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The Challenges of Organic Production and Marketing in Europe and Spain. Innovative marketing to the future with quality and safety food products

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Abstract: In this work it explains the actual situation of organic production and marketing in Spain, studying and analyzing their evolution in the last decade of anterior century and in the first years of the new millennium. In Spain, organic production began in 70's with pioneers in Catalonia, Murcia Region and other zones. It was in 90's when it was observed a great increase in organic surfaces. A very interesting and critic date is that at the moment, more of 80% of organic products it is exporting to other European countries, USA and others foreign markets, and it is necessary a new marketing strategies and innovations to structure the organic market, give a new information to consumers, improve the investment in relation between retailers and this consumers, and improve the perception of utilities of this products. In some countries as is the case of Spain, the consumers don't have enough information about the characteristics of organic products, organic food and organic production methodologies. They must to know all information along the benefits of organic production methodologies and their implications in environment conservation, biodiversity protection, food quality and safety, and this task must be provided by the new marketing strategies and actions.

Key Words: Marketing Innovation, Organic Products, Quality and Safety Food, Organic product marketing.

1. Introduction.

As it is known, increased consumer awareness of food safety issues and environmental concerns has contributed to the growth in organic farming over the last decades and years. As it is known too, the organic production is related with rural sustainable development. Sustainable development must encompass food production alongside conservation of finite resources and protection of the natural environment so that the needs of people living today can be met without compromising the ability of future generations to meet their own needs (Brundtland Commission, 1987).

Organic farming, as defined by regulation, is a way of production process, which excludes the use of synthesised chemical and aggressive products. It is based on a global concept, which relies on value such as health, respect of environment and protection of biodiversity, authenticity, animal care and welfare, social life, and other healthy aspects.

In European Union, as it is known, among the reforms in the CAP that began in the late 1980s to today, came recognition of the key role that organic farming could play in meeting revised objectives, such as reducing surpluses, promoting quality goods and integrating environmental conservation practices and animal welfare into agriculture and animal production. For organic farming to enjoy the confidence of consumers, however, it was evident that stringent regulation covering production and quality would be necessary, as well as measures to prevent fraudulent claims to organic status. Today's consumers in European Union are increasingly calling for access to information on how their food is being produced - from farm to fork - and are looking for reassurance that due care with regard to safety and quality has been exercised at each step in the process.

The objective of Rural Sustainable Development requires farmers to consider the effect that their activities will have on the future of agriculture and how the systems they employ shape the environment. As a consequence, farmers, consumers and policy makers have shown a renewed interest in organic farming. But the critic point is the

consumers and all citizens. Some countries as is the case of Spain, the consumers don't have enough information about the characteristics of organic products, organic food and organic production methodologies. They must to know all information along the benefits of organic production methodologies and their implications in environment conservation, biodiversity protection, food quality and safety, and this task must be provided by marketing strategies and actions.

In Spain, organic production began in 70's with pioneers in Catalonia, Murcia Region and other zones. It was in 90's when it was observed a great increase in organic surfaces. A very interesting and critic date is that at the moment, more of 80% of organic products it is exporting to other European countries, USA and others foreign markets, and it is necessary a new marketing strategies and innovations to structure the organic market, give a new information to consumers, improve the investment in relation among retailers and this consumers, and improve the perception of utilities of this products.

2. Objectives of this work.

Along this paper, it wants to carry out a panoramic vision of organic production and marketing in Spain, relating this production with world and European scenarios, and institutional organizations. This work is based in European Project proposed by CEDEFOP, the research carried out in recent Organic Congress in Spain (SEAE, 2004), and a Meeting about Agriculture and Environment (CTFC, 2006).

Then, the objectives of this work are:

a. To study and explain the Worldwide organic production scenarios, IFOAM institution and European organic production data and policy.

b. To know and analyze the benefits and utilities of organic production methodologies and their implications in environment conservation, biodiversity protection, soil conservation, and food quality and safety.

c. To study and analyze the origin and evolution of organic production in Spain, to explain the characteristics of Spanish organic production and marketing, and to study and analyze the consumer behaviour and some marketing strategies to improve the organic products consumption.

We can highlight the works of Aubert (1970), Altieri (1985), Altieri et al. (1986), Albardiaz et al. (1988), Carrol et al. (1990), Dabbert (1994), Gracia et al. (1998), Isart (1996, 97, 98 and 99), Colom et al. (2000).

3. The Worldwide organic production scenarios and IFOAM.

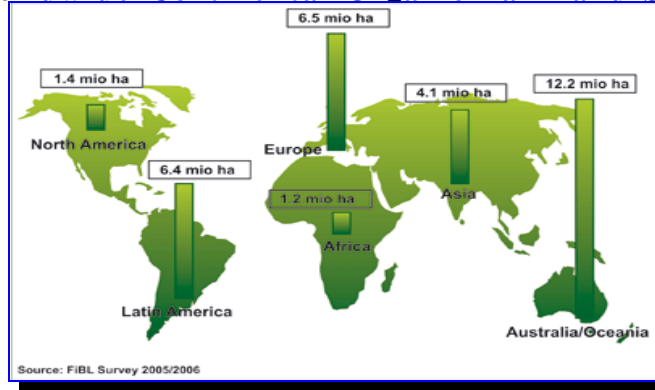
In this paragraph it will present the scenarios and land surfaces of organic production around all world countries. Also, it will explain the IFOAM international movement of organic agriculture and the European policy for the organic production.

3.1. Worldwide Organic Production.

The International Federation of Organic Agriculture Movements (IFOAM), the Swiss Research Institute of Organic Agriculture FiBL, the Foundation Ecology & Farming (SÖL), presented in February 2005 the new study on "The World of Organic Agriculture. Statistics and Emerging Trends 2005" at the BioFach fair 2005 in Nuremberg (Germany), the world leading fair for organic food. According to the study, currently more than 26 million hectares of farmland are under organic management worldwide. This is more than two million hectares more than in the previous year. Helga Willer of FiBL explained that this is an increase of almost 10%. In terms of organic land, Australia leads pack with 11,3 million hectares, followed by Argentina with 2,8 million hectares and Italy with more than 1 million hectares. Regarding the share of organic farmland in comparison with the total agricultural area, Austria, Switzerland and Scandinavian countries lead the way. In Switzerland for example more than 10% of the agricultural land is managed

organically.

Figure 1. Worldwide Continental Organic Farmland Surface, 2005



Per continents and also in terms of organic land, Oceania leads with 12,2 million hectares; the second and third positions are for Europe with 6,5 million hectares and Latin America with 6,4 million hectares; the fourth position is for Asia with 4,1 million hectares, and the last positions are for North America with 1,4 million hectares and finally Africa with 1,2 million hectares.

In 2003, the market value of organic products worldwide reached 30 billion Euro, the largest share of organic products being marketed in Europe and North America. In upcoming years, Bernward Geier of IFOAM expected ongoing growth of the market and organic land area, also due to an increased support of governments and development organizations.

Table 1. Organic Farming Surfaces Worldwide

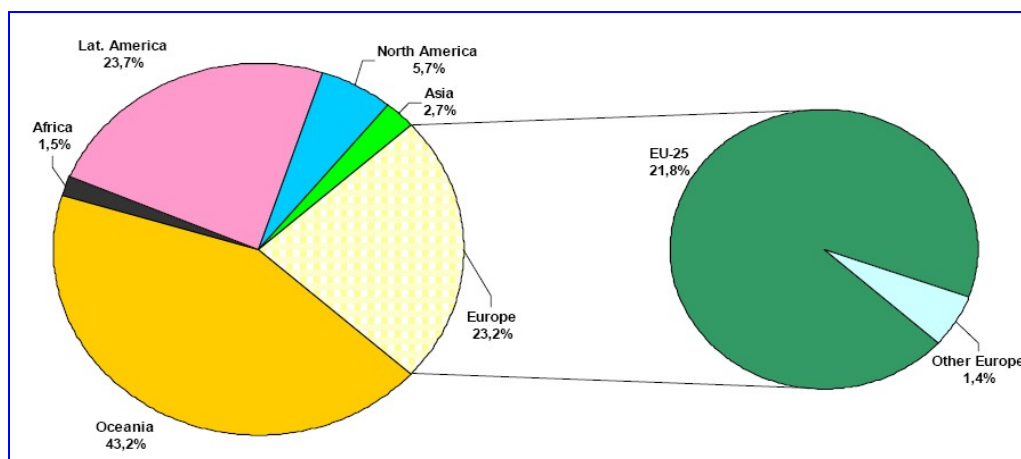
Organic Hectares	
Australia	11,300,000
Argentina	2,800,000
Italy	1,052,002
USA	930,810
Brazil	803,180
Uruguay	760,000
Germany	734,027
Spain	725,254
UK	695,619
Chile	646,150
France	550,000
Canada	516,111
Mexico	400,000
Bolivia	364,100
Austria	328,803
China	298,990
Czech Rep.	254,995
Greece	244,455
Ukraine	240,000
Sweden	207,488
Bangladesh	177,700
Denmark	165,148
Finland	159,987
Peru	150,000
Uganda	122,000
Portugal	120,729
Hungary	113,816
Switzerland	110,000
Turkey	103,190
Paraguay	91,414
Kenya	90,000
India	76,326
Romania	75,500
Ecuador	60,000
Tanzania	55,867
Slovakia	54,478
Poland	49,928

