
Support for Farmers' Cooperatives

Country Report Portugal

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Preface and acknowledgements

In order to foster the competitiveness of the food supply chain, the European Commission is committed to promote and facilitate the restructuring and consolidation of the agricultural sector by encouraging the creation of voluntary agricultural producer organisations. To support the policy making process DG Agriculture and Rural Development has launched a large study, “Support for Farmers’ Cooperatives (SFC)”, that will provide insights on successful cooperatives and producer organisations as well as on effective support measures for these organisations. These insights can be used by farmers themselves, in setting up and strengthening their collective organisation, and by the European Commission in its effort to encourage the creation of agricultural producer organisations in the EU.

Within the framework of the SFC project this country report on the evolution of agricultural cooperatives in Portugal has been written. Data collection for this report has been done in the summer of 2011.

In addition to this report, the project has delivered 26 other country reports, 8 sector reports, 33 case studies, a report on cluster analysis, a study on the development of agricultural cooperatives in other OECD countries, and a final report.

The Country Report Portugal is one of the country reports that have been coordinated by Costas Iliopoulos, AGEPRI. The following figure shows the five regional coordinators of the “Support for Farmers’ Cooperatives” project.

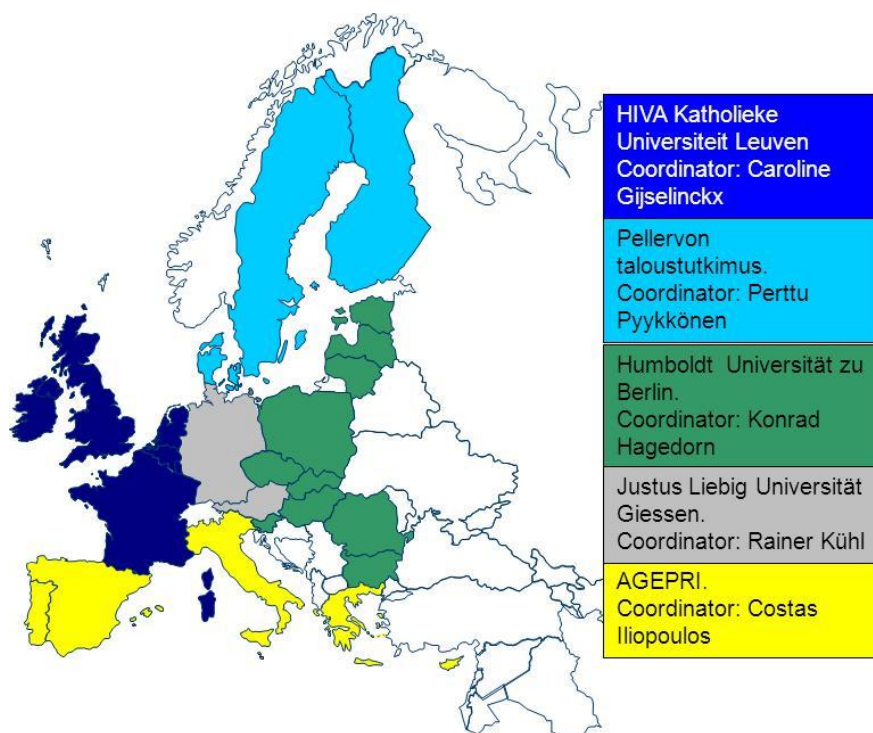


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1 Introduction

1.1 Objective of the study

The imbalances in the bargaining power between the contracting parties in the food supply chain have drawn much attention, including from policy makers. The European Commission is committed to facilitate the restructuring of the sector by encouraging the creation of voluntary agricultural producer organisations (POs). DG Agriculture and Rural Development has launched a large study, “Support for Farmers' Cooperatives”, that will provide the background knowledge that will help farmers organise themselves in cooperatives as a tool to consolidate their market orientation and so generate a solid market income. In the framework of this study this report provides a relevant knowledge from Portugal.

In this context, the specific objectives of the project, and of this country report, are the following:

First, to provide a comprehensive description of the current level of development of cooperatives and other forms of producer organisations in Portugal. The description presented in this report will pay special attention to the following drivers and constraints for the development of cooperatives:

- Economic and fiscal incentives and other public support measures at regional and national level;
- Legal aspects, including those related to competition law and tax law;
- Historical, cultural and sociologically relevant aspects;
- The relationship between cooperatives/POs and the actors of the food chain;
- Internal governance of the cooperatives/POs.

Second, to identify laws and regulations that enable or constrain cooperative development; and third, to identify specific support measures and initiatives which have proved to be effective and efficient for promoting cooperatives and other forms of POs in the agricultural sector in Portugal.

1.2. Analytical framework

There are at least three main factors that determine the success of cooperatives in current food chains. These factors relate to (a) the position in the food supply chain, (b) the internal governance, and (c) the institutional environment. The position of the cooperative in the food supply chain refers to the competitiveness of the cooperative vis-à-vis its customers, such as processors, wholesalers and retailers. The internal governance refers to its decision-making processes, the role of the different governing bodies, and the allocation of control rights to the management (and the agency problems that goes with delegation of decision rights). The institutional environment refers to the social, cultural, political and legal context in which the cooperative is operating, and which may have a supporting or constraining effect on the performance of the cooperative. Those three factors constitute the three building blocks of the analytical framework applied in this study (Figure 1).

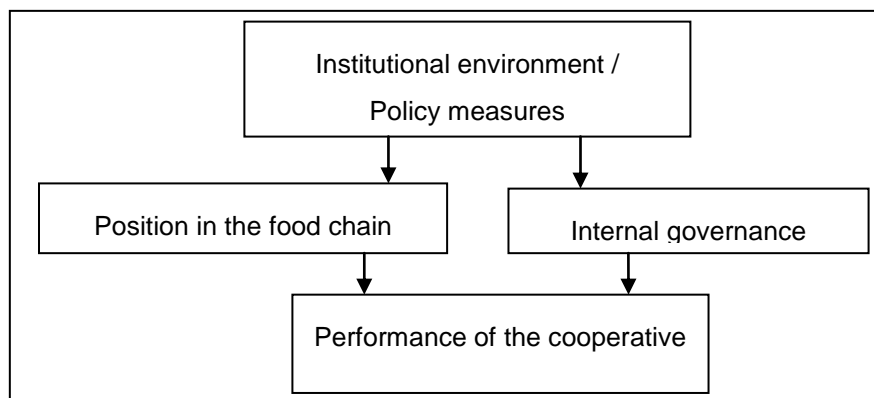


Figure 1. The core concepts of the study and their interrelatedness

1.3. Definition of the cooperative

In this study on cooperatives and policy measures we have used the following definition of cooperatives and producer organisations (POs). A cooperative/PO is an enterprise characterized by user-ownership, user-control and user-benefit:

- It is user-owned because the users of the services of the cooperative/PO also own the cooperative organisation; ownership means that the users are the main providers of the equity capital in the organisation;
- It is user-controlled because the users of the services of the cooperative/PO are also the ones that decide on the strategies and policies of the organisation;
- It is for user-benefit, because all the benefits of the cooperative are distributed to its users on the basis of their use; thus, individual benefit is in proportion to individual use.

This definition of cooperatives and POs (from now on shortened in the text as cooperatives) includes cooperatives and associations of producer organisation (often called federated, second degree or secondary cooperatives).

1.4. Method of data collection

Multiple sources of information have been used: Databases, interviews, corporate documents, academic and trade journal articles. Amadeus, FADN, Eurostat, CASES (*Cooperativa António Sérgio para a Economia Social*), Portuguese Ministry of Agricultural and Rural Development were some of the databases used in this project. Also a database from DG Agri on POs, specifically for the fruit and vegetable sector, and data provided by Copa-Cogeca were used. In addition, information on individual cooperatives has been collected by studying their annual reports and websites. Interviews have been conducted with representatives of national associations of cooperatives, managers and directors of individual cooperatives, and academic or professional experts on cooperatives.

1.5. Period under study

This report tries to cover the period from 2000 to 2010, and presents the most up-to-date available information. This refers to both the factual data that has been collected and the literature that has been reviewed.

2. Facts and figures on agriculture

2.1 Share of agriculture in the economy

A study of farmers' agricultural cooperatives can best start at the farmers' side. In 2007 the share of Portuguese agriculture (agriculture, hunting and forestry) in GDP was 2.18% against 5.41% in 1995 (Figure 2). In the same period the value of agriculture witnessed a decreasing rate of 23% while the GDP increased. This picture is clear about the decreasing importance of the agricultural sector in the Portuguese economy.

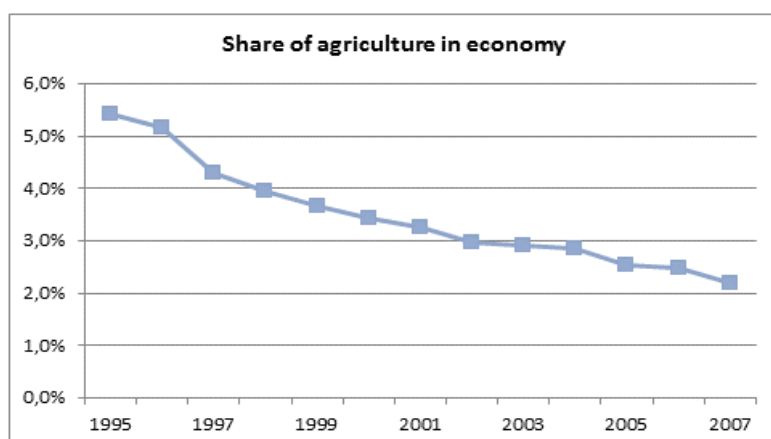


Figure 2. Share of agriculture in GDP. Source: Eurostat Nat. Accounts

2.2 Agricultural output per sector

Within agriculture several sectors exist. Figure 3 provides information on the main sub sectors in Portugal. Due to its soil and climate characteristics, the main Portuguese agricultural sectors are fruit and vegetables, wine, dairy and pig meat.

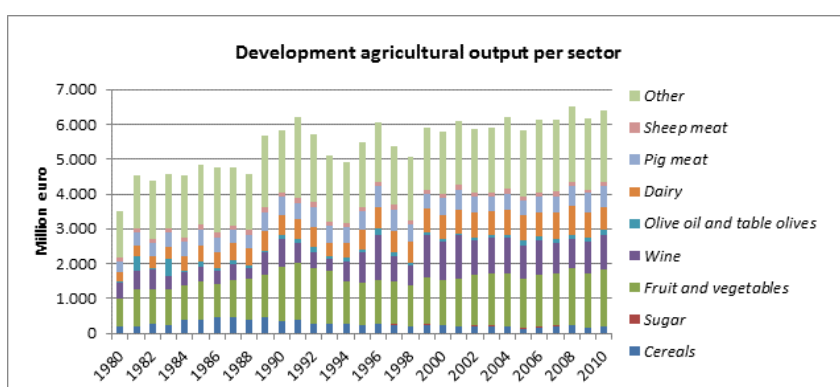


Figure 3. Development of the different sectors in agriculture, value of production at producer prices, in millions of euro. Source: Agriculture Economic Accounts, Eurostat

Figure 4 shows the development in the output per sector for the period 2001-2009, calculated on a 3 year average around 2001(2000, 2001 and 2002) and around 2009 (2008, 2009 and 2010). Sugar beet, cereals, sheep meat and wine show a negative rate. The other sectors, mainly olive oil and fruit and vegetables, show a positive rate. The total agricultural output increased by 1%.

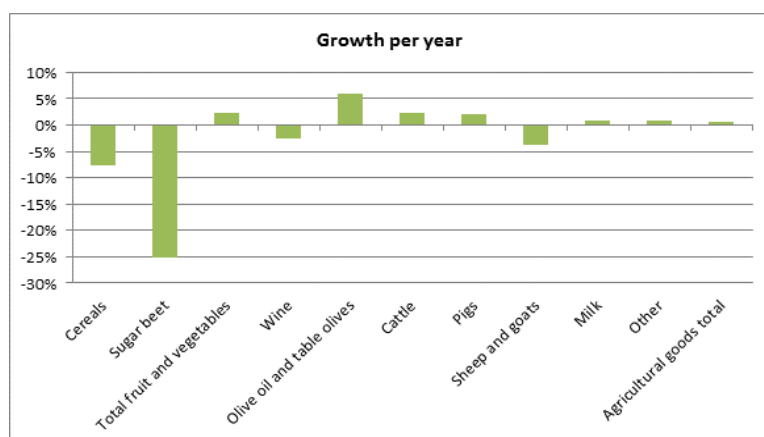


Figure 4. Trend in output per sector "2001" - "2009". Source: Economic Accounts of Agriculture, Eurostat

2.3 Development in the number of farms

The number of farms in Portugal is shown in Table 1 and Figure 5. Between 2000 and 2007, the total number of farms decreased by 34%, from 416 to 275 thousands. For the nine agricultural sectors presented in Table 1 this number went from 208,560 (50.13% of the total) in 2000 to 154,410 (56.15% of the total) in 2007 a reduction of 25.96%. This decrease occurred in all sectors, although more pronounced in the pig meat, wine and dairy sectors, but the relative position of each sector remained relatively stable, with a concentration degree, in 2007, of 80.90% in farms of the 4 following sectors: fruits and vegetables (20.92%), wine (19.20%), olive oil and table olives (15.01%), sugar (14.00%) and sheep meat (11.77%).

Table 1. Number of farms

	2000	2007	% change per year
Cereal	8,430	6,390	-3.88
Sugar	27,690	21,620	-3.47
Pig meat	7,280	4,290	-7.28
Sheep meat	23,800	18,170	-3.78
Total fruit and vegetables	42,620	32,300	-3.88
Horticulture	12,600	7,620	
Fruit and citrus fruit	30,020	24,680	
Olive oil and table olives	29,490	23,180	-3.38
Wine	45,520	29,460	-5.94
Dairy	14,190	9,590	-5.44
Beef	9,540	9,230	-0.47

Source: Eurostat, Farm Structure Survey.

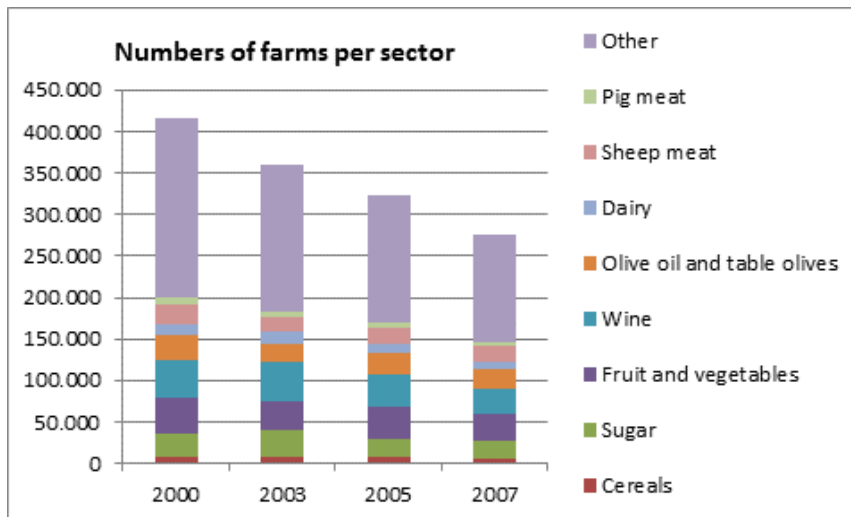


Figure 5. Number of farms 2000 - 2007 with data per specialist type of farming. Source: Eurostat, Farm Structure Survey.

