region focused on Agri-Food sector

- Euratlantic region present a strong agri-food base and a complete range of services to companies (Banking, Insurance, Finance, Consulting and Audit, Logistics, Call centres, Telemarketing and Foreign Embassies);
- The Euratlantic region combined is one of the largest agricultural and agri-foodstuff producing area in Europe. The agri-food industry total turnover is about 60 billion Euros in all region, with about 24.358 companies (14650 in Spain, 3205 in France and 6500 in Portugal) and generating more than 320.000 jobs;
- The main agri-food sectors are eggs and meat production, dairy industry, cattle feed, fresh and preservation pastry and biscuits industry, meat-based products, tomato industry, wine production, olive-oil production, fresh and processed vegetables and fruits;

- Food industry firms have all the expertise necessary to turn existing resources into sophisticated products for a number of industries (dairy products, meat-based products, tomato industry, wine industry, olive-oil industry, pastry and biscuits industry, fruits and vegetables industry);
- The Spanish agri-food sector ranks fifth in terms of sales in Europe. It is the largest sector of the Spanish manufacturing industry, with 20% of the total industrial production, 15% added value, and 17% total employment;
- In **Andalucía**, The food-processing industry has a total turnover of 9.700 millions euros, with 6228 companies witch employs 50900 persons in total. The most important sector in terms of revenue is the sub-sector of fats and oils with approximately 3275 million euros. The second most important sector is meat production, with a total turnover of 1089 million euros. The main agriculture productions are cereals, raise, sugar beet, early fruits, citruses, potatoes, tomatoes, olive oil, oily ones and wine. With in the cattle industry, the most important products are milk from dairy cows and goats, meat and meat-based products from Iberian pig;
- **Asturias** is the foremost dairy region of the country, with a total turnover of 705 million euros. It's has a total number of agri-food companies of 762 with 1355 million euros of income. These 762 industries have a total of 7400 employees. World-wide known cheese Cabrales it is elaborated with a milk mixture of cow, ewe and goat, being put under a later maturation that provides an extraordinary flavour. Among the agricultural productions it is possible to highlight numerous productions as apples for cider, potatoes and diverse vegetables. The meat as also a great fame and bull calves are mainly exported to different parts of the country, as well for other countries of de EU.
- The region of **Castilla y León** constitute the nucleus of the Spanish cereals production. It's has a total of 3338 companies witch employees 32150 persons, with a total revenue of 5741 million euros. The main agriculture productions, besides de cereals, are vegetables, oily ones, potatoes and sugar beet. The wines have reached worldwide prestige due to careful elaboration and quality concept that is applied with great rigor. In the cattle productions dairy have a great importance, as so cattle meat (bovine, sheep and goats). Has dairy, the cheese production elaborated

- with milk from cows and sheep, is a great revenue income. Poultry, rabbit and pig industries complete the panorama;
- The agri-food sector in **Galicia**, has a turnover of 4637 million euros, a number total of 2728 companies and employs 27290 persons in total. The most important agricultural productions are maize, potatoes, young apples and wines. As cattle productions are to mention milk and its derivatives, which constitute the form of life of many small operations, poultry keeping as well as the meats from bovine and pig;
 - **La Rioja** has a total of 912 agri-food companies witch made a total income of 1473 million euros, and 6600 workers. La Rioja is world-wide known for is wines, the most lucrative sector that constitute 55% of the industrial revenue of the region, with numerous warehouses, many of them founded more than 200 years. It's produced also cereals, sugar beet, fruits (mostly pears and famous peaches for conserve) and vegetables (potatoes, lettuces, borecole, onions, mushrooms, asparagus, beans and peas). The region is also important in the meat industries, by the presence of many large herds of cattle, sheep and goats mainly, as well as is meat and milk cows. Nevertheless, the intensive cattle ranches of pigs, rabbits and poultry are beginning to be developed in the region. Also, the region had been developing in the recent years the industry of traditional vegetal conserves and to lesser extent meat ones. Between these last ones it emphasizes the meat-based products of La Riojan that constitutes a complement forced for red wines of the Rioja;
 - The France Euratlantic regions, represent 28% of the French agri-food sector in what concerns the enterprises' number, 33% in what concerns employees, 29% in what concerns to the annual turnover and 24% of added value;
 - In **Basse-Normandy region**, the agri-food sector has a total turnover of 6.6 billion euros. It's the largest industrial employer in the region with more than 330 companies witch employs 36000 persons (157 firms with more than 20 employees). Normandy is a farming region, which is famous for its dairy production, with a high added value. It's France's foremost cheese-making region and has earned Normandy an international