Organic Hectares	
Latvia	48,000
South Africa	45,000
Netherlands	41,865
Estonia	40,890
Indonesia	40,000
New Zealand	40,000
Norway	38,176
Kazakhstan	36,882
Tunisia	33,500
Colombia	33,000
Japan	29,151
Ireland	28,514
Belgium	24,163
Lithuania	23,289
Slovenia	23,280
Dominican Rep.	22,151
Morocco	20,040
Zambia	20,000
Ghana	19,460
Rep. of Korea	18,936
Egypt	17,000
Venezuela	16,000
Sri Lanka	15,215
Serbia/Montenegro	15,200
Guatemala	14,746
Costa Rica	13,967
Thailand	13,900
Nicaragua	10,750
Cuba	10,445
Cameroon	7,000
Russia	6,900
Vietnam	6,475
Iceland	6,000
Israel	5,640
Panama	5,111
El Salvador	4,900
Papua New Guinea	4,265

Organic Hectares	
Croatia	3,530
Philippines	3,500
Azerbaijan	2,770
Senegal	2,500
Pakistan	2,009
Luxemburg	3,002
Belize	1,810
Honduras	1,769
Algeria	1,400
Jamaica	1,332
Bosnia Herzegovina	1,113
Liechtenstein	984
Lebanon	758
Malaysia	600
Bulgaria	437
Sudan	430
Malawi	325
Syria	260
Suriname	250
Iran	200
Fiji	200
Benin	197
Albania	192
Mauritius	175
Cyprus	166
Madagascar	130
Guyana	109
Togo	90
Nepal	45
Zimbabwe	40
Laos	35
Malta	14
Bhutan	13
Jordan	7
SUM	26,458,270

Source: SOEL Survey, February 2005

Figure 2. Proportions in Worldwide organic land. Source: EU Commission, 2005



3.2 The IFOAM International Institution.

The International Federation of Organic Agriculture Movements (IFOAM) is a grassroots and democratic organization that currently unites 750 member organizations in 108 countries. In order to achieve its mission and address the complexity of the various components of the organic agricultural movement worldwide, IFOAM has established official committees and groups with very specific purposes, from the development of standards to the facilitation of organic agriculture in developing countries.

The IFOAM General Assembly serves at the foundation of IFOAM. It elects the World Board for a three year term. The World Board appoints members to official committees, working groups and task forces based upon the recommendation of the IFOAM membership, and IFOAM member organizations also establish regional groups and sector specific interest groups.

- The IFOAM World Board has established the following official structures:
- The Norms Management Committee, which includes members of the Standards Committee and the Accreditation Criteria Committee.
- The Development Forum, which works towards the development of organic agriculture in developing countries.
- The Program Strategy Committee of the "IFOAM Growing Organic" Program.
- The Africa Organic Service Center and the FAO Liaison Office.
- Various Working Groups and temporary Task Forces.
- IFOAM Regional Groups.

The Government Relations Committee, which works with governments worldwide to advance the interests of IFOAM. IFOAM member organizations have also established professional bodies such as the IFOAM Organic Trade Forum, the Organic Retailers Association, the IFOAM Aquaculture Group and the IFOAM Forum of Consultants and initiatives like the Farmers' Group.

3.3. The IFOAM Program 2008.

The IFOAM Program 2008 describes the goals and work plan for the period 2005- 2008 of the International Federation of Organic Agriculture Movements. The World Board offers this program to the IFOAM General Assembly of 2005 for debate and consideration. At the General Assembly 2002, the World Board presented the first such program, which was extensively discussed at the Assembly.

After the General Assembly the World Board did some changes to the Program as a result of the GA debate. During this current term of office, the World Board has formulated IFOAM's mission and worked from that with strategic planning resulting in five goals for the Federation. This document lays down these goals, the more precise objectives for how to contribute to the goals and indicate some activities and targets. Based on the Program, more detailed plans are made by the World Board and the staff.

In order to fulfil its mission, five goals were set by the World Board for the medium term, which the Program 2008 contributes to:

- 1. IFOAM builds the global platform for the organic movement.
- 2. IFOAM develops, communicates and defends the principles of organic agriculture.
- 3. IFOAM advocates and facilitates the adoption of organic agriculture.
- 4. IFOAM promotes the development of organic markets.
- 5. IFOAM ensures an effectively managed organization with sufficient and sustainable resources.

The IFOAM's mission is leading, uniting and assisting the organic movement in its full diversity. His goals are the world wide adoption of ecologically, socially and economically sound systems that are based on the principles of Organic Agriculture.

3.4. Origin of Organic Farming in Europe. Benefits of the Organic Production.

At the beginning of the XXth century, in Germany, in Switzerland , and in the United Kingdom, raised the first movements for a "biodynamic" or "organic" agriculture. In all countries, organic farming was born from two parallel movements which started in the sixties thanks to:

- producers willing to react to the increasing development of intensive agriculture mechanized, using all types of chemical inputs (fertilizers, pesticides, hormones, ...) and industrializing breeding.
- consumers aware of products containing more and more colorants, preservatives, pesticides, hormones, etc., who made dangers against the health.

Three are the thought currents that should be mentioned in the origin of these alternative agricultures (they contain links among the agriculture, the nature and the ecological balances):

- The Biodynamic Agriculture appeared in Germany in 1924 thanks of the impels of Rudolf Steiner;
- The Organic Agriculture (organic farming), born in England, starting from the theses developed by Sir Howard in their work "Agricultural Testament" (1940);
- The Biological Agriculture, developed in Switzerland by Hans Peter Rusch and H. Muller, similar with bases to the previous one.

In other hand, the Japanese M. Fukuoka, inspired to final of the 70's the birth of the Permaculture or Natural Agriculture, based on the minimum human intervention. Today, it studs the Agro-ecology, term that it is promoted and coined in Latin America (some Latin- Americans Universities).

In the 80- 90s, this segment was structuring and concretizing, and it improved with news public regulations. The specifications and private logos are replaced by a national or regional logos, officially recognized by the Ministry of Agriculture of each countries and European regulation.

In short, the very important rules and benefits for the Organic Farming methods and technical are:

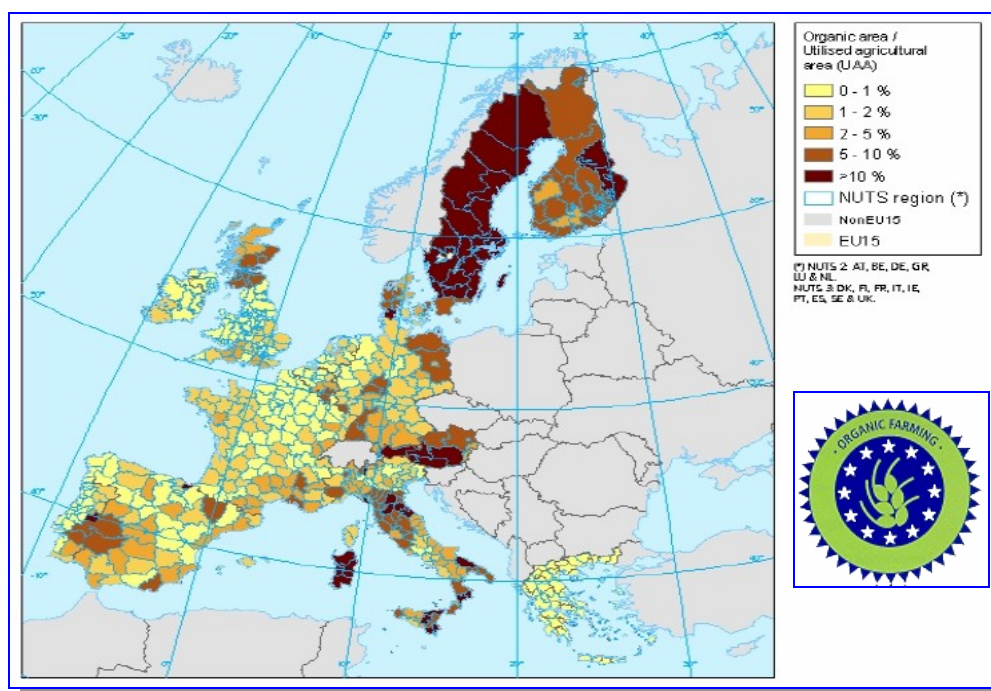
- Producing high nutritive quality food in sufficient quantity.
- Working in harmony with natural ecosystems rather than dominate them.
- Promoting and diversifying biological cycles, while respecting micro- organisms, fauna and flora of soils, cultures, and cattle.
- Maintaining and improving in the long term soil fertility.
- Using as much as possible natural and renewable resources at a local level.