2.4 Size of farms

Farms come in different sizes from small part-time farms to large exploitations. Figure 6 shows the distribution of farms per size class, measured in European Size Units (ESU). With the exception of the dairy sector, in general, we are dealing with very small farms. This situation is especially true in the case of olive oil and table olives, followed by that of pig meat. From the total population of Portuguese farms, 57.5% belong to the first two classes and 86.3% to the first four classes of farms, respectively. These numbers are quite clear about the extreme farming fragmentation and the small scale in agricultural production.

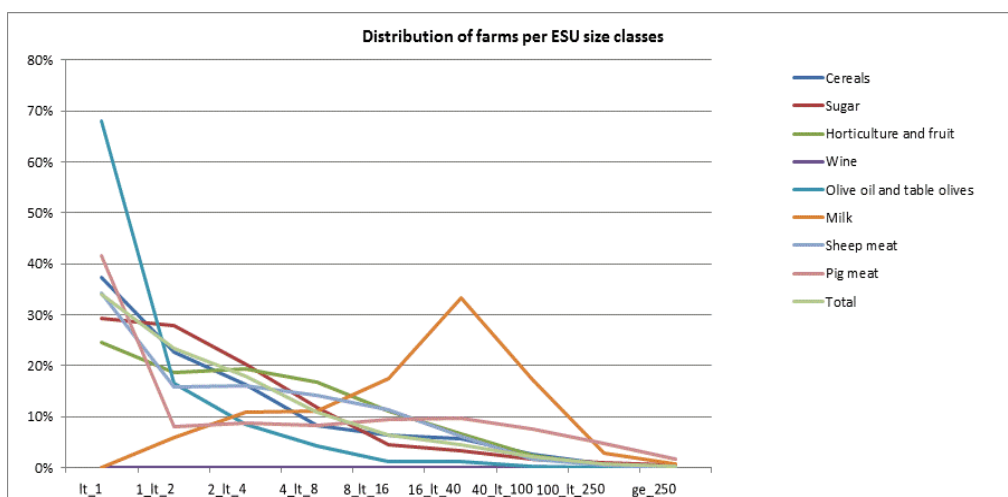


Figure 6. Number of farms per size class, measured in ESU, per specialist type of farming. Source: Eurostat, Farm Structure Survey.

2.5 Age of farmers: distribution of farms to age classes

From the information presented in Figure 7, and comparatively to the other EU countries, and the average of EU27, we can easily observe that the Portuguese farming population is the oldest one: 46.7% with over 65 years (EU27 = 32.7%), 72.1% with over 55 years (EU27=55.4%) and only 10.4% with less than 44 years (EU 27=21.8%).

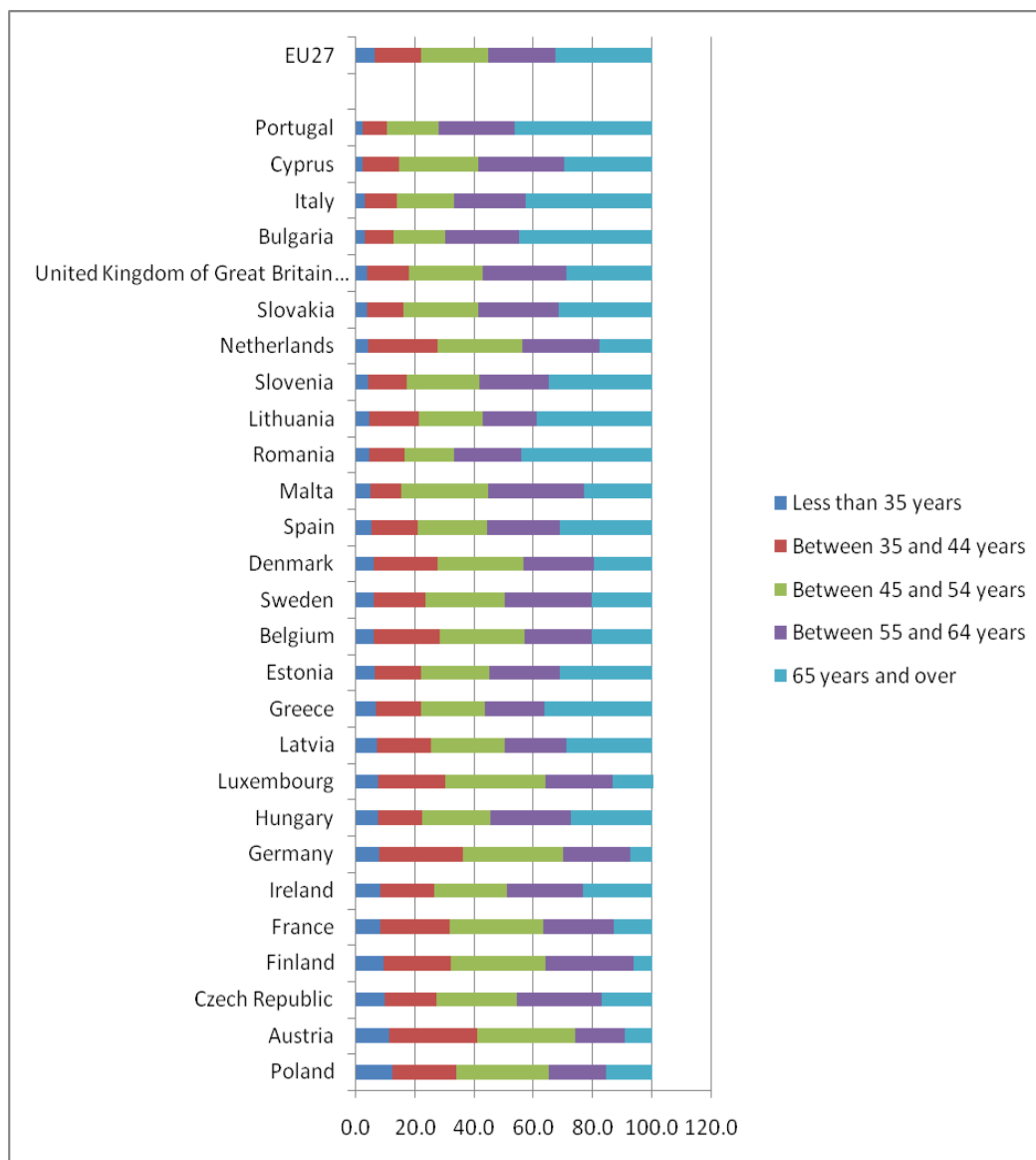


Figure 7. Percentage of farmers per age class, per Member State and EU27, 2007 (ranked with countries with the lowest percentage of young farmers on top). Source: Eurostat, Farm Structure Survey.

2.6 Specialisation of farm production

Cooperatives do not only have member-farmers with different farm sizes (or with age differences). Farms also differ in the composition of their production and, therefore, of their inputs. This is even true for specialist farms, where e.g. some the so called specialist dairy farmers also have beef or sheep or sell hay. In addition to that a lot of mixed (non-specialized) farms exist. The heterogeneity of farming in terms of specialisation can be estimated by calculating the share that specialized farms have in the total production. This is what Graph 8 (split in 8A for plant production and 8B for animal production) shows.

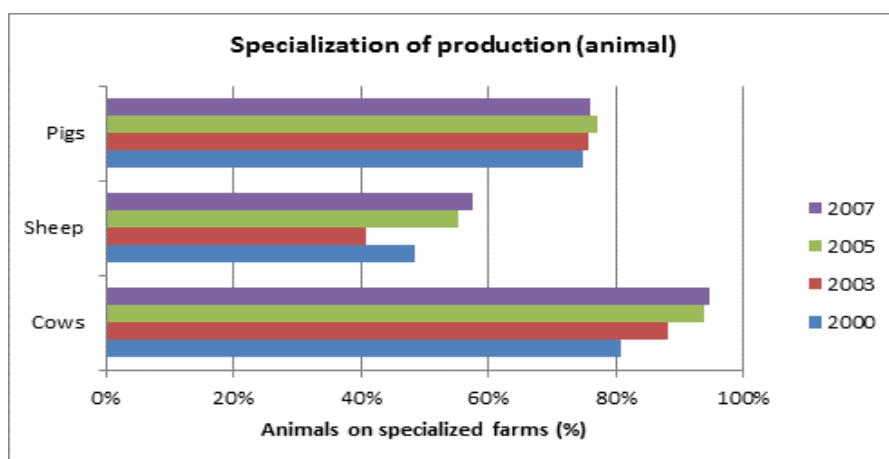
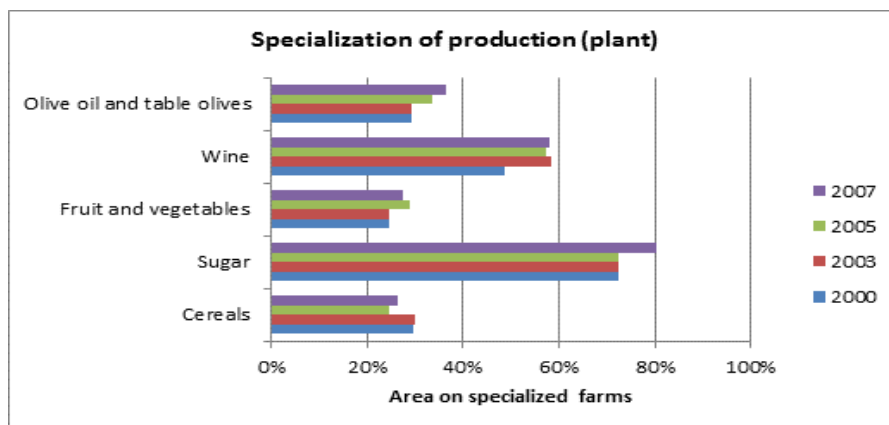


Figure 8. A & B - Heterogeneity in farm production: the share of specialist farm types in total production. Source: Economic Accounts of Agriculture, Eurostat.

2.7 Economic indicators of farms

The description of agriculture is concluded with some economic indicators (Table 2). These indicators focus on the net value added and income from farming for farmers, as well as the level of their investment. Some of this investment was made in the equity of the cooperative, but by far, most of it, has been made in farm assets.

Table 2. Economic indicators average per farm (2006-008)

	Cereals	Sugar	Fruit and vegetables	Olive oil and table olives	Dairy	Wine	Pig meat	Sheep meat
Economic size - ESU	9.37	16.50	13.31	7.90	28.23	9.40	75.20	11.00
Total labour input - AWU	1.16	1.82	1.74	1.24	1.82	1.57	2.18	1.58
Total Utilised Agricultural Area (ha)	40.8	15.8	7.3	33.8	18.0	8.10	17.4	73.0
Total output €	22,201	29,255	21,388	20,034	66,102	16,605	184,628	17,658
Farm Net Value Added €	17,988	15,693	9,521	14,244	24,765	8,936	49,703	11,359
Farm Net Income €	15,698	11,873	7,183	11,463	21,611	5,584	44,767	9,824
Total assets €	98,303	72,041	71,647	149,010	110,502	82,638	222,015	108,211
Net worth €	84,531	69,537	70,075	145,564	99,442	80,646	206,676	105,444
Gross Investment €	1,331	2,515	2,534	33,084	5,480	2,227	6,055	2,733
Net Investment €	-1,938	-1,118	-1,432	29,987	-699	-1,778	-2,566	-471
Total subsidies - excl. on investm. €	12,729	7,044	1,420	4,753	10,940	1,606	852	8,163
Farms represented	2,180	8,310	15,347	3,527	8,377	13,930	1,280	9,457

note: less than 3 years available

Source: DG Agri, FADN.

2.8 Synthesis

INE (2011: 3), based on the results of the Agricultural Census of 2009, summarizes the main trends in the Portuguese farming structure and agricultural systems in the last decade (i.e., comparing results between the years 2009 and 1999) as follows:

- One of every four farms had ceased its activity but the surface of farms occupies half of the country;
- The small-sized farms continue to prevail, but 2/3 of the Utilized Agricultural Area (UAA) is now managed by farmers with more than 50 ha of UAA;
- UAA increased more than, roughly, 2.5 ha, from an average of 9.3 ha to 12 ha, as a result of the absorption of the surfaces of small farmers by larger ones;
- The number of holdings (as a legal entity of agricultural enterprises) grew 23%, and 27% of the UAA is managed by them;
- A change in the agricultural landscape, with permanent pasture occupying almost half of the UAA in the most extensive agricultural production systems;
- Enhanced surface reduction of grain cereals in about 244 thousand ha;
- A decrease of 23% in irrigated surface;
- Doubling the average size of cattle and pig herds;
- An increase of 10% in the number of tractors;
- A loss of 443 thousand persons in agricultural family population; however this population still represents 7% of the resident population;
- Women account for one third of farmers and increased their importance in 8%;
- Farmers age increased on average by 4 years, and it is now of 63 years old;
- The average farmer is a male that completed the 1st cycle of basic education, with only applied training and working exclusively in farming activities about 22 hours per week.

Since agricultural cooperatives are an upstream (supply input cooperatives) and downstream (processing and marketing cooperatives) extension of agricultural activities, i.e., a vertical integration, their evolution reflects, and it is a consequence, of the structural transformations occurred in Portuguese agriculture. Until 2010, POs (with the legal statutes of cooperative or private firm) were only present in the Fruit and Vegetables sector. Special attention to these organisations will be given in section 5.3 of this report.

3. Evolution, position and performance of cooperatives

3.1 Types of cooperatives

The Portuguese Cooperative Movement has its roots in the 19th century, although its expansion and deployment was very limited until 1974 (Namorado, 1999). During the Constitutional Monarchy, overthrown in 1910, the Portuguese Cooperative Movement was incipient and clearly rooted in the labour movement. During the 1st Republic, from 1910 to 1926, cooperatives were doctrinally oriented, but this orientation did not result in consistent public policies.

During the dictatorship period, between 1926 and 1974, the political power was generically hostile to cooperatives. However, the economic failure of the corporative regime concerning the agricultural sector, led government to encourage agricultural cooperative development in a top-down strategy, strongly supervised by the political power. This positioning is clearly expressed in the *Plano de Fomento* for wine (Teixeira, 2001; and Rebelo et al. 2002), milk/dairy, olive oil and fruit cooperatives, in the 1950s and 1960s.

An important consequence of the democratic revolution of April 25th in 1974 for agricultural cooperatives was the conquest of freedom that led, from this date on, to a strong cooperative expansion both in terms of the number of cooperative members and of the sectors in which they became involved. However, after this expansion, that lasted until the mid-1980s a period of significant cooperative failures occurred, particularly in industries characterised by intense market competition (e.g., the agri-food sector).