- reputation. As Normandy is devoted mainly to dairy production, most of its meat comes from dairy cows. However, the region also produces high-quality pork (3rd largest producer in France), lamb and horsemeat, as well as poultry and rabbit. By ranking number, Normandy is the fifth one in France for cream, butter, white and soft cheeses, flax, cider apples, oysters, creams, carrots, leeks and turnips, and Pacific oysters;
- **Western France (Bretagne, Pays de la Loire, Poitou-Charentes)** is the largest agricultural and agri-foodstuff producing area in France and also in Europe with 2425 companies with 123000 employs (780 companies with more than 20 workers). The agri-food sector has a turnover of 30 billion Euros and carries out 30% of the country's food-processing exports. Is the first French region in meat production, seafood processing and fish industry, dairy industry, cattle feed and pet food, fresh and preservation pastry and biscuits industry, meat-based products and seafood-based products;
 - **Limousin** is a region of unspoilt nature with generous and varied natural products as meat, milk, cereals and water. The region has 700 companies with 40000 employees in total. Is strong tradition and skills, particularly for the production of cheese and cooked, smoked and salted meat products, as granted an international reputation. The presence of many large herds of cattle (Charolais, Limousin, Salers and Aubrac breeds) makes it an important area for the meat and milk industries. With 12% of all French milk production, Limousin has become the main production region in Europe for cheese with a label of origin. It is also an important area for the production of foie gras and ready-prepared meals, and is the main jam producing area in France. Also produces a variety of concentrates, such as the fruit syrups. Is as well the home of an important bottled drinks and mineral water sector which produces half the bottled mineral water in the whole of France;
 - The Portuguese Euratlantic region represents 76% of the agri-food companies, 11,3% added value, and about 20% total employment;
 - Portuguese most important agri-food sub-sectors are milk industry, breeding animals' feed industry (in the **Norte** Region), wine industry (**Norte, Centro and Alentejo**), cattle slaughtering industry (**Alentejo**),

- bread making and pastry industry (Norte region), beer industry (Norte and Centro regions), juices and other non-alcoholic drinking industry (Norte and Centro regions), poultry and rabbits slaughtering industry (Centro) and tea and coffee industry (**Norte and Alentejo**);
- Situated in **Alentejo** region of Portugal, the biggest lake of Europe is 83 km long, has a perimeter of 1160 km and and 110 million hectares of irrigable area. It has great potentialities from agriculture (special horticulture and fruits and olives), first transformation and added value processing investments, energy investments (electric but specially eco and bio diesel) and others. A Technological Agri-Industrial Park (Parque Agro-industrial do Penique) is in implemented phase.

IV- A leading position in health, safety and quality food

- Euratlantic region demonstrates higher capacity in organic agriculture, traditional quality products and healthy production processes to the burdening of consumers exigencies in what concerns quality and food safety;
- In France, Pays de la Loire has the first national position in what concerns qualified products (PDO, Label Rouge, Organic Agriculture, Certificat de Conformité de produit), with more than 100 products in 20% of the farms and representing 1 to 1,2 thousand Euros of total 19,8 thousands in all France. In what concerns organic agriculture, the region concentrates 12% of national surface in this way of production (2,3% of regional surface), on poultry and ewes, cereals, forages, protein seeds and wine;
- In Spain, Andaluzia and Castilla y León concentrate the majority of quality products and Organic Agriculture products.
- In Portugal Alentejo is the leader, dominating the qualified products and the Organic Agriculture products;
- An equilibrium between distribution channels organization, production development, and regulations among Euratlantic area, to allow organization at this level, should be attained to allow this niches to become even more important in Euratlantic are as a whole.