- Settling auto-sufficient agricultural systems as far as organic matter and nutritive elements are concerned.
- Breeding the animals by giving us life conditions that enable them to express their specific behaviours and caring to animal welfare.
- Avoiding any form of pollution that may result from a farming practice.
- Maintaining genetic diversity of farming systems, of their environments, including the protection of wild plants, and give them a safe and secure work environment.
- Care about the impact of agricultural techniques on environment and social life.

3.5. Some organic production data in Europe.

Organic and in-conversion land area in Europe (the EU 25, plus four applicant countries and the EFTA countries) reached 6.4 million hectares (2.9 per cent of UAA) on 181,900 holdings in 2004. The total land area in enlarged EU 25 represents now over 6 million ha on 155,000 holdings. The trends vary among the individual countries, e.g. organic land area increased in Greece and Austria, whereas it declined in Denmark, Italy and the UK. In Portugal, the increase was over 70 per cent; there were also large increases in some new EU member states, e.g. over 60 per cent in Poland and over 80 percent in Lithuania and Latvia.

Figure 3. Share of organic land (UAA) in EU15 at regional level. Commission, 2001



At EU-25 level, 149.000 holdings are certified organic and in-conversion holdings which represent a mean reaction following the in-which after the

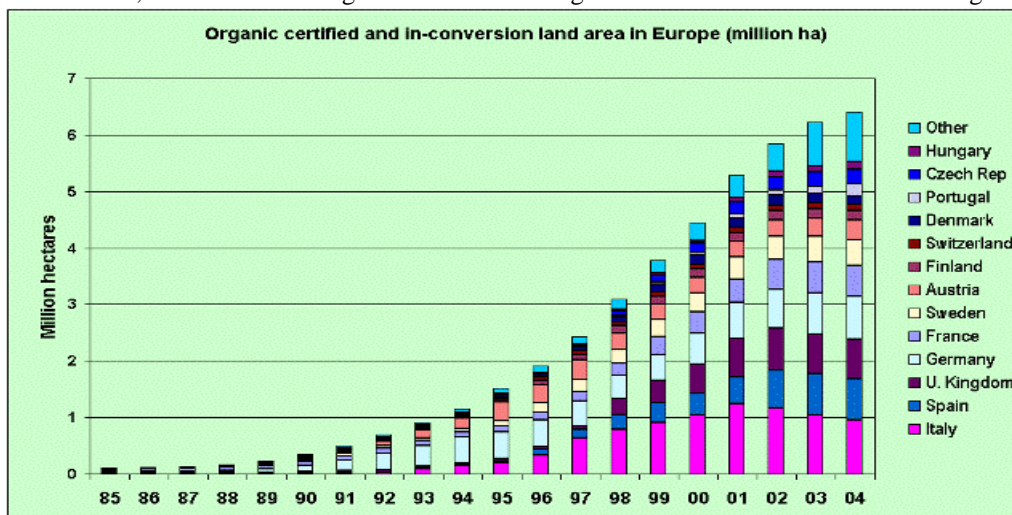


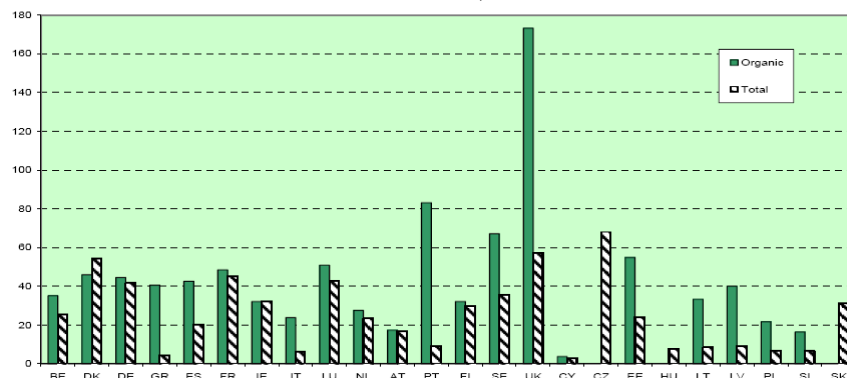
Table 2. Certified and policy- supported organic and in- conversion land area in Europe (ha). 1985- 2004. Source: University of Wales.

Year end	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04																	
European Union (25 nations)																				Estim.																	
Austria	5,880	7,000	8,400	12,32	16,67	21,54	27,58	84,00	135,9	192,33	335,86	309,08	345,37	287,89	272,63	272,00	276,41	296,15	328,80	344,91																	
Belgium	500	700	972	1,000	1,200	1,300	1,400	1,700	2,179	2,683	3,385	4,261	6,818	11,744	18,515	20,667	22,410	24,874	24,163	23,563																	
Cyprus																				30	52	100	166	500	1,018												
Czech Rep																				17,50	15,37	15,66	110,75	165,69	218,11	235,13	254,99	263,79									
																				260	3,480	7	1	7	15,818	14,127	17,022	20,239	71,620	6	9	4	6	5	9		
Denmark	4,500	4,800	5,035	5,881	8,283	11,03	17,15	18,13	19,76	20,688	38,334	44,991	59,963	93,201	136,62	157,66	168,37	174,35	165,14	156,80																	
Estonia																				500	2,350	1,600	1,600	3,000	3,000	3,000	3,080	4,000	9,872	20,555	30,623	42,573	46,016				
Finland	1,000	1,200	1,400	1,500	2,300	6,726	13,28	15,85	20,34	25,822	44,695	84,556	102,34	126,17	136,66	147,26	147,94	156,69	159,98	162,02																	
																				1	9	0	2	118,39	137,08	165,40	218,79	315,77	369,92	419,75	517,96	550,99	540,00				
France	45,000	50,000	55,00	60,00	65,00	72,00	81,22	85,00	87,82	94,806	118,39	137,08	165,40	218,79	315,77	369,92	419,75	517,96	550,99	540,00																	
																				0	0	0	0	5	0	9	94,806	3	4	6	2	0	1	0	5	0	0
Germany-cert	24,940	27,160	33,04	42,39	54,29	90,02	158,4	202,3	246,4	272,13	309,48	354,17	389,69	414,29	452,32	546,02	632,16	696,97	734,02	767,89																	
																				7	3	5	1	77	79	58	9	7	1	3	3	7	3	5	8	7	1
Germany-other	0	0	0	0	0	0	0	0	2	85	8	2	5	60,307	0	0	0	0	0	0																	
																				15,00	30,00	96,74	126,3	173,12	152,06	121,57	60,307	0	0	0	0	0	0	0	0	0	
Greece	0	0	0	50	100	150	200	250	591	1,188	2,401	5,269	10,025	15,402	21,451	26,707	31,118	77,120	244,45	267,15																	
																				103,67	113,81	128,69	1	6	0												
Hungary																				2,500	5,400	6,400	8,630	12,325	9,300	19,625	21,565	32,609	47,221	79,177	103,67	113,81	128,69				
Ireland	1,000	1,100	1,300	1,500	3,700	3,800	3,823	5,101	5,460	5,390	12,634	20,496	18,687	24,411	29,360	27,231	30,017	29,754	28,514	30,670																	
																				11,00	13,21	16,85	30,00	88,43	154,12	204,49	334,17	641,14	785,73	911,06	1,040,	1,237,	1,168,	1,052,	954,36		
Italy	5,000	5,500	6,000	9,000	0	8	0	0	7	0	4	5	9	8	8	377	640	212	002	1																	
																				1,240	1,250	1,250	1,147	1,200	1,500	1,426	1,628	4,400	10,549	16,935	24,480	48,000					
Lithuania																				148	267	582	1,118	1,568	4,006	3,995	4,709	6,469	8,780	23,289	42,000						
Luxembourg	350	400	412	450	550	600	634	500	497	538	571	594	618	744	888	1,068	2,006	3,121	3,004	3,100																	
Malta																				10,05	11,15	3	0	11,340	12,909	14,456	16,960	22,268	26,350	32,334	35,876	42,610	41,865	48,155			
Netherlands	2,450	2,724	3,384	5,000	6,544	7,469	9,227	10,05	11,15	11,340	12,909	14,456	16,960	22,268	26,350	32,334	35,876	42,610	41,865	48,155																	
Poland																				300	550	1,240	2,170	3,540	5,000	6,855	8,000	9,000	10,000	11,000	25,000	38,732	43,828	49,928	82,730		
																				120,72	206,52	9	6														
Portugal	50	200	320	420	550	1,000	2,000	2,000	3,060	7,267	10,719	9,191	12,193	29,533	47,974	50,002	70,857	91,006	120,72	206,52																	
																				15,14	14,77	14,70	14,72	14,762	18,813	27,661	27,809	50,695	46,386	58,458	58,706	49,999	54,479	53,091			
Slovak Rep																				0	3	0	4	14,762	18,813	27,661	27,809	50,695	46,386	58,458	58,706	49,999	54,479	53,091			
Slovenia																				70	100	150	200	300	100	214	2,697	5,440	10,828	13,828	20,081	23,280					
																				11,67	103,73	151,86	269,46	352,26	380,90	485,07	665,05	725,25	733,18								
Spain	2,140	2,500	2,714	3,000	3,300	3,650	4,235	7,859	11,67	17,208	24,079	5	5	5	7	2	9	5	4	2																	
																				23,60	28,50	31,96	33,26	36,67	113,99	118,17	127,33	155,46	174,22	202,82	214,12	225,77	222,99				
Sweden-cert	1,500	2,500	4,870	8,598	0	0	8	7	4	48,039	83,490	5	5	0	3	7	7	0	6	6																	
																				116,32	151,28	168,77	179,17	200,00	220,00	239,44											
Sweden-other	0	0	0	0	5,092	4,890	5,775	7,161	7,869	6,812	3,334	48,317	87,010	116,32	151,28	168,77	179,17	200,00	220,00	239,44																	
																				7	0	3	3	0	0	2											