In 1980, the Cooperative Code (CC) was passed. The current law is the result of an amendment enacted in 1996 (Law nº 51/96 from September 7). Since 1998 a Cooperative Fiscal Statute (Law nº 95/98 from December 16) exists establishing a specific and a-priori favourable tax regime for cooperatives, comparatively to private firms (exemption of tax on net surplus, excluding the net profits from transactions with third parties, and local tax exemption on real estate). In 2012, this autonomous and specific Cooperative Fiscal Statute became part of the Fiscal Benefits Statute, with a specific article on cooperatives (article 66-A), but the “fundamental matrix” of fiscal support was maintained.

In addition to primary cooperatives and secondary cooperatives, the CC contemplates the existence of federations and confederations of cooperatives. Presently¹ 22 federations and 2 confederations of cooperatives are active. Six federations are present in the agricultural sector: Fenadegas (wine), Fenafrutas (fruit and vegetables), Fenalac (milk), Fenazeites (olive oil) Fenca (production), Fenagro (supply inputs) and, at a higher level 2 large confederations: CONFAGRI (agricultural and forestry sectors and agricultural credit) and CONFECOOP (all the other sectors where cooperatives are involved). Since the 1st Congress of the Portuguese Cooperatives, in 1999, these confederations are collaborating under an Inter-cooperative Forum.

Since 1976, the Portuguese government has been associated with the cooperative sector through a public institute called INSCOOP (*Instituto António Sérgio do Sector Cooperativo*), renamed as a cooperative organisation (instead of a public institute), in 2008, CASES (*Cooperativa António Sérgio para a Economia Social*).

Cooperative activities (principles, functions, internal governance, etc) are regulated by the legal framework stipulated in the CC and additionally, for each sector, stipulated by a specific legal regime. In the case of agricultural cooperatives this regime is defined in Law Decree nº 335/99 from August 20.

¹ See www.cases.pt

In their organisation and operation, the Portuguese cooperatives observe (comply with) the following cooperative principles, that are an integral part of the declaration on the cooperative identity adopted by the International Cooperative Alliance (ICA): voluntary and open membership; democratic member control; members' economic participation; autonomy and independence; education, training and information; cooperation among cooperatives; and concern for the community.

Primary cooperatives only accept as members², individuals or firms that have transactions with the cooperative (user-owners).

According to article 2 of the CC *“Cooperatives are autonomous legal persons, created freely, with variable capital and membership, that through co-operation and mutual assistance of their members, with obedience to cooperative principles, aim, in a non-profit way, to meet the economic, social, or cultural needs of the members”*.

Article 2 of Law Decree nº 335/99 states that *“agricultural cooperatives are those involved in the agricultural, livestock and forest activities, to collect, concentrate, transform, store and sell production of members, to produce, buy, process and store raw material and animals to members exploitations, to provide services to the members and to manage the use of water resources”*.

In its core, the Portuguese cooperatives in their organisation and management follow the model that in the literature is known as traditional cooperative, where equity is mainly financed through by member contributions and net surplus (benefits) retained by decision of the general assembly.

In terms of spatial distribution, cooperatives are spread throughout the country³.

Table 3 shows the number of cooperatives, by branch, in Portugal in 2000 and 2010. The total number of cooperatives in 2010 is 3,108, an increase of 4.5% relatively to 2000. By branch, agricultural cooperatives are predominant (31.6% in 2000 and 28.9% in 2010) followed by housing and construction and services. Comparing the cooperatives branches that provide public or quasi-public goods (handicraft, culture, education, services and social solidarity) with those that compete with IOFs in the market (agricultural, trade, consumption, credit, fishing and production workers), we observe that, in the last decade, the number of the former increased, while the opposite occurred in the latter case.

In summary, the Portuguese cooperative movement only gained relevance after the 1960s, as an answer to market failures (monopoly/monopsony power and asymmetric information). The relevance of cooperatives in social activities is increasing, mainly, into sectors that provide public or quasi-public goods.

² The article 6 of the CC also considers as cooperatives the *regies* or cooperatives of public interest, characterized by government participation or other legal persons governed by public law, as well as, jointly or separately, cooperatives and users of products and services produced.

³ The site of CASES (www.cases.pt) provides detailed information of the number of cooperatives in each district by branch.

Table 3. Number of cooperatives (by branch) in Portugal in 2000 and 2010

Cooperatives	2000	2010	Change (%)
<i>Branch</i>			
– Agricultural	931	870	-6.55
– Crafts	48	57	18.75
– Marketing	60	47	-21.67
– Consumption	205	169	-17.56
– Credit	150	100	-33.33
– Culture	255	302	18.43
– Education	128	139	8.59
– Housing and construction	540	518	-4.07
– Fishing	25	17	-32.00
– Labour Production	104	71	-31.73
– Services	419	513	22.43
– Social Solidarity	85	209	145.88
Total	2,950	3012	2.10
<i>Cooperative Unions</i>	65	72	10.77
<i>Federations and confederations of cooperatives</i>	25	24	-4.00
Total	2,975	3,108	4.47

Source: www.cases.pt

3.2 Market share of farmers' cooperatives in the food chain

In Portugal, detailed information about the quantities of agricultural products marketed through cooperative firms is scarce (see COGECA, 2010). However, we can say that, in order of importance, they play a relevant role (Table 4) in the chains of dairy (ilk), wine, olive oil and fruit and vegetables. Despite this importance, there are few studies either of the cooperative sector as a whole or on particular aspects of agricultural cooperatives.

The market share of cooperatives in the dairy, fruit and vegetables, wine, and olive oil food chains, in 2009, was 70%, 25%, 42% and 30%, respectively.

Table 4. Market Share of Cooperatives

	2003		2009		Comments
Sector	Number of members	Market Share (%)	Number of members	Market Share (%)	
Cereals					
Sugar					
Pig meat					
Sheep meat					
Fruit and vegetables	n.a.	35	n.a.	25	Only in fruits. Based on qualitative information given by stakeholders of the sector
Olive oil and table olives	n.a.	35	n.a.	30	Based on qualitative information given by stakeholders of the sector
Dairy	n.a.	65	n.a.	70	Based on qualitative information given by stakeholders of the sector
Wine	n.a.	54	n.a.	42	Based o data in IVV annual reports

3.3 List of top 50 largest farmers' cooperatives

CASES (former INSCOOP), taking into account the turnover, publishes annually the top ranking of the 100 largest cooperatives of all branches. Tables 5 and 6 include the top ranking of the 50 largest agricultural cooperatives in 2005 (accounting data of 2004) and 2010 (accounting data of 2009).

Table 5. List of top 50 largest farmers' cooperatives in 2005

<i>Name</i>	<i>Sector</i>	<i>Nº of workers</i>	<i>Turnover (10³ euros)</i>
AGROS- União das cooperativas Produtoras de Leite, UCRL	Dairy(milk)	353	189,378
Proleite- Cooperativa Agrícola de produtores de leite do centro litoral, CRL	Dairy(milk)	110	71,726
Cooperativa Agrícola de Barcelos, CRL	Dairy(milk)	99	65,448
LACTICOOP-União das Coop. de Leite Entre Douro e Mondego	Dairy(milk)	76	61,560
VILA DO CONDE- Cooperativa Agrícola, CRL	Dairy(milk)	84	51,612
UNILEITE - União das Cooperativas Agrícolas Lacticínios S. Miguel, UCRL (Azores)	Dairy(milk)	141	39,781
CARMIM - Cooperativa Agrícola de Reguengos Monsaraz	Wine	88	29,864
BENEDITA- Cooperativa agrícola de criadores de gado, CRL	Supply inputs to livestock	56	28,505
Cooperativa União Agrícola, CRL	Supply inputs to farming	137	25,239
PÓVOA DE VARZIM- Cooperativa Agrícola Leiteira, CRL	Dairy(milk)	42	24,266
FAGRICOOP-Cooperativa Agrícola de Produtores de Leite, CRL	Dairy(milk)	48	21,398
AGROMAIS-Entrepósito Comercial Agrícola, CRL	Marketing	16	18,752
PORTO ALTO - Rações para animais, CRL	Supply inputs to livestock	32	16,766
Cooperativa dos Agricultores de S. Tirso e Trofa, CRL	Supply inputs to farming	35	16,003
AZUEIRA - Adega Cooperativa, CRL	Wine	35	15,858
CAVES SANTA MARTA, CRL	Wine	86	15,794
BORBA - Adega Cooperativa, CRL	Wine	55	15,436
REDONDO- Adega Cooperativa, CRL	Wine	57	15,405
LEICARCOOP-Cooperativa dos Produtores de Leite, CRL	Dairy(milk)	3	15,256
TOCHA-Cooperativa Agrícola, CRL	Dairy(milk)	106	14,069
BRINCHES - Cooperativa agrícola, CRL	Olive oil	48	13,562
SERRALEITE - Cooperativa Agrícola dos produtores de Leite, CRL	Dairy(milk)	97	12,883
MONTEMOR-O-Velho, Cooperativa agrícola, CRL	Supply inputs to farming	37	11,874
CAVES VALE DO RODO, CRL	Wine	74	11,663
FAVAIOS - Adega Cooperativa, CRL	Wine	43	11,421
ESPOSENDE - Cooperativa Agrícola, CRL	Dairy(milk)	39	11,368
MOURA E BARRANCOS - Cooperativa Agrícola, CRL	Olive oil	43	11,260
CAVAGRI, Cooperativa agrícola do Vale do Cávado, CRL	Supply inputs to farming	40	10,909
CALCOB- Cooperativa Agrícola de Oliveira do Bairro, CRL	Supply inputs to farming	55	10,793
BEBEDOURO - Cooperativa Agrícola, CRL	Dairy(milk)	38	10,121
COPOMBAL - Cooperativa agrícola, CRL	Supply inputs to farming	21	10,053
MONÇÃO - Adega Cooperativa, CRL	Wine	26	9,578
Cooperativa Agrícola de Coimbra, CRL	Supply inputs to farming	36	9,080
FUNCHAL - Cooperativa Agrícola, CRL (Madeira)	Supply inputs to livestock	37	8,886
TERRAS DE FELGUEIRAS _ Caves Felgueiras, CRL	Wine	58	8,929
UCANORTE XXI - União Agrícola do Norte, UCRL	Marketing	33	8,432
ALMEIRIM - Adega Cooperativa, CRL	Wine	53	8,064
SABODOURO - Cooperativa Agrícola, CRL	Supply inputs to farming	31	7,816
BEJA - Cooperativa agrícola, CRL	Olive oil	32	7,374
MURÇA - Adega Cooperativa, CRL	Wine	28	7,286
LOURICOOP-Cooperativa de Apoio e Serviços da Lourinhã, CRL	Supply inputs to farming	41	7,244
GRANFER - Produtores de Frutas	Fruits and vegetables	23	6,885

VALE DO MONDEGO – Cooperativa Agrícola dos Lavradores, CRL	Supply inputs to farming	21	6,756
Cooperativa Agrícola de Lacticínios do Faial, CRL (Azores)	Dairy (milk)	74	6,623
SANTO ISIDRO DE PEGÕES - Cooperativa agrícola, CRL	Wine	30	6,411
CDA – Cooperativa agrícola, CRL	Supply inputs to farming	34	6,278
AGROCAMPREST – Cooperativa Agrária, CRL	Supply inputs to farming	38	6,266
SANTA MARIA DA FEIRA E S. JOÃO DA MADEIRA, CRL	Supply inputs to farming	37	6,258
VERCOOP-União das Adegas Cooperativas da Região dos Vinhos Verdes, CRL	Marketing of wines	55	5,835
CAMINHOS DO FUTURO – Cooperativa Comercial, CRL	Supply inputs to farming	25	5,770

Table 6. List of top 50 largest farmer's cooperatives in 2010

<i>Name</i>	<i>Sector</i>	<i>Nº of worker</i>	<i>Turnover (10³ euros)</i>
AGROS- União das cooperativas Produtoras de Leite, UCRL	Dairy(milk)	300	175,671
UNICOL – União de Cooperativas Lacticianios Terceirenses, UCRL	Dairy(milk)	158	64,413
Cooperativa Agrícola de Barcelos, CRL	Dairy(milk)	100	63,199
Proleite- Cooperativa Agrícola de produtores de leite do centro litoral, CRL	Dairy(milk)	108	62,940
LACTAÇORES – União das Cooperativas Lacticianios dos Açores, UCRL	Dairy(milk)	50	57,788
Vila do Conde – Cooperativa Agrícola, CRL	Dairy(milk)	86	56,619
LACTICOOP-União das Coop. Produtores de Leite Entre Douro e Mondego	Dairy(milk)	71	53,951
UNILEITE – União das Coop. Agrícolas Lacticianios S. Miguel, UCRL (Azores)	Dairy(milk)	193	53,339
União Agrícola, CRL	Supply inputs	165	30,003
CARMIN-Cooperativa Agrícola de Reguengos de Monsaraz, CRL	Wine	81	25,305
LEICARCOOP-Cooperativa dos Produtores de Leite, CRL	Dairy(milk)	5	24,734
AGROMAIS – Entrepasto Comercial Agrícola, CRL	Marketing	18	24,415
PÓVOA DE VARZIM- Cooperativa Agrícola Leiteira, CRL	Dairy(milk)	39	23,785
BENEDITA- Cooperativa agrícola de criadores de gado, CRL	Supply inputs to livestock	45	22,137
REDONDO – Adega Cooperativa do Redondo, CRL	Wine	59	19,477
BEJA e BRINCHES – Cooperativa agrícola, CRL	Olive oil	57	19,358
BORBA- Cooperativa Agrícola, CRL	Wine	63	17,858
Cooperativa dos Agricultores de S. Tirso e Trofa, CRL	Supply inputs to farming	34	16,061
CAVES SANTA MARTA, CRL	Wine	71	15,545
MOURA e BARRANCOS, Cooperativa agrícola, CRL	Olive oil	42	15,128
AZUEIRA, Adega Cooperativa, CRL	Wine	42	13,839
MONÇÃO, Adega Cooperativa, CRL	Wine	28	13,051
TOCHA-Cooperativa Agrícola, CRL	Dairy(milk)	96	12,681
ESPOSENDE – Cooperativa Agrícola, CRL	Dairy(milk)	43	11,982
S. MAMEDE DA VENTOSA, Adega Cooperativa, CRL	Wine	38	11,837
RACOOB – Cooperativa Agrícola de Rações, CRL	Supply inputs to livestock	5	11,705
PORTO ALTO – Rações para animais, CRL	Supply inputs to livestock	30	11,660
CALCOB- Cooperativa Agrícola de Oliveira do Bairro, CRL	Supply inputs to farming	62	11,648
UCANORTE XXI – União Agrícola do Norte, UCRL	Marketing	29	11,541
PROVAPE – Cooperativa Agrícola do Vale da Pedra, CRL	Fruit and vegetables	3	11,530
SERRALEITE, Cooperativa agrícola, CRL	Dairy(milk)	71	10,865

MONTEMOR-O-VELHO, Cooperativa agrícola, CRL	Supply inputs to farming	39	10,654
FAVAIOS, Adega Cooperativa , CRL	Wine	43	10,401
BEBEDOURO, Cooperativa agrícola, CRL	Dairy(milk)	20	10,262
BENAGRO – Cooperativa Agrícola de Benavente, CRL	Supply inputs to farming	8	9,955
CAVAGRI, Cooperativa agrícola do Vale do Cávado, CRL	Supply inputs to farming	40	9,560
COPOMBAL – Cooperativa Agrícola, CRL	Supply inputs to farming	20	9,555
FUNCHAL _ Cooperativa Agrícola, CRL (Madeira)	Supply inputs to livestock	36	9,390
LOURICOOP-Cooperativa de Apoio e Serviços da Lourinhã, CRL	Supply inputs to farming	45	9,090
SANTO ISIDRO DE PEGÕES, CRL	Wine	36	8,932
ALENSADO – Cooperativa Agrícola do Sado, CRL	Fruits and vegetables	3	8,398
FRUTUS – Estação Fruteira do Montejunto, CRL	Fruits and vegetables	87	7,992
AGROCAMPREST – Cooperativa Agrária, CRL	Supply inputs to farming	19	7,983
VERCOOPE-União das Adegas Cooperativas da Reg. dos Vinhos Verdes, CRL	Marketing of wines	48	7,434
ALMEIRIM –Adega Cooperativa, CRL	Wine	33	7,398
CAMINHOS DO FUTURO – Cooperativa agrícola, CRL	Supply inputs to farming	28	7,271
TERRAS DE FELGUEIRAS _ Caves Felgueiras, CRL	Wine	49	7,266
FRUBAÇA – Cooperativa de hortofructicultores, CRL	Fruits and vegetables	90	7,250
Cooperativa Agrícola de Coimbra	Supply inputs to farming	42	7,129
Cooperativa Agrícola de Lacticínios do Faial, CRL (Azores)	Dairy (milk)	74	7,046

In the food chain the 5 largest agricultural cooperatives belong to the dairy/milk sector. Excluding agricultural supply cooperatives, and in terms of processing/marketing, in descending order, emerge the cooperatives in the wine, fruit and vegetables and olive oil sectors. The total turnover of the top 50, improved from 1,015,837 million euro in 2004 to 1,137,0290 euro in 2009 (an increase of 11.9%). In the same period, the average turnover increased from 20,317million euro to 22,741 million euro. However, there is a strong concentration of the turnover in the largest cooperatives, being the coefficient of variation of 639% and 524% in 2004 and 2009, respectively.