V- A major Biotechnological region in Europe

- Biotechnology is a sector with one of the highest growth prospects in the Euroatlantic area over the coming years. This embraces wide and diverse areas such as: health (genomics and proteomics), agriculture (genetic engineering), food (new foods), environment and new materials;
- Compared with Portugal, Spain and France have more strong biotechnological sectors. With an exception to Bretagne, which has the bigger importance and tried to promote the region as a biotech area, the Euratlantic regions have relatively low impact and image as a biotech area;
- Euratlantic region has 509 Biotech companies (239 in France, 45 in Portugal 45 and 225 in Spain). The main activities are agriculture, health, food and environment. The more important biotech Spanish Euratlantic region is Andalucía, in France is Bretagne and in Portugal is Norte region.

4.3.2. Why invest in Agri-Food and Biotechnology Euratlantic Region?

Because Euratlantic region:

- I- presents a growing and dynamic environment;
- II- is located strategically in Europe;
- III- has a lower labour-cost;
- IV- has a friendly weather conditions;
- V- has flexible and qualified workforce in agri-food and biotech sector;
- VI- has great dynamism and continuing impulse in terms of R&D, innovation and IT in agri-food and biotech sector;
- VII- leading scientific and technological excellent in different fields such as agriculture machinery and food sectors, treatment of farm and

food products, animal feeds, plants and animal biology, biotechnologies, enology, food quality control and traceability;

- VIII- has a leading position in several agri-food products health, safety and quality food;
- IX- welcomes foreign investments and investors providing financial taxes and incentives for specific agri-food projects;
- X- is able to provide professional advise before, during and after the investment process;
- XI - is a first tourism destination worldwide, with a less-stress and more secure and safe environment in Europe.





Study Conclusion

The conclusions of the study are the following:

I- General presentation of Agri-food sector in Euratlantic region

The food-processing industry in the Euratlantic region is a very important one. Euratlantic region is one of the largest agricultural and agri-foods producing area in Europe. The food-processing industry total turnover is about 50 billion Euros in the all region, with about 36.000 enterprises and it provides most jobs then any other sector in the region, generating more than 379.000 jobs.

French Euratlantic area represents 14.620 enterprises, about 199.000 employees and a turnover of about 37 billions €. Spanish Euratlantic area represents 14.653 enterprises, 124.340 employees and an annual turnover of about 12 billions €. Finally, Portuguese Euratlantic area represents 6.545 enterprises, 55.964 employees and an annual turnover of about 1 billion €. These numbers mean the Euratlantic area represents about 13.2% of the European enterprises in the sector of food and beverages and 10.5% of the employment in this sector. Gross Value Added at Basic Prices of the Agricultural Industry is, for Portugal, Spain and France, of almost 60 millions Euros, which is about 42% of EU-15.

The annual turnover can be divided by each sector of food and beverages' industry to have a short vision of their importance. In France, animal slaughtering represents 25.0% of the annual turnover of the food and beverages sector, fruits and horticulture's preparation and conservation represent 5.3%, oils and animals and vegetables' fats production represent 1.4%, milk and milk products' industry represent 19.8%, legumes and cereals' transformation and the production of starches and similars represent 4.0%, production of animals' food represent 7.9%, production of other feeding products represent 21.0% and drinks' production represent 15.61%. In Spain,

animal slaughtering represents 12.8% of the annual turnover of the food and beverages sector, fruits and horticulture's preparation and conservation represent 5.7%, oils and animals and vegetables' fats production represent 2.4%, milk and milk products' industry represent 12.8%, legumes and cereals' transformation and the production of starches and similars represent 2.3%, production of animals' food represent 6.1%, production of other feeding products represent 19.4% and drinks' production represent 38.5%. Finally, for Portugal, animal slaughtering represents 16.4% of the annual turnover of the food and beverages sector, fruits and horticulture's preparation and conservation represent 4.4%, oils and animals and vegetables' fats production represent 6.6%, milk and milk products' industry represent 13.2%, legumes and cereals' transformation and the production of starches and similars represent 4.4%, production of animals' food represent 11%, production of other feeding products represent 20.9% and drinks' production represent 23.1%.