U. Kingdom	6,000	7,000	8,500	11,000	18,500	31,000	34,000	35,000	30,990	274,519	390,868	527,323	679,631	741,174	695,619	690,269				
EU25	100,310	112,784	131,354	162,112	221,248	331,075	474,350	676,310	878,767	1,113,458	1,462,349	1,823,091	2,324,097	2,980,449	3,632,608	4,263,335	5,064,509	5,602,151	5,904,481	6,079,694
EFTA European Free Trade Association																				
Iceland										146	717	1,082	1,288	1,500	2,500	3,400	5,466	6,000	5,500	4,910
Liechtenstein							30	30	240	290	410	520	610	630	660	690	690	984	984	984
Norway	90	114	246	312	534	1,578	2,444	3,225	3,778	4,520	5,768	7,897	11,706	15,581	18,774	20,523	26,673	32,546	38,179	41,036
Switzerland	4830	5520	6630	7275	10,080	12,045	14,100	17,300	20,780	25,230	31,815	58,741	67,189	71,539	79,269	82,707	93,955	102,642	109,090	110,000
EFTA	4920	5634	6876	7587	10,614	13,623	16,574	20,555	24,800	30,186	38,710	68,240	80,793	89,250	101,203	107,320	126,784	142,172	153,753	156,930
EU applicants																				
Bulgaria															12	286	539	566	2,038	2,050
Romania										980	1,000	1,000	5,000	10,000	17,438	28,800	43,850	57,205	60,000	
Croatia							100	50	50	120	120	No data	No data	No data	No data	No data				
Turkey						1,037	3,000	6,077	5,216	5,196	10,000	15,250	18,000	25,000	44,558	59,984	57,001	55,000	103,190	105,000
Applicants	0	0	0	0	0	1,037	3,000	6,177	5,266	5,246	11,100	16,370	19,000	30,000	54,570	77,708	86,340	99,416	162,433	167,050
EU29 & EFTA	105230	118418	138230	169699	231,862	345,735	493,924	703,042	908,835	1,148,890	1,512,159	1,907,701	2,423,890	3,099,698	3,788,381	4,448,364	5,277,633	5,843,739	6,220,667	6,403,674

In the EU-25, the average organically cultivated area per holding at 40 ha was significantly larger than the average area of conventional holdings at 15 ha of UAA. Compared to the average conventional holding, organic holdings are particularly large in two Southern Member States, Greece and Portugal (9 times larger), where it might be influenced by relatively high share of olive groves. Organic producers' holdings in the United Kingdom (173 ha) were also considerably larger than on EU-25 average. However, in the Member States with the most important share of organic holdings, e.g. Austria, Finland, and Denmark, the difference is less important with the exception of Sweden where organic holdings are also significantly larger than conventional ones.

Figure 5. UAA per holding in EU-25, 2003 (ha). Source: EU Commission, 2004



In 2003, Italy had the largest number of organic holdings, 44 000 or 31% of EU-25 total, followed by Austria with 19 000, Spain and Germany with about 17 000 each. Five Member States had a share of organic holdings in total holdings above 3%, i.e. Austria 9.5%, Denmark 7.2%, Finland 6.6 %, Germany 4.0% and Sweden 3.8% in 2003. Looking historically, more or less the same Member States were already above the EU average (0.4%) in 1993 but the ranking was different: Austria (4.6%), Finland (1.8%), Sweden (1.7%), Denmark (1.0%) and Germany (1.0%). Over the period 1999- 2003 the highest annual increase in number of holdings was noticed in the United Kingdom (13%), Spain (11%), Luxembourg (11%), Portugal (11%) and France (10%). The number of holdings slightly decreased in Austria over this period.

3.6. Organic Production Policy in European Union. Regulation and Control.

The EU's Agenda 2000 reform package included much greater emphasis on rural development, making this the 'second pillar' of the common agricultural policy (CAP), with respect for the environment at its core. The reform package requires Member States to adopt appropriate environmental protection measures relating to all types of agriculture. Farmers are now expected to respect certain basic environmental standards without any financial compensation and the 'polluter-pays' principle is being applied. However, the agri-environment measures under the rural development programs offer farmers payments for environmental commitments that go beyond good farming practice. Organic farmers are entitled to claim agri-environmental premiums since it is recognized that this particular farming system benefits the environment. In addition, organic farming can be promoted through investment aid in the area of primary production, processing and marketing. With all of these provisions in place, the framework of rural development policy is likely to contribute considerably to the expansion of organic farming. To understand the role and operation of organic farming within EU farm policy, it needs to be seen within a range of different contexts, including:

- consumers' concerns;
- quality assurance and regulation;
- the extent of organic farming in the EU today;
- the role of integrated farming;
- organic farming and rural development.

Organic farming and integrated farming also represent real opportunities on several levels, contributing to vibrant rural economies through sustainable development. Indeed, new employment opportunities in farming, processing and related services are already evident in the growth of the organic sector. As well as the environmental advantages, these farming systems can bring significant benefits both to the economy and the social cohesion of rural areas. The availability of financial support and other incentives for farmers to convert to organic production is designed to help the sector grow still further and to support associated businesses throughout the food chain.

Among the reforms in the CAP that began in the late 1980s came recognition of the key role that organic farming could play in meeting revised objectives, such as reducing surpluses, promoting quality goods and integrating environmental conservation practices into agriculture. For organic farming to enjoy the confidence of consumers, however, it was evident that stringent regulation covering production and quality would be necessary, as well as measures to prevent fraudulent claims to organic status. Today's consumers are increasingly calling for access to information on how their food is being produced - 'from farm to fork' - and are looking for reassurance that due care with regard to safety and quality has been exercised at each step in the process. Regulations have therefore been introduced to ensure the authenticity of organic farming methods, which have evolved into a comprehensive framework for the organic production of crops and livestock and for the labelling, processing and marketing of organic products. They also govern imports of organic products into the EU.

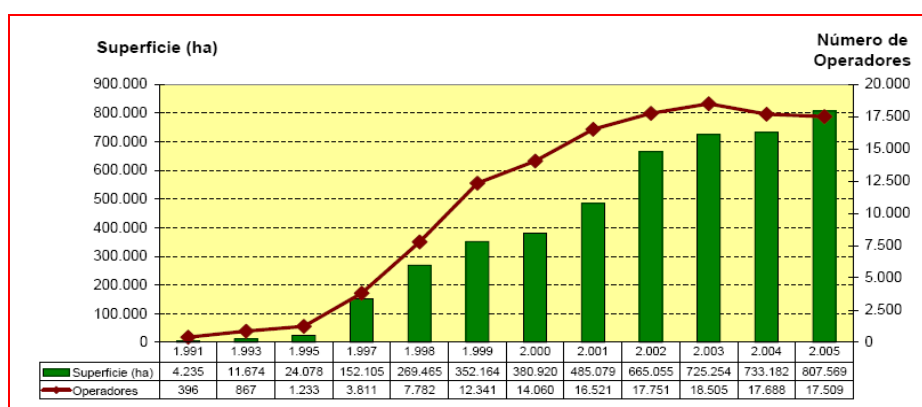
The first regulation on organic farming (Regulation EEC N° 2092/91) was drawn up in 1991 and, since its implementation in 1992, many farms across the EU have converted to organic production methods. Where farmers wish to claim official recognition of their organic status, the conversion period is a minimum of two years before sowing annual crops and three years in the case of perennials. In August 1999 rules on production, labelling and inspection of the most relevant animal species (i.e. cattle, sheep, goats, horses and poultry) were also agreed [Regulation EC N° 1804/1999]. This agreement covers such issues as foodstuffs, disease prevention and veterinary treatments, animal welfare, husbandry practices and the management of manure. Genetically modified organisms (GMOs) and products derived from GMOs are explicitly excluded from organic production methods.