3.4 List of top 5 largest farmers' cooperatives per sector

Table 7 includes the list of the five largest processing/marketing cooperatives in the four agricultural sectors where their position is relevant for the Portuguese case.

Table 7. Most important cooperatives in the sectors where they are relevant

Sector	Order Nº	Name of Cooperative
Dairy (milk)	1	AGROS- União das cooperativas Produtoras de Leite, UCRL
	2	UNICOL- União das Cooperativas de Lactícínios Terceirenses, UCRL (Azores)
	3	Cooperativa Agrícola de Barcelos, CRL
	4	Proleite- Cooperativa Agrícola de produtores de leite do centro litoral, CRL
	5	LACTAÇORES – União das Cooperativas de lactícínios dos Açores (Azores)
Wine	1	CARMIM-Cooperativa Agrícola de Reguengos de Monsaraz, CRL
	2	REDONDO – Adega Cooperativa do Redondo, CRL
	3	BORBA- Cooperativa Agrícola, CRL
	4	CAVES SANTA MARTA, CRL
	5	MONÇÃO ⁴ – Adega Cooperativa, CRL
Olive oil	1	BEJA E BRINCHES – Cooperativa Agrícola, CRL
	2	MOURA E BARRANCOS – Cooperativa Agrícola, CRL
	3	VIDIGUEIRA – Cooperativa Agrícola, CRL
	4	VALPAÇOS – Cooperativa dos Olivicultores, CRL
	5	ERVEDAL e FIGUEIRA e BARROS – Cooperativa dos Olivicultores, CRL
Fruit and Vegetables	1	PROVAPE – Cooperativa Agrícola do Vale da Pedra, CRL
	2	ALENSADO – Cooperativa Agrícola do Sado, CRL
	3	FRUTUS – Estação Fruteira do Montejunto, CRL
	4	FRUBAÇA – Cooperativa de hortofruticultores, CRL
	5	COOPERFRUTAS – Cooperativa de Fruta e Produtos Hortícolas, CRL

Source: Data provided by CASES

3.5 Transnational cooperatives

Many cooperatives are active internationally. In most cases the foreign activities of cooperatives are limited to marketing, trade and sales. Usually they do not buy agricultural products from farmers in other countries. However, there is a growing group of cooperatives that do business with farmers in other EU Member States. These cooperatives are called international cooperatives. They are marketing cooperatives that buy from farmers in different countries or supply cooperatives that sell inputs to farmers in different countries. One particular group of international cooperatives is the so-called transnational cooperatives. These cooperatives do not just contract with farmers to buy their products or to sell them inputs they actually have a membership relationship with those supplying or purchasing farmers. In sum, a transnational cooperative has members in more than one country.

In Portugal there are no transnational cooperatives. They only operate with members located in Portugal (mainland and the islands of Azores and Madeira). However, in the top corner of the pyramid of the cooperative milk sector operates a private company, Lactogal SA (whose shareholders are only three cooperatives: Agros, Proleite and Lacticoop) that recently bought the Spanish private company named Celta, SA. The milk collected, processed and packaged by this firm is essentially sold in the Spanish market.

The international experiences of agricultural cooperatives are especially relevant in the field of exports, but the domestic market continues to be dominant.

⁴ Although Monção, Adega Cooperativa, CRL ranks similarly to Azueira, we opted to analyze the former, since it shows a superior market dynamic, based in the well known brand of Vinho Verde “Muralhas”. In the traditional wine cooperatives is even referred as a benchmarking.

4. Description of the evolution and position of individual cooperatives

4.1 Data gathering per cooperative

Annex 1 includes detailed information on the 5 largest cooperatives presented in Table 7. The accounting data was collected from a data base provided by CASES⁵. This data was completed with information from websites, telephone contacts and personal interviews with the responsible of cooperatives and of Fenadegas (Federação Nacional das Adegas Cooperativas, FCRL), Fenalac (Federação Nacional das Cooperativas de Produtores de Leite e Lacticínios, FCRL), Fenafrutas (Federação Nacional das Cooperativas Agrícolas de Horto-Fructicultores, FCRL), Fenafrutas (Federação Nacional das Cooperativas de Olivicultores, FCRL), Fenadegas (Federação Nacional das Adegas Cooperativas, FCRL), CONFAGRI (Confederação Nacional das Cooperativas Agrícolas e do Crédito Agrícola de Portugal) and a former Portuguese Agricultural Minister.

4.2 Position in the food chain

The economic role of cooperatives and its position in the food chain needs to be understood in a context where today's agro-food markets are characterised by: thinner margins, greater price and income volatility due to reduced government involvement and international competition; a trend to fewer, larger and more specialised farms, fewer agribusiness firms; innovative products with a shorter life cycle; food consumption increasingly shaped by demands for variety, convenience, food safety and environment friendly; enormous concentration in the final market of consumers; the increasing importance of the role played by information and commercialization technologies (e.g., e-commerce). Despite these changes in market structure and dynamics, with dominance of the demand over the supply, agricultural raw material markets are characterised by vertical coordination, in a way where players (farmers and marketing/processors) engage in a "coopetition", in which all cooperate in the creation of value added, while subsequently competing over its distribution.

The literature refers four types of vertical coordination between farmers and processors: (a) coordination with no contract (spot market), (b) contract farming or quasi integration; (c) ownership integration; (d) and farmer cooperatives.

In Portugal these four types of vertical coordination exist. Various levels of vertical integration between and inside sectors are observed. In the dairy/milk sector, during the last 20 years, milk cooperatives won a dominant position (AdC, 2010). Almost 2/3 of the raw milk is collected and processed by cooperatives. They also detained 2/3 of the domestic UHT milk market, owning well-known brands, 1/3 of the butter and also a good position in the high added value products (cheese and yoghurts). About 95% of the products processed by cooperatives are sold in the domestic market or exported to Portuguese speaking countries (i.e., Angola, Mozambique and Cape Verde).

In the wine sector, cooperatives process about 40% of domestic production, but lost market share during the last 20 years to IOFs, namely to the grape growers who are also processors and bottlers. Although there are some well-known brands of cooperative wines (e.g. *Muralhas* and *Porta da Ravessa*), in general, they are present in the low segment consumer market. In terms of international trade, Port wine (Rebello and Caldas, 2011) has an important contribution to wine

⁵ The authors would like to acknowledge the fruitful help of CASES in providing the required information. Obviously the usual disclaims applies.

exports, representing, in 2008, 26% of the quantity and 53% of the value of wine exported, being the price of Port wine more than double of the price of still wines. In addition to the classical brands of Porto wine (e.g. Sandeman) and table wine (e.g., Mateus Rosé), in the last decade emerged a set of Portuguese wines highly rated and awarded in international contests, magazines and newspapers (Mhur and Rebelo, 2011), produced by small and medium enterprises.

Similarly, in the olive oil sector, cooperatives have been losing their market share. This means that the increased production from the new olive tree plantations, in the southern part of Portugal (Alentejo), was mainly absorbed by IOFs. The olive cooperatives sold more than 50% of their production in bulk to packagers/traders while bottled a large part under the brand of the buyer (BOB). The most famous olive oil brands (*Gallo, Oliveira da Serra* and *Andorinha*), are marketed by IOFs. In recent years, these firms are adopting strategies of upstream vertical integration, adding to marketing the production and processing of olive oil. This product is essentially sold in the domestic market. Brazil, followed by Angola, is the main export market.

In the fruits and vegetables sector the situation is heterogeneous. For the fruits (mainly apples and pears) that need a long period of stocking/conservation in cold facilities, cooperatives hold a 30% market share of the domestic production; in the processed fruits and fresh vegetables markets they are almost absent.

With respect to fruit cooperatives it is important to highlight that two generations of cooperatives presently exist: the first generation was founded in the 1950s and 1960s by a large number of culturally/socially heterogeneous farmers, whose mission was mainly to solve the problems of farmers' production, without a clear marketing strategy; the second generation was founded during the last 20 years by homogeneous small groups of farmers with a well-defined marketing strategy.

Although the main market for fruits and vegetables continues to be the domestic market, exports are witnessing an increase in the last years.

4.3 Institutional environment

The development of Portuguese agricultural cooperatives is strongly related to the evolution of the political system during the last century, in three distinct periods, as referred in 3.1: the "first republic" period, between 1910 and 1926, characterized by strong social convulsions and political instability, is responsible for the emergence of consumer cooperatives; the "dictatorship regime" period, between 1926 and 1974, is characterized by the promotion of agricultural cooperatives in a top-down process and public control; and since 1974 the "democratic regime" period created the conditions to the free foundation of cooperatives, but without high public support.

In their foundation, organisation and governance, agricultural cooperatives are required to follow the legal framework presented in the Cooperative Code (CC) and the specific laws relative to each "branch" that complete and develop the CC. In comparison to IOFs, agricultural cooperatives are exempt from corporate tax (IRC) and local taxes related to acquiring property assets. The VAT incident on deliveries made by members is also exempt, being chargeable only when the final price is paid.

Research on agricultural wine cooperatives (Teixeira, 2001 and Rebelo et al, 2010) allows us to conclude that Portuguese farmers became members of processing/marketing cooperatives, not only to obtain economic benefits (price received by the product delivered to the cooperative), but also according to their social characteristics (size of the farms, level of education, age). The

results achieved by those authors indicate that in wine cooperatives⁶ members own small farms (about 1.6 hectare/farm); roughly 80% of farmers have just primary education; and in age terms, only 12% are less than 40 years old and 45% over 60 years old. To overcome the restrictions of the traditional cooperative model, namely the ill definition of property rights, with the inherent problems of free-rider and preference of short time horizon, during the last decade, in the fruit and vegetables sector, POs were founded, under the legal regime of private firms or cooperatives, by a small group of homogeneous members.

The agricultural sector as a whole and agricultural cooperatives in particular, are under the umbrella of the competition law that is applied to other sectors. However, according to article 2nd of the EC Regulation No 1184/2006 of April 27th, there are exceptions to the general rules of competition, namely: agreements, decisions and practices integrated in the national market organisations; agreements, decisions and practices that will be needed to satisfy the objectives of the CAP; some agreements between farmers or associations of farmers that belong to a single Member State, since these agreements have no influence on prices, do not affect competition and do not jeopardise CAP objectives.

Assuming that agricultural markets are becoming increasingly global and competitive, and that farmers are rational economic agents that try to maximize their own wealth, the loss of market share by cooperatives (other than milk) is an indicator that the structural conditions of Portuguese agriculture and the institutional environment, have not been enough attractive to adopt the cooperative model over the other forms of vertical coordination (spot market, contract farming, quasi integration, or ownership integration).

Relatively to public intervention in the cooperative sector, Rodrigues (2010: 840) maintains that: *"We had two periods of close relation between the cooperative sector and the political power: 1980/1982 and 1995/1997. In the last 10 years it is obvious that the government did not consider this sector relevant"*.

4.4 Internal governance

In their internal governance, cooperatives follow the rules established by the CC from 1996, a Parliament law applicable to all kinds of cooperatives. However, the first specific law for cooperatives was established in 1982.

The article 39^o of the CC defines as mandatory governance bodies of cooperatives: a) the general assembly; b) the board of directors (BoD); c) the supervisory board. The statutes may still provide other bodies, as well as give power to the general assembly or to the BoD to create special committees, of limited duration, in order to perform specific tasks.

Consequently, Portuguese agricultural cooperatives are structured in a two tier-system (Rodrigues, 2010). The secondary cooperatives, federations and confederations of cooperatives (article 84^o of the CC) adopt a one-tier system if the number of members of the General Assembly is not sufficient to fulfil the positions in the governance bodies. In this case, there will be only a collegiate body, the Assembly of Cooperatives, composed by all members, acting by simple majority, bearing in mind the number of votes that each member is assigned by the Statutes.

The governance bodies of agricultural cooperatives are composed only by members (BoD, supervisory board and president and vice-president of the general assembly). The members of the bodies are elected among members for a four-year term, unless a shorter period is specified

⁶ The qualitative information collected while preparing this report, supports the conclusion that the situation is similar in the other traditional cooperative sectors, namely in olive oil and fruits and less in dairy/milk.

in the bylaws. The BoD has at least three members, but cooperative bylaws may stipulate a higher (odd) number. By this reason, in some cooperatives the board of directors is composed by five members. The BoD can delegate some of its functions to a manager. The supervisory board is composed of three members (or a higher odd number). The members of these bodies can be remunerated as stipulated by the general assembly, if not forbidden by the bylaws. The majority of the cooperatives do not have professional BoD and/or managers (Rebelo et al, 2010).

In the decision-making process, the democratic principle of “one member, one vote” (article 51^o of the CC) is adopted by primary cooperatives. However, there exist two exceptions: cooperatives whose members are exclusively other cooperatives; secondary cooperatives, federations and confederations. In these cases (article 83^o of the CC), the bylaws may attribute to each cooperative member a certain number of votes, both as a function of the number of their members or according to other explicitly stated criteria that, in the context of the democratic principle, receives the approbation of the majority of the members. Some secondary cooperatives adopt a voting rule based in the number of members and in the quantity of product delivered by each associated cooperative.