II- Main strengths of a location in Euratlantic area

1) Availability and Security of Raw Material

Proximity to and availability of raw material.

2) Availability of Highly Skilled Workforce

The Euroatlantic region has a large availability of skilled workforce. Number of students in the university could be a decisive factor for north-american enterprises, enter in the labor market with a great potential and with lower cost for enterprises

3) Transportation Infrastructure

Good airports and seaports and proximity of other international airports and good Highway network; Spain had also the largest logistic platform in Zaragoza.

4) Innovation / R&D

There exist some IT and R&D initiatives in Euratlantic regions and an exceptional concentration of public and private research centers. The region has great dynamism and continuing impulse in terms of R&D, innovation and IT in agri-food and biotech sector; leading scientific and technological excellent in different fields such as agriculture machinery and food sectors, treatment of farm and food products, animal feeds, plants and animal biology, added values processing, packaging, logistics, biotechnologies, enology, food quality control and traceability.

5) Low Energy / Utilities Costs

In general, utilities are cheaper in these countries, when compared with many other countries of the EU and USA. Presents a growing and dynamic environment, a lower labour-cost and a flexible and qualified workforce in agri-food and biotech sector. A relatively high unemployment means that is available a large amount of labor force

6) Distribution Network

Some optimal distribution network intelligently designed to minimize costs by providing the customer the right goods, in the right quantity, at the right place, and at right time (Walmart.com; tompkinsinc.com; Dabur.com; bizeurope.com; rhodia.com; Wholesale; Silliker.com; organic-europe.net; gonzalesbiass; beveragedaily.com; dolefoods, Tibbett & Britten Portugal's and others big groups). S well fully developed transportation network (highways, high-speed train, TGV, international airports, seaports).

7) Market Size

GDPs of EU-25 and USA are roughly comparable; with trades between these two regions exceed a billion US dollars per day. Euratlantic area is similar to Germany, with about 30 million inhabitants.

8) Business Opportunities

Euratlantic means a fabric of agri-food companies with organizations off all sizes working together, numerous foreign firms and a wide range of activities. Speciall opportunities business are: added-value foods and beverages, seafood and aquaculture, vegetables oils and olive oil, meat and animal genetics, processed food and beverages. Other businss opportunities are the logistics function (in Europe logistics market is worth an estimated € 710 billion, or 8% of Europe's GDP, of which, € 320 billion is outsourced). This is a very broad sector with more than 1 million companies totalling a workforce of more than 5 million people. Being both the European continent's Atlantic coast and a crossroads between North America, Northern Europe, Benelux and Mediterranean Basin, Euratlantic region is at the heart of the European markets. It borders with 7 other countries and also provides a unique gateway into Southern and Eastern Europe and to North Africa and Middle East as well which, according to the World Bank, represent fast-growing consumer goods markets.

9) Incentives

The existence of regional incentives, like subventions and/or reduction of taxes. Some of the world's leading companies have already invested in France, Spain or Portugal processing facilities, confirming Euratlantic's reputation as one of the most promise and lucrative investment location in Europe.

Strategically located position, near the Atlantic Ocean, Northern Europe and Mediterranean Sea, with access to all the Western coast of America and access to Africa and good weather conditions.



III- Sub-sectors in Euratlantic area

Portugal

Norte

UNICER - SUMOS E REFRIGERANTES S.A. is a Added value processing beverages company. AVELEDA - SOCIEDADE AGRICOLA E COMERCIAL DA QUINTA DA AVELEDA, S.A. , SOGRAPE VINHOS S.A.; SANDEMAN & CA. S.A. and REAL COMPANHIA VELHA S.A. belong to the Seven Group of the biggest wine companies in Portugal.