The regulations also include imports of organic agricultural products from third countries whose organic production criteria and control systems have been recognised by the EU as equivalent. Farm inspections are carried out at least once a year and spot checks are also undertaken. Sanctions for infringements of any of the rules include instant removal of the right to claim organic status for the product concerned, with stricter penalties imposed for more serious breaches. Meticulous record keeping is required, including, for livestock farmers, complete records of their livestock management systems.

4. The Origin and Evolution of Organic Farming in Spain.

Organic farming in Spain came up in the 70's in Catalonia, Murcia Region and other zones. Small farms, basically promoted by young people converted in the middle of the 70's. The first important project of a noteworthy group of members was the conversion of the Calasparra (Murcia) rice co-operative. An important evolution was in the late 80's, but has grown tremendously since years 90's, with the number of producers expanding considerably. In 1991, there were only 4,235 hectares planted to organic products, while in 1998 there were 269,465 ha., and 352.164 ha. in 1999. Since 1997 (152.105 ha.), area devoted to organic farming has been more doubled. At the moment (2005), the certified and in-conversion surface are 807.569 hectares, and the great grown was since 1995. Similarly, greater health awareness has resulted in expansion of demand for quality and "natural" and "healthy" products. However, consumption of organic products in Spain remains relatively limited, with organic foods estimated to account for less than 1 percent of total of the total food market. Organic production is certified by authorities, in each of Spain's Autonomous Regions, and also by other private institutions.

Figure 6. Evolution of Organic Surface (ha) and Number of Operators in Spain Period 1991- 2005. Source: Ministry of Agric., Fish. and Food, and Control Authorities



In year 2005, Spain had 15.693 organic farmers that worked in organic land of 807.569,27 hectares, 1.764 processors and distributors, 52 organic products importers, and 17.509 of total operator in organic production and distribution. In year 2004 and EU-25, Spain it occupied the third position in organic surface (733.182 ha), following Italy (954.361 ha) and Germany (767.891 ha).

Spain is composed by 17 Autonomous Communities (Regions, Nut II). At this regional level and it concerns to organic land surface, leads Andalucía with 403.361,15 hectares (nearly 50% of total Spanish surface), followed by Aragón with 74.219,66 hectares, Extremadura with 67.378,53 hectares, Castilla-La Mancha with 64.691,13 hectares and Catalunya with 54.188,49 hectares. The others regions have less than 31.000 ha, as Comunidad Valenciana 30.793,71 ha, Navarra 28.002,10 ha, Murcia Region 21.890,62 ha, Baleares Islands 15.993,05 ha, Castilla y León 12.152,72 ha. Regions in last positions have less than 10.000 hectares.

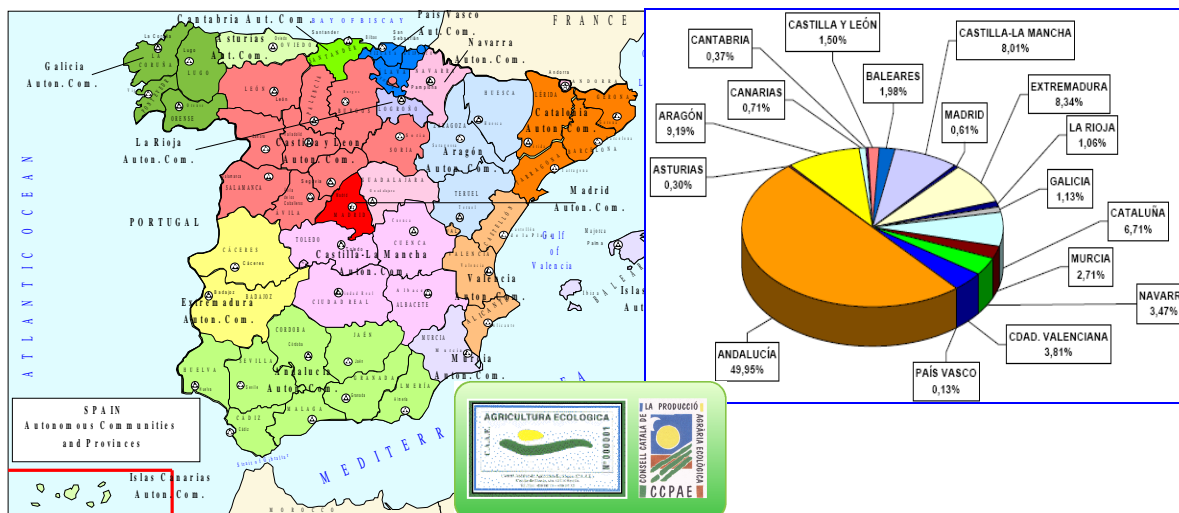
Table 3. Regional Organic Production, Process and Distribution in Spain, 2005

Source: Ministry of Agriculture, Fishery and Food (MAPA), and Control Authorities

Autonomous Communities	Organic Producers	Processors and Distribut.	Organic Importers	Total Operators	Organic Surfaces (ha)
ANDALUCÍA	5.159	320	4	5.483	403.361,15
ARAGÓN	752	94	-	846	74.219,66
ASTURIAS	94	34	-	128	2.409,93
BALEARES	312	84	-	396	15.993,05
CANARIAS	609	46	-	655	5.759,97
CANTABRIA	85	14	-	99	3.023,80
CASTILLA-LA MANCHA	1.074	76	-	1.150	64.691,13
CASTILLA Y LEÓN	217	82	-	299	12.152,72
CATALUÑA	683	369	28	1.080	54.188,49
EXTREMADURA	3.608	61	1	3.670	67.378,53
GALICIA	370	55	-	425	9.156,36
MADRID	74	44	3	121	4.916,80
MURCIA	725	122	3	850	21.890,62
NAVARRA	580	87	3	670	28.002,10
LA RIOJA	283	61	-	344	8.582,05
PAÍS VASCO	136	50	1	187	1.049,20
COMUNIDAD VALENCIANA	932	165	9	1.106	30.793,71
TOTAL NACIONAL	15.693	1.764	52	17.509	807.569,27

Figure 7. Spanish Autonomous Communities and organic farming

proportions .



Related to organic farming producers, it leads Andalucía too with 5.159, followed by Extremadura 3.608, Castilla- La Mancha 1.074, Comunidad Valenciana 932 and Aragón 752 producers. In other hand, it concerns to processors and distributors leads Catalunya with 369, followed by Andalucía with 320, Comunidad Valenciana with 165, Region of Murcia with 122 and Aragón with 94 processors and distributors. In next table 4 it presents the detail of organic lands per tipus of crops.

Table 4. Organic crops per Spanish Autonomous Communities, year 2005.
Source: MAPA