The Portuguese agricultural cooperatives follow the traditional cooperative principles (i.e., open membership, democratic control, restricted residual claim and benefit to members proportional to patronage), with poorly defined property rights and the inherent difficulty in assuming risky investments that could add value in the medium and long run. Additionally, the smaller ones follow the so-called “Mediterranean model” of governance, characterised by the adoption of the traditional principles and a non-professional management (Rebelo et al., 2010). To the question “Is the traditional governance cooperative model, imposed by the CC, a strong restriction to the competition and development of long run entrepreneurial strategies”, the answers of cooperative leaders are not unanimous. For cooperatives well positioned in the agri-food chain and with low leverage levels, the compliance of the CC rules is not a relevant restriction, but other solutions/models are acceptable; the inverse position is expressed by cooperatives with a high leverage, bad positioned in the market and experiencing problems in attracting members/patrons.

Summing up, the current domestic and international competitive environment and the present socio-economic characteristics of the farming systems, lead us to conclude that agricultural Portuguese cooperatives have much to benefit if a more flexible internal governance structure is permitted and adopted.

4.5 Performance of the cooperatives

The economic justification of agricultural cooperatives is found at the level of members’ farm. Agricultural cooperatives are successful if they provide their members net economic benefits higher than those achieved individually or through other forms of vertical coordination. As both main suppliers of raw materials and equity (patrons), members decide on the cooperative’s retained earnings, investments and farmers’ output final price. However, since this price is related to the retained earnings, and because the price of the farm product delivered by members represent an important cost to the cooperative firm, the cooperative’s profit is not, generally speaking, a useful measure of its performance. Soboh et al (2009) present a vast review of the theoretical and empirical economic literature on the performance of agricultural marketing cooperatives. They conclude that empirical studies have failed to address cooperative objectives as represented by the theoretical literature.

Rebelo et al. (2010) applied an econometric model with the goal of checking the performance of the Portuguese Douro Wine cooperatives assume two alternative indicators of performance, according to the objective pursued: if the cooperative objective is to maximize the short run financial benefits to members, the patronage refund rate (patronage refund divided by gross

revenue) is an appropriate performance indicator. On the other hand, the equity/total asset ratio may be a more appropriate performance indicator for professional managers, to who is preferable a capital structure that favours equity accumulation. Based on the econometric model results, the authors concluded that, according to the theoretical framework, the governance structure has opposite effects on the indicators of performance: when full time directors have bargaining power, cooperatives transfer less revenue to members and try to decrease leverage. These results reinforce the belief that cooperatives structured differently have different and conflicting stakeholder interests. Cooperatives with non-professional management tend to maximize annual revenues from the raw materials delivered; cooperatives with professional directors/managers seek to reinforce equity, with a risk minimizing strategy.

Using as performance indicators the position in the food chain and financial indicators (total assets, equity, and leverage) of the top five agricultural cooperative per sector, it is possible to infer that: milk cooperatives, essentially those located in the Portuguese mainland, present a better and higher performance; in the other sectors the situation is heterogeneous and not so clear, with some cooperatives with high levels of leverage.

5. Sector analysis

In this chapter we discuss the developments in the sectors that are central to this study and that are present in the Portuguese agriculture. We report on market trends, important changes in (agricultural) policies and we seek to link these findings to the strategies and performance of investor-owned firms (IOFs) and cooperatives in the agricultural sector. The period analysed is 2000 – 2010 and the analysis presented here is based on published works. Among these deserve special emphasis six sector diagnoses (cereals, olive, meat, milk/dairy, fruits and vegetables and wine) available in the site of the Portuguese Ministry of Agriculture and Rural Development, Cabinet of Policies and Planning (GPP). The cooperatives only play a relevant role in the fruit, olive oil, wine and milk sectors. The analysis of each one of these sectors ends with a summary of actions that are necessary to implement to improve the performance of cooperatives.

5.1 Cereals/arable crops

Arable crops include cereals, oilseeds and protein crops, rice, grain legumes, crops used in set-aside, even for non-food purposes, and crops for the production of dried fodder (GPP, 2007). Almost two years after the introduction of the 2003 CAP Reform, the production of cereals and rice (1.2 million tons/year) decreased. The area utilized in cereals production decreased by 400,000 ha, corresponding to 10% of UAA, that is, half of the area farmed in 1990. In 2005, 38% of the Portuguese farms produced cereals and/or rice, compared to 43 % in 1990.

The imports of cereals and rice in total, averaged for the five-year period of 2001- 2005, €475 million/year, 3/4 of which are from EU, not exceeding the exports of €31 million/year, most of them sent to EU. Overall cereals and rice contribute with 15% to the deficit of the trade balance of agricultural products.

The area sown with cereals and rice was reduced by almost 50% since the beginnings of the 1990s, from 750,000 ha in 1990 to 390,000 ha in 2006. The proportion of UAA occupied with these crops also shrank to half: from 20% in 1990 to 10% in 2005. This fall was more pronounced in durum wheat, rye and maize.

The market of cereals is dominated by imported crops. The domestic price for national production is, in general, below the market price of the imported grain, whether coming from the EU and/or worldwide, due to the fact that prices reflect transportation costs associated to the peripheral geographic position of Portugal.

Although there are several non-economic associations of supply inputs, producers, importers and processors in the sector they act individualistically along the agri-food chain. Hence, forms of vertical co-ordination between stakeholders are poorly developed. Consequently, it is not surprising that cooperatives have no relevance in this sector. However, if POs are recognized as such in this sector, it is expected that there will be an increase in producer associations, either in the legal form of cooperatives or commercial societies (IOFs).

5.2 Sugar

The industrial activity concerning sugar processing from sugar beet in Portugal started only with the installation of a firm named - DAI, *Sociedade de Desenvolvimento Agro-Industrial, SA*, in the processing campaign of 1996/1997, with an initial quota of 60,000 ton of white sugar, that later was raised to 70,000 ton. The cultivation of sugar beets, initially unknown by the vast majority of producers, had from the start a good response from the farmers to meet the needs of DAI (GPP, 2009a).

For ten years after it was founded, the Association of Sugar Beet Producers (ANPROBE) was successful in achieving the appropriate development of sugar beet production to meet the needs and demands of the industry. Sugar beet cultivation took place mainly in the regions of Ribatejo and Alentejo (central and southern part of Portugal, respectively), in an irrigated area close to 8,000 ha, involving in total approximately 600 farmers.

However, given the context of surpluses in the EU sugar market, with the decline in sugar prices, DAI's market sugar quota decreased from 69,718 to 34,500 tons under the 2006/2007 campaign, and from this quota to 15,000 tons in 2007/2008, when this firm decided, in the 2008/2009 campaign, to renounce to its entire quota, changing its economic objective to refining imported sugar cane under the existing preferential EU⁷ agreements.

After the reform of the CMO for sugar, that took place in 2006, DAI ("single sugar beet processing firm in Portugal") was authorized to refine a quantity of 65,000 tons of sugar cane and to waive all of its market share, and continue to use its facilities for raw sugar cane refining, according to the regulation implemented to restructure the sector. Consequently, this unit opted to cease its production of sugar beet and to restructure its activity, allowing us to say that presently, the sugar sector is not relevant for the Portuguese agriculture and economy.

5.3 Fruit and vegetables

"Fruits, flowers and vegetables" constitute the most important component in the structure of the Portuguese agricultural production (GPP, 2007c). The share of its production value in the total agricultural production value rose from 16.0% in the five-year period of 1996-2000 to 20.4% in the 2001-2005' period. This improvement is mainly due to the behaviour of "fresh vegetables" whose share, for the periods presented above, increased from 10.5% to 13.6%, although the sub-sector "fruits" witnessed a slight decrease from 13.0% to 12.1%.

In 2005, the area occupied by fresh fruits was 57,969 ha, and that of vegetables and flowers was, respectively, 33,000 and 1,375 ha. In 1999, there were 156,653 farms in the sector, but in 2009 this number decreased in 36%. The reduction of farm area was less sharp than that in the number of farms, for the same period, which means an increase of area per farmer.

The concentration of supply and the preparation for the market of fruits and vegetables, generically framed in post-harvest activities, are held in facilities that ensure the reception, cleaning, processing, calibration, pre-refrigeration and/or cold storage, packaging, and shipment of products. These units, commonly designated according to the range of products in which they are involved, as fruit facilities, horticultural facilities or horticultural-fruit facilities, are, in general, of large size and they involve the supply of a variable number of associated producers or operators that, with a more or less significant production, or even without own production, engage in wholesale of fruit and vegetables from different sources. Cumulatively, there are other small facilities with miscellaneous equipment owned by producers or small wholesalers.

In the case of fruit and vegetable plants held by POs, the linkages and commitments assumed by the members are stronger and durable. In other cases either they are wholly or in majority owned by producers or other types of market operators.

The POs are defined and operate in the framework of the agricultural CMO. Their main objectives are the following: (i) to provide production answers to market demands; (ii) to increase both quality and production volume, but respecting the environment; (iii) to

⁷ According article 29^a of the Reg. (CE) n^o 318/2006, of the Council, revoked by Reg. (CE) n^o 1234/2007, since October, 1st, 2008.

concentrate supply; and (iv) to improve the preparation of products (e.g. pallets and cartons), as well as to promote improved negotiation terms between suppliers and their customers.

The legislative framework follows the community Regulations, namely Regulation (EC) n° 1324/2007 of the Council of 22nd October (single CMO Regulation) and Reg. (EC) n° 1580/2007 of the Commission de 21st October (the rules for the application of Reg. (EC) n°1234/2007 for fruits and vegetables). In national terms, the document prepared by the Portuguese Ministry of Agriculture and Rural Development entitled “National Strategy for the Operational Programs of the POs from fruits and vegetables”, for the period 2007-2013, must also be emphasized (GPP, 2009).

Regarding fruits and vegetables POs, the Reg. (EC) n°1234/2007 was transcribed into Portuguese law by Ordinance n°1266/2008 of 5th November. Table 8 presents the conditions that firms need to fulfil in order to be officially recognized as a PO.

Table 8. Conditions to fulfil in order to be officially recognized as a PO

Conditions	Description
Legal form	<ul style="list-style-type: none"> – Agricultural Cooperatives, CRL; – Group Farming Societies – Partial Integration (SAG –IP); – Complimentary Groupings of Firms (ACE); – Civil Society in the form of commercial society; – Limited society, since the shares are registered and identified the shareholder identified.
Agricultural products included	Those referred in part IX of Annex I of Reg. (EC) n° 1234/07.
Minimum size of P=	<ul style="list-style-type: none"> a) Any product or product group: 15 producers and 750,000 euro of value marketable products (VMP) or 5 producers and 1,500,000 euro of VMP; b) Nuts: 10 producers 125,000 euro of VMP marketable c) For a single product, with the exception of tomatoes for processing and nuts, the VMP referred in a) can be reduced to 70%, while maintaining the number of producers; d) For recognitions in which at least half of the VPC is obtained through certified products (organic products, protected origin denomination, ...); e) For recognition purposes are counted those producers that are members of societies associated to POs; f) No-producer members are not counted for recognition purposes; g) The reductions presented in c) and d) shall not be cumulated, applying, where necessary, the most favourable situation.

Subsequently, the Legislative Decree n° 11/2010 of 11 April extended the recognition of POs activity in other sectors (cereals, olive oil and table olives, wine, meat, and milk). However, until 2010, POs are only present in the fruits and vegetable sector.

Table 9 presents a summary of the main characteristics of the POs recognized. In 2009, there were 90 POs, of which 54% were cooperatives and the remaining IOFs, involving 10,727 producers and 52,607 ha, with an annual turnover of 217,563 thousand euros.

POs are mainly focused in the processing/marketing of pears (domestic variety Rocha), citrus, apples and cherries.

In 2009, the weight of POs in the total production of fruits and vegetables was about 3% (in 2004 it was around 10.7%, but in this number was included the tomato production for the processing industry, that weighted 8.4% and that now has a very low weight), indicating that POs still have a long way to go in the organisation of the fruit and vegetable sector.

Table 9. Data on POs (Fruits and vegetables)

	2009	2005
Number of POs		
- Cooperatives	49	42
- Societies (IOFs)	41	32
- Total	90	74
Number of members of the POs		
- Cooperatives		
. Individual farmers	8,715	6,496
. Firm farmers	780	248
- Private Firms		
. Individual shareholders (farmers)	914	1,151
. Firm farmers	318	215
Members' participation in equity (%)		
- Cooperatives	100	100
- Private Firms	100	100
Total area (ha)		
- Cooperatives		
. Fruits	22,699	23,371
. Vegetables	10,975	6,250
- Private firms		
. Fruits	4,268	3,596
. Vegetables	14,665	9,955
Value of the marketed products - VMP (1.000 euro)		
- Cooperatives	93,417	82,318
- Private firms	124,120	93,440
- Total	217,536	175,757
Origin of the marketed products in value (1.000 euro)		
- Produced by POs' members	217,536	175,757
- Produced by other farmers	0	0
- Total	217,536	175,757
Origin of the marketed products in quantity (ton)		
- Produced by POs' members	9,041,848	1,221,740.8
- Produced by other farmers	0	0
- Total	9,041,848	1,221,740.8
Destination of the marketed products (%)		
- Consumed fresh	72	15
- Sold to processors	28	85
- Processed by the POs	0	0
Product Markets (%)		
- Domestic	-----	-----
- Exports		
Weight of POs in total production (%)	3	2

Source: Data provided by GPP-MADRP in May 2011

The following strengths, weaknesses, opportunities and threats (SWOT) characterise the fruits and vegetables sector (GPP, 2007c):

Strengths: Natural conditions for early production; available installed productive capacity; technical expertise; availability of differentiated quality products; the existence of vegetable and agro-industrial plants with business entrepreneurship in some regions; strategic products (such as pear) that are supported by appropriate organisations.

Weaknesses: Poor organisation in terms of products' *filière*, in vertical integration and business co-operation; economic agents in the *filière* with an inadequate knowledge, namely, in the area

of management and marketing/promotion; lack of large scale farms; imbalances in the ownership of market margins by the different stakeholders, with dominance of the big group retailers; old facilities not adapted to new demand requirements; a reduced lack of differentiated products; incipient marketing/promotion activities, lack of a clear commercial strategy; lack of concentration and/or processing in some production areas; atomized and disorganized investment; lack of innovation in the sector; water scarcity and of good quality for irrigation in some regions.

Opportunities: Increased consumer demand for quality and differentiated products; increased availability for product varieties with a good market aptitude; positive image in terms of the importance of fruits and vegetables in food diets and public health; increasing demand in processed products, namely, frozen products, juices and squashes and products of the IV and V generation; potential for the exploitation of domestic consumption.

Threats: Competition by EU state members with a better organisation (France, Italy, and Spain); concentration, downstream of the *filière*, in the marketing channels, causing a down pressure on the prices paid to producers; weak bargaining power on the part of small producers; increased costs resulting from EU stringent regulations (environment, food safety and labour protection) vis-à-vis third countries; changes in consumers' preferences, with a reduction in the consumption of domestic products and an increase in the consumption of tropical fruits; tendency for the abandonment of the activities in some regions.