GELDOURO - PRODUTOS CONGELADOS, S.A.; PANIKE - INDUSTRIA DE PRODUTOS ALIMENTARES CONGELADOS, S.A. are frozen and deep-frozen foods companies and LACTOGAL - PRODUTOS ALIMENTARES, S.A. one of the biggest companies in Iberian for milk and dairy products processing. CERALIS SGPS S.A. and BAKEMARK SA are first transformation flower milling and Bread, factory-baked.

Centro

CAVES ALIANÇA, S.A. is one of the others seven big companies in wines, liquors and spirits; NUTROTON and SORGAL, are grains, livestock and poultry producers and processors, PROLEITE is milk first transformation cooperative and GELGURTE, LDA (Ice creams and sorbets), DANONE PORTUGAL, SA (Yoghurt) and DEROVO (Eggs products) re added value processing companies. DEROVO has a medal of better company in the world 2004.

Alentejo

SALSICHARIA ESTREMOCENSE, LDA (Meats, cooked and cured) TOMSIL (Tomato) and Delta (Coffee products) are the more important added value processing companies. The last one is market leader in Portugal. Finagra (Wine and olive oil) is another wine company integrated in the Seven group of the main producers in Portugal.

Spain

La Rioja

HERMANOS CUEVAS S.A. (Vegetables, tinned added value company), and EUROCHAMP SAT (Vegetables, pickled) are important added value companies. BODEGAS RIOJA SANTIAGO, S.A. (wine) and ARLUY, S.L. (crackers and snacks) are other important ones in the region.

Galicia

SAPROGAL, S.A. (Premix for livestock and poultry) is an important livestock premix manufacturing company). In the frozen and deep-frozen foods sector, important ones are VIDISCO SL, FRINOVA, S.A. (Frozen and deep-frozen foods), and CHYMAR S.A. (Fish).

MOYRESA SA is important in Vegetable oils transformation, CALVO CONSERVAS, S.L. in Vegetables, preserved, LECHE PASCUAL SA (in milk processing), INGAPAN, S.L. Bread in cakes and pastries, GRUPO LACTALIS IBERIA S.A. in Cheese and CASA SANTIVERI SA in dietary and organic foods.

Castilla y León

The main companies in the region are: TROUW ESPAÑA SA in Feeds for animal farming, ZUMOS PASCUAL, S.L. and DULCES Y CONSERVAS HELIOS, S.A. in Fruit added value processing products (juices and jams), and NATURIN SA is an aperitifs company. In dairy products, we mention, QUESOS FRIAS, S.A, LACTEAS GARCIA BAQUERO SA, ANGULO GENERAL QUESERA SL and CLESA S.A. JAMONES SEGOVIA, S.A (Ham), INDUSTRIAS CARNICAS VILLAR S.A., and CAMPOFRIO ALIMENTACION S.A are meats, cooked and cured companies. Other added value companies are IBERGEL, S.A. (Frozen and deep-frozen foods) and GALLETAS SIRO SA (Crackers and snacks):

Asturias

INDUSTRIAS LACTEAS MONTEVERDE AS (Cheese), EMBUTIDOS VALLINA, S.A. (meats cooked and cured) and CHUPA CHUPS SA re the main companies in Asturias.

Andalucia

SANCHEZ ROMERO CARVAJAL JABUGO S.A., re one of the more important companies in the meats, cooked and cured field, and LATCIMIL S.A., LACTEA ANTEQUERANA S.L, PULEVA FOOD SL, RAMIREZ SANTOS, S.A., DHUL, S.A., HELADOS MIKO SA in the milk sector and dairy products. OROMAS S A is an important company in the cereal processing food and INTERNACIONAL ENVASADORA, S.A. (olives packaging) and ANGEL CAMACHO, S.A. (olive oil) in olive sector. In terms of wine sector the COVINJE S.L. and BODEGAS PEDRO DOMEQ S.A. and BACARDI ESPAÑA S A are the more relevant.