Autonomo us Communit y	C rop 1	Cr op 2	Cr op 3	C rop 4	C rop 5	C rop 6	Cr op 7	C rop 8	C r 9	10	C rop 11	Cr p 12	Cr p 13	C r 14	TOTAL
ANDALUCIA	16.208,51	1.492,56	1.233,96	499,07	41.515,99	497,92	19.844,27	532,76	12.862,75	148.816,25	155.767,00	1.425,29	4,72	2.660,10	403.361,15
ARAGON	31.198,82	110,21		223,49	1.435,03	311,47	750,46		173,16	701,89	6.847,29	29.672,95	2.773,00	21,88	74.219,66
ASTURIAS	10,83	10,89		91,25					0,21	62,92	2.226,92				2.409,93
BALEARES	1.715,97	74,99	38,28	89,44	280,32	129,05	2.205,25		15,82	5.476,14	5.853,92	113,00	0,50	0,57	15.383,05
CANARIAS	133,60	162,04	27,60	21,63		411,44	84,53	102,06	27,99	3,12	3.958,74	825,65		1,57	5.759,97
CANTABRIA	39,08	58,44		33,46							2.891,46				3.023,80
CASTILLA-LA MANCHA	14.382,61	147,61		115,34	8.622,00	4.942,14	3.896,76		221,37	657,75	3.294,28	25.610,86		2.800,38	64.691,13
CASTILLA Y LEÓN	4.770,51	70,51		11,84	8,40	484,12	8,08		38,44		5.525,13	1.226,85		8,84	12.152,72
CATALUÑA	1.943,00	223,00	13,10	112,00	2.412,00	1.227,00	829,00		38,00	12.339,00	32.472,00	2.522,00	8,37	50,02	54.188,45
EXTREMADURA	6.771,25	30,35		1.056,67	32.823,96	304,25	1.660,59	0,60		586,65	19.133,16	3.009,40		1,65	67.378,53
GALICIA	168,08	45,64		299,80		34,94			26,08	915,79	7.606,82	43,38	0,72	15,11	9.156,36
MADRID	766,27	38,38		7,25	373,27	216,49	5,53			2.017,06	1.265,21	227,33	0,02		4.316,80
MURCIA	3.748,36	813,79	183,48	375,18	1.281,43	3.752,75	7.106,46		301,84	742,14	26,36	3.550,67	8,16		21.890,62
NAVARRA	9.544,81	101,45		60,92	252,80	977,72	231,89		72,88	3.849,70	4.976,65	7.864,57	31,77	37,44	28.002,10
LA RIOJA	337,75	141,87		81,49	479,53	269,42	673,83			388,37	6.119,19	84,32		6,28	8.582,05
PAIS VASCO	112,31	80,76		86,12		79,29				11,61	664,62	12,76	0,14	1,58	1.049,20
CDAD. VALENCIANA	2.461,78	251,55	313,58	400,75	2.000,47	2.352,59	4.055,63		850,40	8.238,63	9.610,72	256,79	0,82		30.793,71
TOTAL NACIONAL	96.313,54	3.854,04	1.810,00	3.585,70	91.485,20	15.890,58	41.380,37	835,42	14.828,44	184.807,02	288.239,47	78.445,82	2.828,22	5.805,45	807.589,27

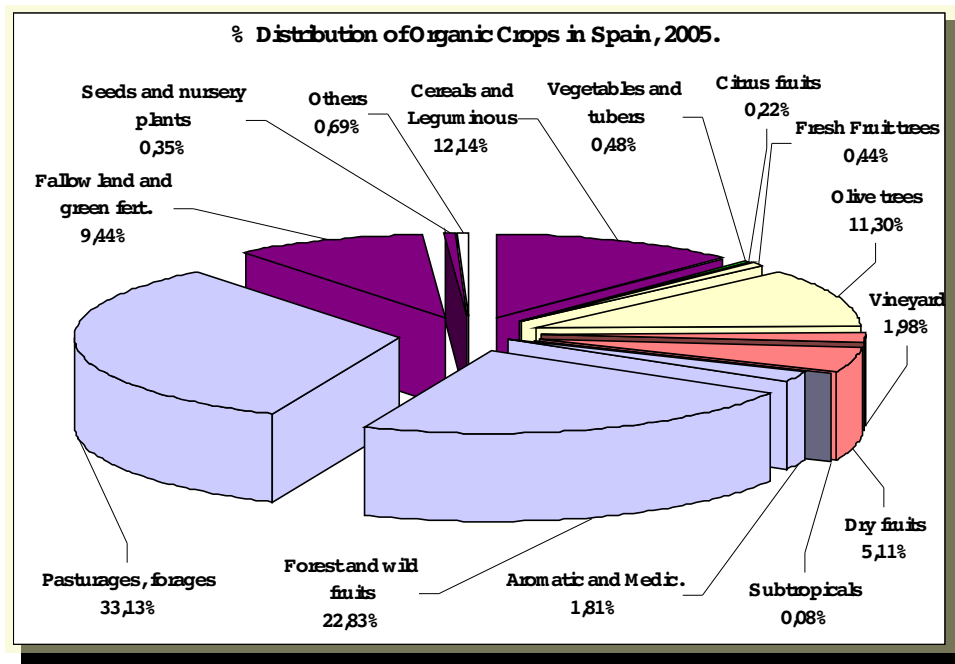
Crop 1: Cereals, leguminous ; Crop 2: Vegetables, tubers and root vegetables ; Crop 3: Citrus fruits ; Crop 4: Fresh Fruits ; Crop 5: Olive Tree ; Crop 6: Vineyards ; Crop 7: Dry fruits ; Crop 8: Subtropical plants ; Crop 9: Aromatic and medicinal plants ; Crop 10: Forest and wild fruits ; Crop 11: Forage and pastures ; Crop 12: Fallow land, green fertilizer ; Crop 13: Seeds and nursery plants ; Crop 14: Other crops.

It concerns to surfaces per tipus of crop, forages and pastures leads with 268.239 ha, followed by forest and wild fruits with 184.807 ha, cereals and leguminous with 96.313 ha, and olive trees with 91.485 ha.

Spain is much more of a producer than a consumer, in terms of organic farming and production. The natural conditions of our country (relatively moderate use of agri-

chemicals, numerous ecosystems and a favourable climate for early-cultivation) have promoted the introduction of organic agriculture, but until now there was no home market with stable trade structures. More of three-quarters of the production (for the most part typical Mediterranean crops) are exported, mainly to central and northern European countries and USA.

Figure 8. %Distribution of Spanish organic crop. Year 2005. Source: MAPA



Spanish organic livestock, year 2005, presents 1.879 holdings. Bovine holdings leads with 45% (847), followed by Lamb holdings with 24% (445), after Poultry holdings with 8% (148), Goats with 7% (132), Beekeepers 7% (131) and Swine holdings with 5% (100). Finally, small animals (others) holdings with 4% (76). Look at Table 5 the Spanish organic animal farming.

Table 5. Distribution of Organic animal farms by number of holdings. S:MAPA

Spanish Autonomous Community	Bovine		Lamb		Goats		Pork s	Poultry		Bees	Othe rs	TOTAL
	meat	m ilk	meat	m ilk	m eat	m ilk		m eat	egs			

ANDALUCÍA	384		229		52	11	62	9	15	35	3	800
ARAGÓN	2		3				1		1	7		14
ASTURIAS	24	5	8		3					7		47
BALEARES	15	2	63	1	9		27	8	41		1	167
CANARIAS	1		7			1			6	8		23
CANTABRIA	27	2	4					2	6	11		52
CASTILLA-LA MANCHA	12	1	9	5	7	1			1	4		40
CASTILLA Y LEÓN	20		3				1			11		35
CATALUÑA	169	3	44		28	2	2	9	11	2	60	330
EXTREMADURA	48		19		1		6		3	3		80
GALICIA	65	17	7		3			3	14	17	1	127
MADRID	6	2				1				8		17
MURCIA			3		1	3		1	3	1	1	13
NAVARRA	7	2	4	3	1				1	1	2	21
LA RIOJA	1					1		2		13		17
PAÍS VASCO	10	8	10	15	2	2	1	3	4	2	7	64
COMUNIDAD VALENCIANA	14		8		2	1		1	4	1	1	32
<i>TOTAL NACIONAL</i>	805	42	421	24	109	23	100	38	110	131	76	1.879

It concerns to organic transformed agro-food related to vegetal production, in table 6 it presents the 1.713 Spanish companies producers of different types of organic transformed products. The first position is for Fresh Vegetables packed, with 281 companies (14%), followed by Wine and Cava sector with 272 companies (13,6%), Olive Oil companies with 226 (11,3%), Bread and derivated with 183 (9,1%), Processed Cereals 109 (5,4%) and the others present less than 100 companies (Dry fruits 78, Aromatic, Medicinal Processed Plants and Species 65, Cooked Food 49, and Cookies, Cakes and Sweets 39).

Table 6. Spanish Organic Processed Agro-food Production, 2005.

Source: MAPA

Autonomoos Communitie s	O liv e Oil	Wine & Cava	Fres h Vege t.	Juic es & pr.v eg.	Arom . Medi c. . Spec .	B rea d And D eri v.	Cooki e Cakes sweet s	Dry Fruit s Proce s.	Proce s. Cerea ls	Cooke d Food	Othe rs	T ota l
ANDALUCÍA	85	14	52	11	7	35	8	17	4	1	58	290
ARAGÓN	13	14	23	12	2	10	1	3	27	1	23	129
ASTURIAS		8	2	1		8	1	1	2		1	20
BALEARES	5	11	3	6	1	8		4	1	3	24	66
CANARIAS		14	16	1	3	3				1	1	39
CANTABRIA			2			3		1				6
CASTILLA-LA MANCHA	16	27	4	3	1	2	2	4	1	2	4	66
CASTILLA Y LEÓN		13	1	9	4	10	2	1	7	2	13	62
CATALUÑA	27	45	62	14	11	25	12	21	25	19	70	331
EXTREMADURA	29	5	5	5	1			1			11	57
GALICIA		5	7	2	2	8		5		2	5	36
MADRID	3	8	4	5	1	8	6	3	4	5	3	50
MURCIA	7	19	40	23	15	5		8	10	4	9	140
NAVARRA	5	23	6	13	1	8	1		12	3	6	78
LA RIOJA	5	25	4	4		2	2	1	2		7	52
PAÍS VASCO		8	5	2		12	1			3	5	36
COMUNIDAD VALENCIANA	31	35	45	7	16	38	5	8	14	3	53	255
<i>TOTAL NACIONAL</i>	226	272	281	118	65	183	39	78	109	49	293	1.713

In other hand, related to animal production, the numbers of Spanish companies that produce organic transformed food are 289. Then, the total organic transformed agro-food companies were 2002, in 2005.