In terms of agricultural policy, the fruits and vegetables sector is assumed as a strategic sector for the development of Portuguese agriculture, being expected that in the future Portugal will be a net exporter of these products. The cooperatives/POs should play an important role in this strategy.

In these sector coexist two categories of cooperatives: those founded in the fifties and sixties of last century, with a high number of heterogeneous, aged and risk averse small producers, whose focus is centred in the resolution of production problems without a well defined marketing strategy; and those founded in the last twenty years by a small number of large and homogeneous producers, with clear marketing strategies. To increase the market share and to meet the markets challenges, the fruit cooperatives should develop marketing and market/consumer orientation, as well as investments in R&D and innovation. According the information provided by the main stakeholders of the cooperatives, the achievement of those goals implies a change in the actual property rights structure and model of governance, and an increase in the cooperative dimension through M&A, alliances or other form of associations.

5.4 Olive oil and table olives

Since the mid-1990s a worldwide expansion of the olive oil sector occurred, expressed by a growth in production and an increase in international demand, with an annual average consumption growth rate of 3.5% (GPP, 2007b).

Spain produces 1/3 of the world production and is the largest producer (34%). Italy and Greece rank, respectively, second (29%) and third (14%). Portugal currently holds the eighth position in the ranking of world production, along with Algeria and Jordan. France, Cyprus and Slovenia, in EU, can also be considered relevant producer countries.

In Portugal the per capita consumption index (7.5 kg/inhabitant/year, in 2005) is quite small compared to that registered in other EU member producer countries: Greece (25kg), Spain (12.6kg) and Italy (12.3 kg), and far away from the consumption values reported in Portugal during the 1960s (10.5 kg).

The predominant vocation of the Portuguese “olive oil and table olives” sector is olive oil production; about 96% of total production (only 4% goes to table olives). The soil and weather

adequate conditions to this culture and the significant diversity of varieties provide a basis for the production of olive oil of excellent quality.

Inverting the trend of recent decades, the sector is becoming more dynamic, either through the use of the most modern production techniques, in particular irrigation technologies, or by installing new plantations and varieties. These changes that were implemented in the context of several EU support frameworks remained relatively unimportant until the beginnings of this century, but reversed after 2005, with a significant increase in the areas planted.

In processing, concentration, modernization and technological adaptation of mills was achieved, satisfying the requirements of EU regulation on hygiene and environmental conditions (since mid of 1990s, the number of mills decrease from 1,000 for a little more than 600), and leading to an improvement in the quality of Portuguese olive oil.

The increase in the area planted (in an intensive regime) in Alentejo, benefiting from irrigation provided by the construction of the Alqueva dam, resulted in a positive balance in 2010, for the first time, of almost 1.088 million euro (2006 featured a negative balance of 121,249 euro) in the trade balance of olive oil. Exports totalled the value of 159.258 million euros (Report and Accounts of the House of Olive Oil). Since 2006, exports have grown at an average annual rate of 20%. The Brazilian market represents the main export market destination (65% of exports), in which the Portuguese firms hold a market share of 55%.

In terms of organisation, the olive *filière* covers a diversified set of actors and activities that include growers, mill units, refiners, packagers and traders, involved in the production, processing, and marketing of both olive oil and table olives. The processing sector (cooperatives or IOFs) is characterized by a large and atomized supply (micro-firms are predominant), but with growing tendency to an increase in size.

At the processing level, the cooperative sector has a significant, but decreasing, weight. To this fact contributed the entry of investor-owned economic groups in all parts of the *filière* (from production to marketing). Although cooperatives have been creating their own brands, the major brands are at the hands of IOFs, such as Nutrinveste with the brands *Oliveira da Serra* and *Andorinha* (this brand is exported to the Brazilian market), and Unilever - Jerónimo Martins (ULJM), with the brand *Gallo*. Both are among the largest firms in the agri-food Portuguese sector.

Olive oil was priced at roughly 2 euro/kg in the 2009-2010 campaign. However, the surplus of this product in Europe (particularly in Spain) is causing a down pressure in prices and, consequently, difficulties in small producers (not in larger ones) with low productivity and increasing production costs.

Similarly to fruit and vegetables, Portugal has also defined the development of the olive oil sector as a national strategy/objective, profiting from the soil and weather conditions and the increased irrigated area in the southern part of the country. The increased demand for Portuguese olive oil by the North/South American and African markets is a stimulus for the growth of the Portuguese olive oil sector since it provides an alternative to the EU market.

To improve the market performance of olive oil cooperatives great efforts are required to position their products in the market with their own brand to be able to compete with IOFs, through quality and appropriate market strategies, including internationalization. The main stakeholders of the cooperatives recognise that the implementation of such strategy involves larger units (through M&A, secondary cooperatives, alliances and other form of association), investments in modernization facilities and equipments, packaging, R&D and innovation. This was the strategy followed by larger IOFs in the last decade.

5.5 Wine

Based on data from 2007 (Table 10), we observe that almost half of the world wine production is still concentrated in the three main European producer countries (Italy, France, Spain), despite the impressive growth of the New World countries (Argentina, South Africa, Australia and Chile). The Portuguese ranking position has been declining in recent years, moving from the 10th position in 1991/95 to the 12th in 2007. After 2007, the Portuguese wine production (in thousands of hectolitres) was 5,688 in 2008, 5,893 in 2009 and 7,133 in 2010, respectively, averaging 6,466 in the 2006-2010's period.

Table 10. Wine production (in thousands of hectolitres)

Country	2007		2006		2001/2005		1996/2000		1991/95	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
Italy	45,981	17.29	52,036	18.38	46,936	17.21	54,386	19.95	60,678	23.06
France	45,672	17.17	52,127	18.41	51,919	19.03	56,271	20.64	52,886	20.10
Spain	34,755	13.07	38,137	13.47	37,323	13.65	34,162	12.53	26,438	10.05
United States	19,870	7.47	19,440	6.87	20,399	7.48	20,386	7.48	17,619	6.70
Argentina	15,046	5.66	15,396	5.44	14,488	5.31	13,456	4.94	15,588	5.92
China	12,000	4.51	12,000	4.24	11,640	4.27	9,581	3.51	5,140	1.95
Germany	10,261	3.86	8,916	3.15	9,225	3.38	9,989	3.66	10,391	3.95
South Africa	9,783	3.68	9,398	3.32	8,040	2.95	7,837	2.88	8,228	3.13
Australia	9,620	3.62	14,263	5.04	12,543	4.60	7,380	2.71	4,810	1.83
Chile	8,227	3.09	8,448	2.98	6,389	2.34	5,066	1.86	3,326	1.26
Russia	7,280	2.74	6,280	2.22	4,346	1.59	2,512	0.92	3,348	1.27
Portugal	6,073	2.28	7,543	2.66	7,311	2.68	6,828	2.50	7,276	2.77
Romania	5,289	1.99	5,014	1.77	4,975	1.82	6,173	2.26	5,529	2.10
Greece	3,511	1.32	3,938	1.39	3,727	1.37	3,832	1.41	3,668	1.39
World	265,994	100.00	283,149	100.00	272,780	100.00	272,577	100.00	263,092	100.00

Source: http://news.reseau-concept.net/images/oiv_uk/Client/Statistiques_commentaires_annexes_2007_EN.pdf (OIV)

In terms of trade, around one third of the world production is exported. Italy, France and Spain are the top world exporters, followed by countries like Australia, Chile, Argentina and the USA. During the last decades, the market share of these countries increased more rapidly than that of the traditional European countries. Portugal is in the 9th position in 2007, against the 5th position in 1991/1995, although the Portuguese market share remained the same.

For Portugal (Table 11), Port wine has an important contribution to wine exports, representing, in 2010, 26% of the quantity and 57% of the value of wine exported, because of the price of Port wine which is more than triple the price of still wines. Comparing with international prices, the Port wine price is always higher than the observed in other exporter' countries. A different situation occurs in Portuguese still wine prices that are generally lower than those observed in other exporting countries.

Table 11. Portuguese wine exports

	2010		2009		2008		2007		2006		2005	
	Vol (hl)	%	Vol (hl)	%	Vol (hl)	%	Vol (hl)	%	Vol (hl)	%	Vol (hl)	%
Port wine	741,604	25.13	725,973	23.18	767,070	26.16	814,050	23.44	785,250	26.54	807,750	30.39
Other wines	1,865,410	74.87	2,407,027	67.82	2,164,986	73.84	2,658,815	76.56	2,173,357	73.46	1,850,175	69.61
Total	2,607,531	100	3,133,000	100	2,932,056	100	3,472,865	100	2,958,607	100	2,657,925	100
Prices (€/litter)												
- Port wine	4.25		4.14		4.12		4.21		4.22		4.23	
- Other wines	1.29		1.07		1.30		1.04		1.09		1.14	
- Average	2.13		1.78		2.04		1.78		1.92		2.08	

Source: IVV (www.ivv.min-agricultura.pt) and IVDP (www.ivdp.pt)

The market position of the Port wine is different from that of other wines. On average, 87% of the Port wine produced is exported, in almost 100%, by a reduced number of large IOFs. The exports of other wines represent, on average, almost 30% of domestic production⁸, and roughly 1/3 of these exports⁹ are made by cooperatives. The domestic wine market has been, and still is, the main target of the cooperatives.

Regarding the 1st and 2nd Pillar Measures of CAP, it is clear that the Portuguese wine cooperatives were not favored comparatively to IOFs. Furthermore, according to the measures stipulated in the wine CMO (Council Regulation –EC – No 479/2008), in the Support Programmes, Portugal only adopted the following specific measures (IVV, 2008)¹⁰: promotion on third-country markets; restructuring and conversion of vineyards; by-product distillation; potable alcohol distillation; use of concentrated grape must. From these measures, the wine cooperatives are particularly benefiting¹¹ from the promotion on third-country markets and potable alcohol distillation.

Effectively, in the applications (1/2008, 1/2009, 2/2009, 3/2009 and 1/2019) of the EU measure “promotion on third country markets”, the cooperatives share¹² was only 5% (around 4.4 million euro) of the total investment amount (around 82 million euro) and 3% - four projects - of the total projects approved (135). From these four projects, two were presented by the cooperatives Federation named Fenadegas - Federação das Nacional das Adegas Cooperativas, FCRL - (3.6 million euro) and, the remaining, by two cooperatives (Monção and Távora), which are present in the domestic market with well known brands. These figures reinforce the conclusion that the wine cooperatives face difficulties to invest in the promotion and integration into external markets, generally more competitive and risky than the domestic market but also more profitable.

⁸ However it is important to highlight that in 2010 Portugal (IVV, 2011) imported 1.464 thousand of hectolitre (67.7% in bulk), with an averaging price of 0.57 euro/litter. This price indicates that Portugal imports essentially low quality wines, being also a reference marginal price for this typology of wines in the domestic market.

⁹ Information on wine cooperatives' exports is not published. Information provided by cooperatives responsible refer that the cooperative sector represents almost 10% of the Portuguese wine exports (excluding Porto wine).

¹⁰ The involvement of wine cooperatives as relevant entities in the rural development process (2nd Pillar) has not been a concern of public policies (see section 6.2)

¹¹ Information provided orally (phone) by Fenadegas staff.

¹² The authors thank IVV-OEMP for providing this information.

Relatively to the “potable alcohol distillation” measure, the wine cooperatives were treated similarly to wine producers¹³ and the financial aid they got allowed them to receive benefits in addition to those coming from market sales of low quality wines, with a great effort at reduced prices (for average import reference price of 0.57 euro/litter). Wine cooperatives benefited of almost 90% of the financial support included in this measure (around 3 million euro/campaign)

The current position of the cooperatives in the Portuguese wine chain is strictly linked to the structural changes occurred in the industry throughout the last five decades. In the 1960s, the formation of wine cooperatives originated significant changes in the supply chain, becoming intermediaries between viticulturists and traders. Until the mid 1980s, these cooperatives were mainly focused in vinification and storage activities, selling almost all of their wine production in bulk to traders. After the entrance of Portugal into the EU, in 1986, the wine cooperatives began to sell their wine in bottles. During the last three decades the wine cooperatives expanded and modernized their production capacity, investing in facilities and equipments, following individual growth strategies, mainly focused in answering the needs of their members (heterogeneous producers, in terms of farm size, age, education, etc.) while maintaining the traditional cooperative model.

In 1981, Fenadegas was founded¹⁴ in the legal form of federation, representing, currently, 56 primary cooperatives (roughly 50% of the total) and 3 secondary cooperatives. Its objectives and goals (Fenadegas Statutes - article 4^o) focus “primarily in representing and defend, at all levels, the cooperatives of the wine sector”, providing technical, economic and legal support to the cooperative associated, as well as the representation and negotiation with the coordinating/regulating entities of the wine sector.

Since the admission of Portugal in EU (1986), the wine cooperatives faced the emergence of a new and important set of players, the producer-bottlers. In general, we are in the presence of medium and large vine producers that, besides the vinification of their own production, also buy grapes to other producers in the region where they are located. Using modern facilities and equipments in the vinification, they bottle and market the wine produced with own brands, often with the label of *Quinta*.

The producer-bottlers are dispersed through the main wine regions of Portugal (Douro, Verdes, Alentejo, Dão, ...) and produce PDO/PGI wines that sell in market niches at high prices. A paradigmatic example of this new positioning is the case of the Douro Demarcated Region (DDR), where a set of producer-bottlers, that starting from an initial situation of complete ignorance about Douro table wine, managed to position their wine in the top of world rankings¹⁵, achieving high scores in international contests and excellent references in specialized presses, which are the public recognition of the high quality of the Douro wines.

The impact of these new players in the performance of the wine cooperatives is both positive (PDO/PGI wines become well known internationally, new strategies that can be considered as benchmarking are being applied, innovation generation, i.e, high spillover effects) and negative (emergence of new and aggressive competitors both in production and marketing, resulting in a loss of market share for the cooperatives). In general, the wine cooperatives were not able to benefit from the collective reputation of a PDO/PGI, therefore almost all of them are positioned in the low market segment of table wines. The limits on the total volumes of wine with PDO/PGI

¹³ Portaria nº 152/2011 of April 11th, article 3tth. Moreover, according to the Article 9th of this Portaria, in the 2010/2011 campaign the aid was of 350 euro/hectare (310 euro in 2011/12 campaign). It means that, to 20 hectoliter/ha, an aid of 0.175 euro/litter of wine.

¹⁴ Source: <http://www.confagri.pt/Associadas/Federacoes/fenadegas>

¹⁵ Based on the experience of the Douro-Boys network, the working paper of Muhr and Rebelo (2011) includes a detailed analysis on this subject.

that can be produced in each wine demarcated region are not a weakness, and can, on the contrary, be seen as a market opportunity.