France

Limousin

In the region are important companies VALADE (Jams), MADRANGE (Meats, cooked and cured) and MADELEINES BIJOU Cookies.

Poitou-Charentes

STE COOPERATIVE AGRICOLE LESCURE BOUGON in cheese GRAND OUCHE SA (dairy products) and AVI CHARENTE in desserts milk-based are very important companies in the milk and related products sector. RAYNAL & CIE and REMY COINTREAU are relevant in the wine and liquors and spirits sector. ATLANTIQUE ALIMENTAIRE is one of the biggest in the frozen and deep-frozen foods and NATURENVIE in dietary and organic foods.

Pays de Loire

In milk and dairy products sector the relevance goes to VAUBERNIER, FROMAGERIES PERREAULT and STE FROMAGERE DE CHARCHIGNE for cheese processing, LAITERIE SAINT PERE, UNION SUD VENDEENNE AGRICOLE LAITIERE, LACTALIS LOGISTIQUE, EURIAL POITOURAINE and COOPERATIVE LAITIERE MAINE ANJOU. In Bread, cakes, biscuits and pastries sector, the main companies are LA BOULANGERE, BRIOCHE PASQUIER and UNITED BISCUITS FRANCE. TIPIAK is relevant in frozen and deep-frozen foods, STE EUROPEENNE PRODUITS ALIMENTAIRES in Vegetables tinned and Foods, precooked and gourmet. Other added value companies are PRUNIER and LDC SABLE (Foie Gras), CELIA (cream, sour) and LUISSIER BORDEAU CHESNEL (Meats, cooked and cured).

Basse Normandie

The main companies are milk and dairy products ones, like, CENTRE BRETAGNE LAIT (milk), STE BEURRIERE, SOGEPS , ELVIR , COOP AGRI LAIT MAITRES LAITIERS COTENTIN, COMPAGNIE LAITIERE EUROPEENNE (Dairy products) and SAS LA COMPAGNIE DES FROMAGES ,COOPERATIVE ISIGNY-SAINTE MERE (Cheese), FLORETTE is representative in vegetables, preserved, LES SALAISONS DE BROCELIANDE in meats, cooked and cured and SCHWAN S FRANCE Foods in precooked and gourmet.

Bretagne

In Bretagne, MONIQUE RANOU, ONNO, ETABLISSEMENTS JEAN BRIENT, BERNARD SA , ALH ARGOAT LE HIR are the main companies in the meat sector, with added value processing products (meat cooked and cured). UNICOPA is an important company in cheese sector, ALTHO in crackers and snacks processing, CELTIGEL, EURAGRA and DOUX PERE DODU in frozen and deep-frozen foods, JEAN STALAVEN TRAITEUR and HOUBEbine SA Foods in precooked and gourmet, KERLYS and CIE GEN PROD ALIMENTAIRES PENY in vegetables preserved, DELIFRANCE S A and DAUNAT BRETAGNE in bread and pastries. Finally, VETAGRI SA is an international company in premix for livestock and poultry farming.

IV- Services/Research

Offering an internationally respected agri-food inspection system, Euratlantic region is highly committed to food safety and quality.

There exist an exceptional concentration of public and private research centers, leading scientific and technological excellent in agri-food and Biotechnology:

Spanish

Andalucia

- Centro Andaluz de Prospectiva
- Centro Informático Científico de Andalucía.
- Instituto de la Grasa en Sevilla, CSIC.
- Instituto Andaluz de Biotecnología
- Instituto Andaluz de Investigación y Formación Agraria, Pesquera, Alimentaria y de la Producción Ecológica, adscrito a la Consejería de Innovación, Ciencia y Empresa.
- Centro Andaluz de Investigaciones Vitivinícolas. Universidad de Cádiz.
- Centro Andaluz de Agricultura Sostenible. Universidad de Córdoba.
- Campus Ciencias de la Salud. Granada
- Centro de Investigaciones Científicas "Isla de la Cartuja", dependiente de la Universidad de Sevilla, Junta de Andalucía y CSIC.