5. Reflections about Spanish Organic Marketing and Consumption.

In Spain, it concerns to Control and Certificate of organic production it exist 28 entities called Authorities and Organisms of Control (November 2005). There are 17 Councils or Committees Regulatory entities as private or public organizations related with Agricultural Departments of the 17 Autonomous Communities of Spain, and the rest they are private companies. Also, it exist the CRAE as coordinator institution and autonomous organism of Ministry of Agriculture, Fishery and Food (MAPA). It is important the Asociación Vida Sana (Healthy Life Association) that promote Conferences and Fairs about Bioculture and Biodynamic and Organic Agriculture and Food. It is important too, the Sociedad Española de Agricultura Ecológica (SEAE) that also promote each year Conferences and Congresses about organic production, distribution, techniques, socioeconomics, etc. At the moment, several Autonomous Communities are adding to Andalucía to make their Organic Strategic Action Plan and include proposals against the anterior and other problems related. For example, Catalonia organized a Congress in 2005 and are finishing the Strategic Plan. Aragon and other regions are also making their strategic plan.

About Consumer profile, there are several types of consumers of organic products in Spain:

- Occasional visitors to special food or herbalist shops to buy a herbal tea and others special food, and as a trial buy an organic products.
- Young people eager to try new products.
- Some minority people made aware in the benefits of the organic foods.
- Medium to high income earners in the 40- 50 year age bracket, who are interested in health foods and eating “natural” products, as well as taking supplements or occasionally.
- Parents interested in feeding their babies products.

In our research, it has been detected two main problems related with the Marketing and the Consumption of organic products. On one hand the lack of conscience and of knowledge of the characteristics of the organic products, their benefits and utilities in connection with the quality of the foods, the health and the respect and protection of the environment, and also the perspective negative of high prices of organic products. On the other hand, the no commercial structuring and no appropriate marketing strategy and actions, on the part of companies that are producing and distributing organic products, and also the difficulties to find these products. This second is related also with the first, the high prices and export.

Other problems are the lack of technical, economic and commercial incentives for the farmers, enough to conversion to organic production. The specific problems as for example the plagues and diseases of the plants, and the protection's restrictions. Also, the fight against the weeds, fertilizer practices, etc. On other hand, the needs to special technologies in the industrial transformations: in vegetal or animal processing, logistics, conservation, etc. Also, the fraudulent use of the term “BIO” in Spain.

6. Consumer's needs and Consumer's choice. Paying for quality and safety guarantees?.

Consumers' fears, triggered by food scares and technological developments such as genetic modification and food irradiation, have been translated into serious concern about food safety, ever-increasing demands for quality assurance and more information about production methods. In addition, public awareness of the irreversible damage done to the environment by practices that lead to soil and water pollution, the depletion of natural resources and the destruction of delicate ecosystems and biodiversity has led to calls for a more responsible attitude towards our natural heritage. Against this background, organic farming, once seen merely as a fringe interest serving a niche market, has come to the fore as an agricultural approach that can not only produce safe

food but is environmentally sound too. In Spain, our research it has verified that Spanish consumers value specially the attributes of natural and healthy of organic products, and also their quality and respect to environment.

Food produced organically has always commanded a higher price than conventionally produced foods, a factor which was previously felt to have hindered the expansion of organic farming. Now, however, a greater number of consumers are proving willing to pay higher prices in return for guarantees relating to food safety and quality. Where organically produced foods were once difficult to obtain in other than specialist outlets and local markets, they are now much more readily available on the shelves of the major supermarket chains across Europe. Furthermore, the range of products on offer has expanded to such an extent that a shopper could now reasonably expect to fill the main part of a week's food basket entirely with organically produced foods, whereas just a few years ago the range would have been restricted to vegetables, meat, poultry, dairy products and fruit. A growing consumer market is thus one of the main factors encouraging farmers to convert to organic agricultural production. But some problems exist.

7. Final Note. Some recommendations.

At the moment, the EU Commission has a great interest in developing the organic sector. Given the environmental advantages of this method of production and the social demand for this type of foodstuff, we must now make a firm commitment. The current reform of the CAP is an ideal opportunity.

It is necessary a European Strategic Action Plan developed by each member country. In Spain, the Strategic Plan for Organic Agriculture was presented for the period 2004-2006, with participation of the principal entities of sector. It has a budget of only EUR 56 million for the whole country, while in 2002 it was presented in Andalusia his Strategic Action Plan with a budget of EUR 100 million. Actually several regions are making their Strategic Action Plan. It is necessary to increment the domestic consumption and to low the prices. As it is known, more than 80% of Spanish organic products are exported.

- *Some actions would be necessary to improve consumption and organic production*: 1. Some powerful information campaigns using the mass media as TV, radio and the press to advise about organic products and their benefits; 2. Organic menus in public dining rooms: hospitals, schools, day nurseries, and also in restaurants, etc.; 3. Improving the quality of organic foodstuffs by diversifying the supply, by promoting research into production and processing methods, packaging, transport, conservation and other logistics; 4. The use of a range of plant varieties and animal species and culture methods should be encouraged, thereby helping to preserve biodiversity. This could be added to the criteria already referred for the modulation of production aid as a means of promoting environmental values; 5. Price is the main factor restricting consumer access to organic foodstuffs; in order to improve the current situation in which the additional cost of organic foodstuffs well exceeds the perceived advantages for consumers: Production aid should be increased as public environmental subsidies. 6. The fraudulent use of the term "BIO" in Spain should be solved. This does not increase the clarity of the information provided to the European and Spanish consumer. 7. Specific regulations for the use of water and energy and the prevention of soil erosion must be drawn up. 8. Aids to the sector in general must be increased. This would be a way of recognising the sector's values and putting into practice the principle that those who pollute pay and therefore those who pollute less benefit accordingly.
- *Some actions would be necessary to improve organic marketing and distribution*: 1. A variety of marketing channels should be promoted because that is what the diversity of consumers of organic foodstuffs calls for. This has been one of the most important points that has come up in the consultation carried out by the Commission. 2. More participation of organic retailers in advice and other marketing

communication actions; 3. More effort of Public Administration and Governments in promotion of sector, and information campaigns about benefits of organic products, conferences, etc.; 4. Improving traceability and origin and method information by regulating the distribution channels. There are serious shortcomings at the moment. Undertakings that market only organic products make this process easier. Indicating the origin of products on labels. 5. Encouraging shorter supply chains. The advantages: they facilitate traceability, add social and environmental value to the production method, reduce the consumption of energy in transport, etc. 6. Clarifying logos and identity of organic products by means of the necessary information campaigns. Differentiated logos must be maintained, especially in the case of those that are more restrictive than those covered by Regulation (EC) No 2092/91. It is necessary include in labels all logos: regional logo, private company's logo and the widely recognised European logo, as symbol of integration and cooperation in organic production and their benefits.