Taking into account the figures presented in Table 4 (section 3.2) there is no doubt that that wine cooperatives have been losing market share showing their inability to respond to the new challenges of a globalized wine market. Their low performance can be explained by the following reasons (Rebelo et al, 2010): (i) the atomistic production structure and the socio-economic characteristics (e.g., age, level of education) of the members; (ii) non-professional management; (iii) poorly defined property rights structure, where the members tend to view the cooperative as an organization to which they can sell their grapes and not as a firm where they are the owners; (iv) the local nature of the cooperative, producing wines only of the region in which they are located (e.g. Douro, Alentejo, ...); (v) difficulties in establishing partnerships with IOFs; and (vi) selling the majority of their wines in the competitive low and median market segments. Consequently, high transaction costs, low profitability, problems in equity acquisition /redemption arise, as well as difficulties in developing clear entrepreneurial strategies to compete in new and changing markets.

A large number of wine cooperatives are witnessing a problematic economic and financial situation¹⁶, facing the desertion of their members (caused by low and delayed payments for the grapes delivered), that leads to a reduction in production, with the consequent increase in the per unit production cost and excess in production capacity. On the opposite side, are the cooperatives that are well positioned, essentially in medium market wine segment, with their own and well known brands (e.g. Moscatel de Faveiros, Muralhas), that have adopted clear business strategies, with economics benefits both to the cooperative as a firm and to their member-patrons.

Like in the fruits/vegetables and olive oil sectors the wine sector was also considered a strategic one for the development of the Portuguese agriculture, being the cooperatives determinant to involve small producers in the wine chain.

To improve their market position, wine cooperatives need to produce new and high quality products for the domestic and international markets, as well as to invest in marketing, R&D and innovation. The achievement of this goal depends on the conditions of departure of each cooperative. They must be aware of the importance of factors such as scale economies (through mergers and acquisitions, alliances or networks¹⁷), structure of the property rights, professionalization of management, staff training, technical support to associates/members, and marketing strategies.

5.6 Dairy

Currently, representing about 11.5% of national agricultural production, the dairy sector has shown a remarkable performance after the Portuguese entrance in the EU in 1986. This performance is justified by both an increase in milk supply/milk processed products and an improvement in their quality (GPP, 2007d). The specialization of the productive and processing structures enabled the construction of a true national agro-industrial *filière*, where cooperatives played a crucial role in its consolidation and robustness (GPP, 2007d).

At the level of primary production the farm size increased, as a result of the significant reduction in the number of small farmers, together with the territorial concentration in certain poles along with the processing industry (northwest part of Portugal and Azores Islands).

¹⁶ Information provided by stakeholders of the sector and cooperatives' responsible.

¹⁷ These networks, formal or informal, can occur at the levels of vinification, bottling and marketing, involving cooperatives only or both cooperatives and IOFs.

From the farms that produce milk, roughly 90% are specialised in this production. In recent years the milk producers acquired skills in sanitary control, animal nutrition and genetics that enabled Portugal to achieve the Europeans standards both in terms of cow milk productivity level and milk quality. Moreover, the increased scale and the regional concentration of farms resulted in efficiency gains through the optimization of logistics.

The regional concentration of farms (along with increased intensity) led to growing environmental pressures on water resources and soil, due to the reduced soil availability in the main dairy basins. This situation has deteriorated in the Portuguese mainland, as a result of urban development within rural areas, creating conflict situations with the local rural population.

Taking as reference the analysis presented in AdC (2010), the following aspects should be emphasized about the dairy sector:

- Portugal is almost self-sufficient in raw milk. Portuguese imports of raw milk are mainly from Spain and France, representing about 8.5% and 5.5% of the total Portuguese consumption of raw milk in 2008 and 2009, respectively. From the Portuguese raw milk production about 1.7% and 3.1% was sold to Spain in the years of 2008 and 2009, respectively.
- The crises in the dairy sector in EU was caused, in particular, by the significant reduction in the prices of raw milk (Portuguese prices follow the level and trend of those in EU), observed since the beginnings of 2008, raising the need for different studies by EU and the different Member States, now underway, which may result in specific measures aimed at the sector (exceptions), CAP reforms and the application of the competition legislation (both national and communitarian).
- The increase of Portuguese production of raw milk, in the period of 2000-2005, is explained by a 9% productivity increase (from 5.787 ton of milk/cow in 2000 to 6.287 ton of milk/cow in 2005) and by a 59% farm productivity increase (from 79 ton/farm in 2000 to 126 ton/farm in 2005). Comparatively, these indicators in EU15 increased in the same period, 12% and 10% respectively.
- The collection of raw milk within the national borders is done mostly by cooperatives, some of which are integrated downstream in the processing industry. Particularly, Agros, Lacticoop and Proleite are the three largest dairy co-ops nationwide and the main operators in the Portuguese processing dairy industry operating through Lactogal, since its establishment in 1996. They are responsible in the Portuguese mainland for about 2/3 of the total collection of raw milk, produced by 8,000 producers. The collection of raw milk from Azores (about 1/3 of country total), is also ensured by several cooperatives and/or unions of cooperatives.
- Raw milk is mostly used for milk production, and, specifically, in UHT (ultra-high-temperature) milk, representing, in percentage terms, respectively, 49% and 47% in 2007. In particular, UHT milk represents approximately 77% of the total domestic production of fresh milk (dairy products). Other dairy products of domestic origin are: (i) yoghurts, which consume roughly 5.5% of total domestic raw milk and represent about 9% of the volume of total national dairy products; (ii) cheeses, which consume roughly 3.5% of total domestic raw milk and represent about 50% of the volume of total national dairy products; e (iii) butters, which consume roughly 1.5% of total domestic raw milk and represent about 20% of the volume of total national dairy products.
- The main processors of domestic supply of dairy products (UHT milk, yoghurts, cheeses and butters) were, in 2008: (a) Lactogal (approximately 2/3), Lactalis and Parmalat (Parmalat and Ucal brands), in the case of UHT milk; (b). Fromageries BEL (roughly 1/3),

Insulac (from Azores Islands), Lactogal and Queijo Saloio, in the case of cheese; (c) Lactogal (about 1/2), Lactalis and LactAçores (from Azores Islands), in the case of butters and, finally (d). Danone (about 1/3), Lactalis-Nestlé, Novandie, Gelgurte (Yoplait) and Lactogal, in the case of yoghurts.

The Portuguese dairy sector faces, in the near future, challenges related to: (i) the need of higher domestic production of animal feedstuffs; (ii) ensure environmental sustainability of milk farms; (iii) promote scale economies along the wholly chain; (iv) and diversify products and markets.

It is clear that the cooperatively handled milk had and still has a decisive role in the vitality of the dairy sector. Dairy farmers started with small cooperatives that were able to form secondary cooperatives and, in the case of the Portuguese mainland, a corporation structure. As mentioned to us by a cooperative director *“in this sector there were men with strategy and vision, and the cooperative code was not a constraint to the business development of the sector. The application of cooperative principles provides the social component to business activities”*.

5.7 Meat

Research published in Portugal, generically addresses the meat sector as a whole, although, they conduct a separated analysis by sub-sectors. In this document the same approach is used.

In the 2003-2005' period the Portuguese meat sector realized an average annual value of 2,627 million euro, which corresponded to 37.3% of the average value of the agricultural production sector in the same period (GPP, 2007a). In the last decade, there has been a small widespread growth in almost all sub-sectors of the meat sector. However, from 2008 to 2009, the sub-sectors of beef/veal, pig meat and sheep experienced a reduction in production, while that of poultry and eggs was the only one to present an increase (2%) in these years.

The evolution of the domestic production has not been sufficient to keep up with the increase in domestic demand; therefore, the reliance on foreign supply is a feature that has accentuated in this sector. Indeed, the total average share of domestic production in the domestic consumption of the meat sector is only about 74%. With the exception of poultry, where this figure is close to 92%, in the other sub-sectors this indicator is very low, particularly in beef (52%). Consequently the meat trade balance is, in general, sharply negative. The pressure from foreign supply is felt throughout the meat sector with much intensity, being the Portuguese main suppliers the EU countries. They are responsible for 95% of the Portuguese import quantities. However, in recent years, the imports from third countries have been increasing, in particular from South America.

In Portugal, beef represents 25% of the total value of production in the meat sector. Spain is the main supplier of the Portuguese beef purchases, with a 53% share in the total imports of this sector. The Netherlands comes next, with a 16% share. Portuguese beef exports, although insignificant, go mainly to Spain and Belgium. Beef production has been growing very slowly in recent years, but Portugal continues to be very dependent on foreign markets, thus being very vulnerable to price fluctuations in international markets. Domestic consumption remains stable, with an average annual consumption of meat at 198,500 ton in 2008-2009.

“Sheep and goat” production represents roughly 6% of the total production in the meat sector, averaging annually 132 million euro in the 2002-2005 period; that is, about 2% of the total national agricultural production in that period. The price increased by almost 9%, between 1988 and 2004. The domestic production satisfied only 72% of the market demand in 2009.

In Portugal, the production of pig meat represents approximately 20% of total production in the meat sector. This *filière* is largely based on intensive livestock production with a high degree of industrialization. Moreover, being the sector particularly affected by severe EU regulation requirements in the areas of environment, food safety and animal welfare, this sub-sector

growth is dependent on farmers' capacity to adjust to new regulations, as well as on the strictness of environmental standards. Relatively to international trade, Spain is simultaneously our main supplier and our main costumer: in 2009 it provided 96% of the pig meat purchases in foreign markets. Domestic production is able to satisfy around 80% of domestic needs, given that annually about 493,000 tons of pig meat are consumed in Portugal.

Over the years, poultry production has shown a sustained growth both in terms of volume and value. Within this sector, chicken is the most important business segment, representing approximately 80% of its economics value. This sector is one of the few characterized as being almost self-sufficient (92%).

GPP (2007a) points out the need to intervene strategically in the following aspects: integration in the product chain and concentration of supply; reduction of production costs and increase in productivity; restructuring/modernizing farms to face outstanding standards; promotion and information to the consumer.

As happens in other sectors, there are several associations in this sector. However, the behaviour of economic agents in the chain continues to be very individualized, showing why POs and cooperatives are not emerging in the sector, except in the case of inputs supply. This sector leaves plenty of room for the emergence of POs and cooperatives.

6. Overview of policy measures

6.1 Regulatory framework

The performance of cooperatives (including POs) is influenced by the regulatory framework in a country. This framework is multi-level: EU regulations and national laws influence the way cooperatives can operate. In this chapter we look especially at the regulatory framework that influences the competitive position of the cooperative vis-à-vis investor-owned firms (IOFs) or the competitive position of the cooperative versus other players in the food chain (e.g. the retail/distribution sector).

These competitive positions are influenced within the regulatory framework by much more than the law that establishes the rules for running a cooperative (business organisation law). Well known other examples include agricultural policy (e.g. the EU's common market organisation that deals with producer organisations in the fruit and vegetables sector), fiscal policies (at the level of the cooperative and the way returns on investments in cooperatives are taxed at farm level) and competition policies. There are different types of policy measures in the regulatory framework (McDonnell and Elmore, 1987):

POLICY MEASURE TYPE	DEFINITION
Mandates	Rules governing the actions of individuals and agencies
Inducements	Transfer money to individuals in return for certain actions
Capacity Building	Spending of time and money for the purpose of investment in material, intellectual, or human resources (this includes research, speeches, extension, etc.)
System Changing	Transfer official authority (rather than money) among individuals and agencies in order to alter the system by which public goods and services are delivered

The objective this chapter is to identify support measures that have proved, or not, to be useful to support farmers' cooperatives. In section 6.2, the relevant policy measures and their potential effects in Portugal are identified. In section 6.3, a number of other legal issues are addressed.

6.2 Policy measures

Table 12 identifies some policy measures that influence the competitive position of the cooperative versus IOFs, whose complete perception implies the adoption of a holistic approach. During the last decade: (a) policies measures were taken, both in EU and at the country level, meaning that the sector is highly regulated; (b) the legislative framework is complex and difficult to understand by the farmers, with the decision making-process slow and complicated; (c) in addition to the measures intended for agricultural products and markets (namely, the COM), in Portugal the public policy was also focused in financial support for investments in the agricultural sector; (d) in the context of public policies, cooperatives are not considered distinct from IOFs.

Table 12. Policy Measures Description

Policy Measure Name	Policy Measure Type	Regulatory Objective	Policy target	Expert comment on effects on development of the cooperative
Cooperative Code and Statute for European Cooperative Society (CC and ECS)	Mandate Cooperative legislation/incorporation law of societies, changing the law on cooperatives	ECS: to correct failures of the traditional cooperative model and to open the cooperative to new cooperative models, including internal governance	Specific to cooperatives	SCE regulation (not adopted yet by Portugal) that is suitable to the present challenges of agricultural cooperatives, namely: To permit members' investor in the cooperatives, attracting external financial resources; The possibility of better motivation for "best" co-operators, having differentiated voting rights; Update and revitalisation of the internal governance of cooperative, allowing them to choose among the one-tier system and two-tier system
Competition law	Mandate European and national competition law	Correction of market failures, like anti-competition practices and monopoly power. The law is mainly focused in the consumers' defence.	Not restricted to the agricultural sector and cooperatives. Applicable to the business in general	The main aim is protect the consumers (monopoly power). Needs to be reformulated to simultaneously fight and eliminate monopsony power along the total agro -food chain. Necessary to implement regulation and control of commercial practices of the players with significant market power
Reform of the CAP 2003 – Single payment scheme to farmer –SPF	Inducement Application of EU regulations	More market sustainable competitive agriculture and rural development	Agricultural sector	For the farmers under the SPF has a positive effect in the level and stability of the agricultural income. Since the SPF was calculated on the basis of the average production of 2000-2002, for Portugal, it is relatively low. Additionally, the transference to extensive farming (plant crops and livestock) systems was witnessed, with negative consequences in the rural employment and value of the agricultural

				production. At the end, the result can be the giving up by a large number of producers, essentially in poor regions threatened by desertification. The new CAP policy should include measures that are able to invert the situation.
Operational program for the agriculture and rural development (AGRO) 2000-2006	Capacity Building and technical assistance Portuguese program of public support to investment in Portuguese agriculture during the period 2000-2006	Financial public support to: improve the agro-forest competitiveness and rural sustainability (six measures); improve the human skills and services provided to agriculture and rural areas (six measures)	Agricultural sector	Restructuring and modernization of a larger number of agricultural and forestry exploitations (22,126 projects) Restructuring of a large number of processing and marketing agro-firms (673 projects). Investment in agricultural infra-structures and training. Investment in technical development and demonstration. Predominance in material investment. Not sufficient to induce structural changes. Insufficient to invert the negative trend of the agricultural sector. High number and corseted number of measures. Inexistence of measures specifically directed to the cooperatives' strengthening.
Program of Rural Development 2007-2013 (ProDer)	Capacity building and technical assistance Portuguese program of public support to investment in Portuguese agriculture during the period 2007 -2013	Financial public support to: improve the competitive level of agricultural and forestry sectors; promote the sustainability of the rural areas and natural resources; economic and social revitalisation of the rural areas. Includes three programs: competitiveness (3 measures); sustainability of rural and less favoured areas (2 measures); development of rural areas; promoting of	Agricultural sector	Follows the same guidelines of AGRO, with a less level of public support. It has been criticized by the stakeholders due to its complexity, high number of measures, bureaucracy involved in their application and justification of the applied funds, and excessively concentrated in material and fixed investments. It is expected that the contribution will be positive to the Portuguese agriculture, but not sufficient to induce structural changes. Like

		knowledge and skills (3 measures)		AGRO, ProDer did not contemplate any specific measure directed to the cooperatives.
POs- Operational programs	Capacity building and technical assistance POs in fruit and vegetables sector.	According the established in Reg (EC) 1234/2007, 22nd October, improve the competitiveness of the POs	POs (in form of cooperatives or IOF whose shareholders are producers)	<i>A priori</i> , the program was financially interesting, but according the stakeholders: complex, bureaucratic and not flexible. Therefore the level of adhesion is very low.
Transference of services to producers	Changing systems Transference of public services to cooperatives. There is an agreement between the Portuguese Government and CONFAGRI (Confederation of Agricultural and Credit Cooperatives), to provide public services such as annual support income applications, training, registration of agricultural land; technical advices (extension services)	Improve the quality of the services provided, eliminating asymmetric information	Cooperatives and farmers	Assuming that we are in the presence of proximity public services that can be included within cooperative functions, the aim is to increase their role and to reinforce the linkages with farmers.