Asturias

- Instituto Universitario de Biotecnología
- Instituto de productos lácteos de Asturias (IPLA)
- Asociación de Investigación de Industrias Cárnicas
- Servicio Regional de Investigación y Desarrollo Agroalimentario (SERIDA)
- Laboratorio Interprofesional Lechero de Asturias, (LILA). Para los detalles ver informe anexo del que se hablaba en el punto anterior.

Castilla y León

- INBIOTEC: Instituto de Biotecnología de León
- Centro de investigación del cáncer

- ITA: Instituto Tecnológico Agrario de Castilla y León
- CARTIF: Centro de Automatización, Robótica y Tecnologías de la Información y de la Fabricación

Galicia

- Centro de Innovación y Servicios del Diseño y la Tecnología
- Centro Técnico Nacional de Conservación de Productos de la Pesca
- Centro Tecnológico del Mar
- Centro Tecnológico de Acuicultura de Peces
- Fundación para el Fomento de la Calidad Industrial y el Desarrollo Tecnológico

La Rioja

- CTIC: Centro Tecnológico de la Industria Cárnica
- CTICH: Centro Tecnológico de Investigación del Champiñón
- CIDA: Centro de Investigación y Desarrollo Agrario del Gobierno de La Rioja
- Laboratorio Regional Finca La Grajera, Instituto de Calidad Agroalimentaria del Gobierno de La Rioja
- Centro Tecnológico de la verdura en Calahorra (inauguration next year)
- Oficina de la Patata
- Centro Nacional de Tecnología y Seguridad Alimentaria (CNTA)

France

Limousin

- Institut de Biotechnologie Genius
- Station d'évaluation génétique du pôle de Lanaud
- Plate-forme technique implantée de l'ENSIL
- BioCritt Limousin

Basse Normandy

- The Basic and Applied Biology Research Centre working with the ISBIO (Institut de Biologie et Agro-industries, biology and agro-industry institute) and with an agri-foodstuff technical centre, ADRIA Normandie.
- Environment Control Center
- IFREMER, Research Center for seafood matters

Portugal

Centro

- AIBILI – Associação para Investigação Biomédica e Inovação em Luz e Imagem
- Centro de Química Orgânica Produtos Naturais e Agroalimentares
- Institute of Pharmacology and Therapeutics of the University of Coimbra
- Centro Biologia Celulr (Universidde Aveio)
- Biocant – Innovation Center in Biotechnology (Cantanhede)

Norte

- COTEC PORTUGAL – Associação Empresarial para a Inovação
- Cap Gemini Ernst & Young Portugal
- Escola Superior de Biotecnologia da Universidade Católica
- Centro de Genética (Universidade de Trás-os-Montes)
- Centro Engenharia Biológica (Universidade Minho)
- CBQF (Universidade do porto)

Alentejo

- ICAM – Instituto de Ciências Agrárias Mediterrânicas (Food Safety and Technology)