Bibliography and References

- Albardíaz Segador, M.A.; Álvarez,.; Briz, J.; Muñoz, N. 1998. "Análisis del consumo de alimentos ecológicos". En *Actas del II Congreso de la sociedad Española de Agricultura Ecológica y Desarrollo Rural*. Pamplona- Iruña, 25-28 de septiembre de 1996. Sociedad Española de Agricultura Ecológica. Barcelona.
- Altieri, M.; Anderson, M. 1986. "An ecological Basis for the Development of Alternative Agricultural Systems for Small-farms in the Thrid World". En *American Journal of Alternative Agriculture*. nº 1 pp. 30- 38
- Altieri, M.A, 1985^a. "Agroecología. Bases Científicas de la Agricultura Alternativa". CETAL. Valparaíso.
- Aubert, C. 1970. "L'agriculture biologique". Ed. Courrier du Livre. Paris.
- Avila Cano, J.C. 1991. "El desarrollo de la agricultura ecológica: situación en Andalucía". En *Informe anual del sector agrario en Andalucía*. (1990), pp. 473- 498. Unicaja. Málaga.
- Bayliss- Smith, T. 1982. "The ecology of Agricultural systems". Cambridge University. Press. London.
- Cadenas Marín, A. (1995). "Agricultura y Desarrollo Sostenible". Ministerio de Agricultura, Pesca y Alimentación. Madrid
- Carrol, R.C.; Vancermeeer, J.H.; Rosset, P. (eds.). 1990. "Agroecology". MacGraw- Hill. New York.
- Cenit, M.; Alonso, A.; Guzmán, F. 1998. "Estudio de mercado para productos ecológicos: estudio del segmento de demanda de los centros permanentes de consumo en la provincia de Málaga". En *Actas del II Congreso de la sociedad Española de Agricultura Ecológica. Agricultura Ecológica y Desarrollo Rural*. Pamplona- Iruña. 25- 28 de septiembre de 1996. Sociedad Española de Agricultura Ecológica. Barcelona.
- Colom Gorgues A., Saéz Olivito E., Berga Monge A., Martínez Badía I., et al. 2000. "Study on the Quality of Agricultural Products and the Protection of the Environment: Production, Training, Knowledge Disemination, and Certification for Organic Farmers and Products, in Spain". Research Project of CEDEFOP, European Community, year 2000. Final Report, 162 pág.
- Comité Andaluz Agricultura Ecológica (CAAEE). 1998. "Reglamentación vigente en Agricultura Ecológica". Sevilla.
- Centro Internacional de Altos Estudios Agronómicos Mediterráneos (CIHEAM). 1997. "Evaluación del Potencial de mercado de las frutas y vverdurás ecológicas desde la perspectiva de la distribución". En *Curso Superior de comercialización de Productos Agrários y Alimnetários*. Zaragoza, 29 septiembre de 1997- 12 junio de 1998. Zaragoza.
- Comission des Communités Européennes (CCE). 1989. "Bilan des connaissances et des aplicaciones de l'agriculture biologique et intérêt pour l'agriculture communautaire. Situation des pays de la CEE" En Report EUR 12346 FR/1 y 2. Bruselas.
- Dabbert, S. 1994. "Economics of conversion to Organic Farming: Cross- sectional Analysis of Survey Data in Germany". En *The Economic Organic Farming. An International Perspective*. Cab International. Wallingford. (UK). pp. 285- 293
- Gracia Royo, A.; Gil Roig; J.M.; Sánchez García, M. 1998. "Potencial de mercado de los productos ecológicos en Aragón". Diputación General de Aragón. Zaragoza.
- Isart, J.; Llerena, J.J. (eds.) 1996. "Steps in the Conversion and Development of Organic Farms. The European Network for Scientific Research Coordination in Organic Farming". Proceedings of the Second ENOF Workshop. Barcelona, 3- 4 october 1996. CSIC.Barcelona.
- Isart, J.; Llerena, J.J. (eds.) 1997 "Resource Use in Organic Farming. The European Network for scientific research coordination in organic farming". Proceedings of the Thrid ENOF Workshop. Ancona, 5- 6 june 1997. CSIC.Barcelona.
- Isart, J.; Llerena, J.J. (eds.) 1998. "The Future of Organic Farming Systems. The European Network for Scientific Research Coordination in Organic Farming". Proceedings of the Fourth ENOF Workshop. Edinburg, 25- 26 june 1998. CSIC.Barcelona.
- Isart, J.; Llerena, J.J. (eds.) 1999. "Organic Farming Research in the EU, Towards 21st Century". ENOF White Book. CSIC. Barcelona.
- Kabisch, H. 1978. "La guía práctica del Método Bio- Dinámico en Agricultura". En *Técnicas de Agricultura Natural*. Instituto Naturista Bellsolá. Barcelona.
- Klonsky, K.; Tourte, L. 1994. "State Registration and Organic Certification: A Guide for California Growers". University of California- Cooperative Extension. Department of Agricultural Economics. University of California. Davis.
- Klonsky, K.; Tourte, L. 1995. "Statistical Review of California's Organic Agriculture 1992- 1993". Report prepared for California Department of Food And Agriculture Organic Program. Cooperative Extension.

Department of Agricultural Economics. University of California. Davis.
 Lampkin, N.; Measures, M. (ed.). 1995. *1995/6 Organic Farm Management Handbook*. University of Wales and Elm Farm Research Centre. United Kingdom.
 Naredo, J.M. 1991. "La agricultura ecológica en perspectiva". En *Cuadernos del Banco de Crédito Agrícola*, nº 3, pp. 7-20. Madrid.
 Sánchez, M.; Etxaniz, M. 1998. "Estudio de las preferencias en el consumo de productos de agricultura ecológica". En *Actas del II congreso de la sociedad Española de Agricultura Ecológica. Agricultura Ecológica y desarrollo rural*. Pamplona- Iruña, 25- 28 de septiembre de 1996. Sociedad Española de Agricultura Ecológica. Barcelona.
 SEAE. 1996. "Agricultura ecológica. Salud para la Naturaleza. Salud para la Vida". Cuaderno elaborado para el *II Congreso de la Sociedad Española de Agricultura Ecológica*. 25- 28 de septiembre de 1996. Pamplona.
 Willer H. and Yussefi M.. 2005. "The World of Organic Agriculture 2005. Statistics and Emerging Trends". 7th revised edition, February 2005, International Federation of Organic Agriculture Movements (IFOAM), DE-Bonn.

Annex 1. Results of some surveys to Spanish consumers of Organic Products.

Consumption reasons. Main Reasons.	%	Consumption reasons. Qualities.	%
They are healthier foods	84	They are healthier products	67
They don't have residuals	54	They are more natural products	53
They have better properties	44	They respect the environment	30
They have better flavor	36	They have better flavor	16
They avoid the rural exodus	28	They have more vitamins	15
They favor the fair trade	22		
(ALBARDIAZ, M.A., 1996)		(Ministry of Agriculture, Food and Fish., 1992)	
Consumption reasons. Global Evaluación		Consumption reasons. Global Evaluación	
Healthy and guarantee	91	Reading of labels	49
Visual aspect	77	Origin and attributes of the product	46
Flavour	65	Conservatives level	43
Level of residuals	55	Price high = product of quality	19
Opportunity of Offers	54		
(Brugarolas, L.M., Rivera M., 2001)			

Annex 2. Organic Retailers in Catalonia, Spain. Cost and Price differences.

2.1. Organic retailers in Catalonia Autonomous Community (Spain).

Province of Catalonia	Organic Supermarkets	Eco Stores	Dietetic and Medicinal Plant Stores	Cooperatives Consumer Associations
Barcelona	6	48	105	15
Girona	2	3	65	1
Lleida	0	5	55	1
Tarragona	1	1	55	1

Source: Catalonia Organic Agricultural Production Council (CCPAE), 2005.

2.2. Cost and Wholesaler Price between Organic and Conventional Products, in %.

Products	Over cost in production	Wholesaler Over Price
Fruits and Vegetables	50% - 100%	90% - 100%
Livestock, meat and derived	20% - 40%	20% - 70%
Olives and dry fruits	20% - 40%	3%
Vineyard and wine	10% - 15%	-
Cereals	50 - 60%	70%

Source: Catalonia Organic Agricultural Production Council (CCPAE), 2005.

2.3. Over prices (%) observed in some Organic Products. Prices to consumers, 2005.

Fruits and Vegetables	%	Poultry, Pork, Beef, Lamb	%	Cereal, flours, purees, dry fruits	%

Aubergines, Eggplant	+18	Eggs	+193	Rice	+140
Beets	+60	Chicken breast	+87	White wheat flour	+222
Courgette, Pumpkin	+111	Chicken drumstick	+341	Flour of integral wheat	-8
Onions	+46	Chicken wings	+79	Potato puree	-59
Cauliflower	+24	Chicken unit	+138	Almonds	+41
Cabbage	115	Pork loin	+162	Hazelnuts	+12
Lettuce	-4	Pork sausage	-8	Bread	+20
Carrots	+5	Pork cured Ham	-72	Cooked legumes	%
Potatoes	+53	Pork net sausage	-9	Cooked chickpeas	+51
Peppers	+99	Beef beefsteak	+2	Cooked lentils	+67
Tomatoes	+28	Beef chopped meat	+26	Cooked bean	-8
Chickpeas	+52	Beef entrecote	+26	Vegetable conserves, oil, others	%
Banana	+60	Beef Hamburger	+18	Artichokes	-10
Avocado	+7	Lamb ribs	+57	Asparaguses	-27
Kiwi	-3	Lamb leg and over leg	+10	Peppers	+72
Lemon	+117	Lamb back	+57	Tomato sauce	-16
Apple	+12	Milk and derived	%	Marmalades	+113
Pear	+16	Milk (cow)	+104	Muesli	-52
Melon	+28	Cheese	+50	Oil of Olive	+113
Grape	+148%	Yoghurt	+153	Vinegar	+58

Source: Catalonia Organic Agricultural Production Council (CCPAE), 2005.