Information Sources

- AgraEurope (1997). *European Food and Drink market*, AgraEurope, Brussels.
- Albisu, L. M., Gracia, A. (1998). "L'influence des systèmes de distribution sur le choix des consommateurs des produits alimentaires", in Rastoin, J. L., Eds., *Mondialisation et géostratégies agroalimentaires*, Actes du colloque AIEA2 – SFEA, Montpellier (France).
- APCOR, Associação Portuguesa da Cortiça, <http://www.apcor.pt/>, 2004
- BIMA HS, " Les industries agroalimentaires", n° 16, Janvier 2005
- Blandford, D. (1984) "Changes in food consumption patterns in the OECD area", *European Review of Agricultural Economics* 11(1):43-65.
- Combris, P. (1991) "La consommation alimentaire en France depuis 40 ans: Les préférences ontelles changé?", *INRA Sciences Sociales* 5.
- European Commission (2000) "Quality Policy", <http://europa.eu.int/comm./dg06>.
- European Federation of Biotechnology (EFB), "Biotechnology in foods and drinks", 1997.
- EUROSTAT, "Regional data from 1995 to 2003, according to Nuts 2003", updated on Wed Jul 13 2005 09:24:48
- EUROSTAT, " L'industrie alimentaire en Europe", "Statistiques en bref: vue horizontale/Statistiques structurelles sur les entreprises (Industrie, Construction, Commerce et Services)", Statistiques annuelles sur les entreprises nombre 39/2004.
- EUROSTAT, " Yearbook 2004 –The statistical guide to Europe 1992-2002", European Commission, 2004.
- FIAB, Informe Económico de la Industria Alimentaria, 2004, Spain
- Giannetto, G. (1998) *El desafío de la distribución: "Misión posible"*, Jornadas técnicas ACNielsen, Madrid (Spain).
- Gracia, A., and Albisu, L. M. (1994) "Food diets in EC countries", *Medit*, 5(1):9-12.
- Heisey, Paul, John L. King and Kelly Rubenstein, "Patterns of public-sector and private-sector patenting in agricultural biotechnology". *AgBioForum, The Journal of Agro biotechnology Management & Economics*, Vol. 8 N° 2 &3, 2005.
- Insee, "Pays de la Loire: La Région en Faits et Chiffres", Chiffres-clés : Industrie-IAA, 2003
- Insee, "Basse-Normandie: La Région en Faits et Chiffres", Chiffres-clés : Industrie-IAA, 2003

- Insee, "*Bretagne: La Région en Faits et Chiffres*", Chiffres-clés : Industrie-IAA, 2003
- Insee, "*Poitou-Charentes: La Région en Faits et Chiffres*", Chiffres-clés : Industrie-IAA, 2003
- INE, "*Estatísticas das Empresas*", 1998, 1999, 2000, 2001, 2002
- INE, "*Estatísticas Agro-Industriais 1999-2001*", 2002
- INE, "*La Industria Agroalimentaria y la Alimentación*", Año 2002
- INE, www.ine.pt, 2005.a
- INE, www.ine.es, 2005.b
- Menéndez-Ponte, António Viñal, "A biotecnologia em Espanha e o desafio ibérico", Antonio Viñal & Co. Abogados, Boletim de Biotecnologia, 2003, <http://avinalabogados.com> - lisboa@avinalabogados.com
- Ministerio de Agricultura, Pesca y Alimentación, " *Anuario de Estadística Agroalimentaria 2003*", 2004
- Ministerio de Agricultura, Pesca y Alimentación, "*Hechos y cifras de la agricultura, la pesca y la alimentación en España*", Año 2002
- Ministerio de Agricultura, Pesca y Alimentación, "*Cuadernos de Información Económica sobre la Industria Agroalimentaria*", número 16, 2º semestre de 2002
- Ministerio de Agricultura, Pesca y Alimentación, "*Cuadernos de Información Económica sobre la Industria Agroalimentaria*", número 17, 1º semestre de 2002
- Ministério da Agricultura, do Desenvolvimento Rural e das Pesca, www.min-agricultura.pt, August 2005
- Pissarra, Pedro de Noronha, "Biotechnology in Portugal: promoting downstream private initiative and foreign investment should be the next priorities", Boletim de Biotecnologia, CEO Biotecnol SA, 2003.
- <http://www.agriculture.gouv.fr/>
- <http://www.atkearney.com>
- www.bea.gov
- <http://www.business-in-europe.com/adean-gb/innov.htm>
- http://centrim.mis.brighton.ac.uk/research/Rise/clusterPT_biotech_appx_1-2.pdf
- <http://www.eurunion.org>
- <http://www.europages.com>
- http://informagen.com/Resource_Informagen/states.php
- <http://www.insee.fr>
- <http://www.ouest-atlantique.org/languages/francais.asp>
- http://www.normandydev.com/index_fr.asp
- <http://www.adimac.com/site/html/general.php?l=fr&article=133>
- <http://www.mapa.es>
- <http://www.ine.es>
- <http://www.mercasa.es>
- <http://tse.export.gov>