Based on the diagnosis conducted for this study and looking ahead, in terms of the agricultural policy after 2013, we can point out the following:

- A common EU policy is desirable, but less dependent on the agreements in the framework of the World Trade Organisation. The financial crisis of 2008, the European crisis, and the economic power of emergent counties, changed completely the economic world that was described in the Agenda 2000.
- The reform of the CAP should consider the differences between farming systems in Europe, assuming as objectives both market efficiency and the multiple public goods supplied by farmers, with the need for greater equity in terms of income distribution between countries regions and farmers. For instance, for the Portuguese case, what are the economic and social consequences of the elimination of milk quotas¹⁸? And the elimination of vine plantation rights?
- In the future, more competition from imports should induce cooperatives to invest in added value products and thus satisfy consumer needs. The serious risk of abandonment of the agricultural activity by farmers will be a challenge to rural areas, where young farmers, with an entrepreneurial vision, are needed. Less market control will produce more price volatility and instability. Cooperatives are already fundamental tools in achieving market stabilisation, competitiveness and economic development in the rural areas. POs, mainly cooperatives, through concentration in supply, are the main tools for farmers in an open and more competitive, global market. Due to their strategic position,

¹⁸ The milk quota system was a fundamental pillar to the strengthening of the Portuguese dairy cooperative sector.

POs should participate in market management, when public intervention is absent. Therefore, the objective is to ensure incomes to farmers coming mainly from the market and not from direct payments.

- For agricultural cooperatives, it is important to change the Cooperative Code, allowing Portuguese cooperatives to adopt new cooperative models, in parallel with the current traditional/Mediterranean model. There is no doubt, that Portuguese agricultural cooperatives must be prepared to face a more competitive and global market, where wholesalers and retailers have an increasing and strong market power. In the future, due to CAP reforms and to the older social base, there will be fewer and larger producers. To deal with this new economic and social environment, cooperatives need to merge, to adopt more efficient property rights structures, internal governance, and productive processes.
- Relatively to the taxation system, to consider all cooperative operations as cooperative activities and to avoid a difference between internal and external operations, a simplification of the tax and accounting system is needed. The obligation to have two systems of accounting, when operating with third parts is a barrier to realising scope and scale economies.
- Until now, the main objective of the competition law is to get a lower consumer price, without taking into account the characteristics and the actors of the sector. In the food market, an increasing market power of buyers is observed, in parallel to monopsonistic practices. In the presence of this new market situation, it is important to implement a public policy that boosts the concentration of the farmers' supply, changing, simultaneously, the competition law and role of the Competitive Authority, to take into account market transparency, the defence of all actors involved in the agri-food chain and, at the end, consumers' well-being.

Summing up, the survival and competitiveness of the majority of the Portuguese agricultural cooperatives require an external shock that leads to structural changes in terms of positioning in the market, property rights and internal governance. The achievement of this goal requires policy measures and public financial support not provided in the past.

6.3 Other legal issues

The high volatility of the agricultural commodity prices and the effects of CAP reform 2003, during the last five years, bring into attention questions related to prices, the use of production capacity, public support to production and marketing, and the increasing market power of larger retailers.

Like other firms, cooperatives and POs are under the umbrella of the National Law of Competition (Law 18/2003 from June 11th, [replaced by the Law 19/2012 from May 8th](#)) – NLC- and of the Treaty on the Functioning of the European Union (TFUE) of Lisbon Treaty.

About the NLC, it is important to highlight that it has no redistribution purposes, thus commercial relationships between suppliers and large retailers, the increasing market power of wholesalers and retailers, the increasing market share of BOBs, the inexistence of alternative and the diversified marketing channels for the producers are not under the NLC. Indeed within the restrictions of vertical integration, the NLC places more emphasis on the market power of suppliers (monopoly power) than to the market power of buyers (monopsonistic power). *A priori* the buying agreements are considered pro-competitive whilst the selling agreements are anti-competitive. This position is clearly assumed by the Portuguese Competition Authority (*Autoridade da Concorrência* - AdC) in the Report published in 2010 (AdC, 2010) concerning the commercial relationships between the food distribution and suppliers. In this document AdC

suggests more competition, market equilibrium and transparency in the commercial relationships between economic players along the food-chain.

For the processing cooperatives/POs, it is also relevant the fulfilment of the legal requirements foreseen for the processing activity (Law Decree nº 209/2008 from October 29th), particularly those related with environment. In the dairy/milk sector it is also important to consider the cost caused by the required licensing of livestock farms.

In what concerns the Regulation of the European Cooperative Society (ECS), the Portuguese Government has not considered essential, until now, to implement this regulation. ECS can be implemented by the approval of a specific law or changing the CC (Rodrigues, 2010). More specifically, according to the questionnaire on legal aspects, in appendix, we can summarize that:

- The farmers can proceed to a collective vertical integration through cooperatives or via IOFs. In the first case they are obliged to fulfil the legal rules described in the CC. In the case of IOFs they are under the umbrella of the Private Firms Code (*Código das Sociedades Comerciais*). In both cases, in order to be recognized as a PO they need to satisfy a set of criteria legally defined.
- The Portuguese legal cooperative framework follows the cooperative principles established by the ICA. The sunk costs that result from the creation and operation of a cooperative are relatively low, i.e., the option for the legal form of cooperative does not constitute, itself, an important economic barrier.
- Relatively to the membership structure, the Portuguese CC: sets a minimum number of members; does not permit investor members; stipulates the democratic principle (one member, one vote, in primary cooperatives and a mix of rights in high order cooperatives); only members have voting rights.
- According to the CC, the governance structure is cumbersome, stipulating: the cooperative governance bodies; the decision making process; and the minimum number of members of the BoD. Only members can be elected on the cooperative's governance bodies (the supervisory board in larger cooperatives is an exception), the members (effective and substitutes) of the bodies can only be appointed and removed by the general assembly.
- Equity capital is financed by *an* entrance fee, members' contribution and transfer of surpluses to reserves (mandatory and general) approved by the general assembly. The rule is not to remunerate members' capital investment.
- The scission or merger of cooperatives is only effective – and registered – after the demonstration that the interests of creditors and members are adequately protected. According to the article 80º of the CC, a cooperative cannot be converted into an IOF or in any kind of legal entity (association, foundation, etc.). The same rule applies for the conversion of an IOF into a cooperative.
- Since 1998 Portugal has a specific cooperative tax law. In the case of agricultural cooperatives they benefit from: (a) exemption in corporate tax – IRC; (b) tax free of local real estate (building transmissions – IMT- and own immovable property – IMI); (c) value add tax – VAT – in agricultural cooperatives with processing sections the VAT incident on deliveries made by their members of its own production only is chargeable when they receipt the final price. The cooperative profits obtained in operations with non-members (thirds) pay IRC, even in the exempt cooperatives, which obliges cooperatives in this situation to have a separate accounting for these operations. The exemptions are applied to the cooperative, being the members in similar situation of the other farmers. In 1998 the tax regime considered a positive discrimination in favour of cooperative enterprises. After that, positive tax measures to SMEs were approved, but cooperative tax law was

not altered. Comparatively with SMEs, the situation is less and less “positive” and less and less “discrimination” (Rodrigues, 2010).

- Similar to IOFs, the behaviour of the cooperative is under the umbrella of the competition law. So, the Competition Authority will be the authority in charge of this kind of control.

7. Assessment of developments and role of policy measures

This chapter provides a concluding assessment on the developments of cooperatives in Portugal. In chapter 2 the basic statistics on agriculture and farmers' cooperatives were presented, with the objective of providing an overview of the Portuguese agriculture and an evolution and position of cooperatives in Portugal. In chapter 3, we analysed the evolution, position and performance of cooperatives. Their position in the food chain, internal governance and the institutional environment in which they operate is analyzed in chapter 4.

In chapter 5 we discussed the recent developments in the 7 sectors that are relevant in this study, looking at the specific aspects of each sector and the influence of sector issues on the performance of the cooperatives. In chapter 6 we looked in detail on how the regulatory framework and policy measures that influence the competitive position of the cooperatives in the food chain and vis-à-vis the investor-owned firms.

This final chapter assesses the developments of cooperatives and how they can be explained in terms of the building blocks. Section 7.1 stresses the performance of cooperatives in terms of their internal governance, position in the food chain and the institutional environment in which they are operating (including the regulatory framework). Section 7.2 looks at the effects of policy measures on the position of Portuguese cooperatives, analysing the measures that seem to benefit or constraint them.

7.1 Explaining the performance of cooperatives

As referred in 4.5, the choice of the appropriate indicator to measure cooperative performance depends on the situation of the stakeholder in the cooperative (e.g., member, manager). Members' perspective (Rebelo et al, 2002) on the cooperatives' role can be better explained by answering the following questions: (a) why do farmers want to vertically integrate? (b) why do farmers want/need to integrate jointly rather than individually? In a processing cooperative, the sources of benefits are: scale and scope economies and/or increasing efficiency in assembling and processing raw farm products; elimination of market failures; countervailing market power; farm risk management through pooling or contract arrangement; lower transaction costs in comparison with alternative forms of vertical integration.

A cooperative will only be efficient if its members/patrons are able to get higher net economic benefits (final price of the product delivered, time of receipt, provided runoff, risk sharing), than through other alternative forms of vertical integration. Since investor-members are not permitted in Portugal, members' behaviour relative to their own cooperative is mainly related to the final price (patronage refund) of the product delivered. Research on the wine cooperative sector (Teixeira, 2001, Rebelo et al, 2002; Rebelo et al., 2008) indicates that it is usual for members to exhibit an individualistic and free-riding behaviour.

Since agricultural cooperatives are located in the core of the food chain, between production and marketing, their efficiency depends on what is occurring upstream (supply) and downstream (demand). The agricultural cooperatives' efficiency is influenced by the social and economic structure of agricultural producers located upstream in the *filière* that, in the case of Portugal, is characterized as being heterogeneous, atomized, aged, risk averse and with a low educational level. Thus, the most efficient cooperatives are in the sectors in which these weaknesses have been overcome (as is the case of milk and some fruit cooperatives) and also in those that assumed a business approach, with strong leadership, well defined business strategies and an efficient structure, both in human and physical resources and organisation.

On the demand side, cooperatives face a commercial distribution that is increasingly strong and concentrated. As stated in AdC (2010): in 2008 the nine largest retail groups, held a share of

almost 85% of the total value of sales in food retail, holding the largest two groups, approximately, 45% (p.10); four areas were identified where the bargaining imbalances between distributors and suppliers are clearly relevant (p.16): (i) unilateral imposition of conditions (i. e., negotiation of a typical contract); (ii) discounts and other inducements; (iii) penalties; and (iv) payment times. Although these practices do not contravene the EU and Portuguese legislation on competition, in the absence of a clear abuse of market power, have negative repercussions on sales prices, which, at the end, affect the prices paid to agricultural producers.

In summary, there are many and various internal and external factors that explain the performance of Portuguese agricultural cooperatives. However, only some of these factors are controlled by the cooperative. When comparing efficiency among them, in particular within the same sector, in which the institutional and market conditions are exogenous variables, we should take a special note to the factors related to the socio-economic characteristics of members and leadership.

7.2 Effects of policy measures on the competitive position of cooperatives

As mentioned throughout this report, excluding tax benefits (notably the exemption to pay tax on net surplus -IRC- by cooperatives, for operations with members, even for retained surpluses), as cooperatives are not subject to positive discrimination or special attention by public authorities, being subjected to the same rules as IOFs. When questioned on this issue, cooperative representatives, in general, answer that, over the past ten years, cooperatives do not have attracted the attention of public authorities.

The obligation of cooperatives to follow the legal framework contemplated in the CC, which is based on the traditional cooperative principles of the ICA, in particular the democracy (one member one vote), entry restrictions to members' investors, the constraint and distribution of net benefits and transmission of their holding in cooperative equity (restrictions in the ownership and exercise of property rights) and the lack of flexibility of the governance model, are cited as barriers to the competitiveness of cooperatives, particularly to the oldest ones, with a large and heterogeneous membership (in economic, social and cultural terms).

Some cooperative' stakeholders have pointed out the need for the legal framework to be revised to allow cooperatives evolution into a new generation of cooperatives¹⁹ (proportional investment cooperatives, member investor cooperatives, cooperatives with capital-seeking entities). In our opinion, although the adoption of a new cooperative model, as alternative to the traditional one, is very important, it is not the panacea for the structural illnesses of Portuguese agriculture (atomized, reduced innovation, low productivity, aged farmers, low educational level and risk averse). The legal emergence of these new models would provide a wider range of options in solving some of the current problems in the sector.

Relative to the POs (with the legal status of cooperative or private firm) there are a relevant set of incentives (the public support may reach 80% of the action cost), for the fruit and vegetable sector (GPP, 2009), framed in Regulation (CE) 1234/2007. The actions covered by financial public support are: (i) planning of production; (ii) improvement of product quality; (iii) improvement of marketing conditions; (iv) experimental -production; (v) training activities; (vi) prevention and crisis management; (vii) environmental issues; (viii) other. More recently

¹⁹ Somehow, the milk sector solved this problem by adopting a pyramid model, with the first degree cooperatives aggregating the producers, secondary cooperatives in the intermediate stage and a private commercial company (Lactogal, SA), at the top of the pyramid, owned in equal shares by three cooperatives (Lacticoop, Agros and Proleite). At the same time they were able to constitute a strong business group. This process was supported by a strategic vision and a strong and sustained leadership.

(Legislative Decree n° 11/2010) these measures are being extended to other sectors. Cooperative leaders when questioned on these incentives, considered them to be very interesting and effective, complaining, however, about the bureaucratic procedures related with the application forms and the control of public support obtained.

Regarding the financial supports for investments in modernization and in entrepreneurial skills, cooperatives like IOFs may obtain public support (general level of 35% for SME that are located in a convergence region and integrated in a strategic agro-chain) in the context of the Rural Development Program (ProDer). In this sort of projects, cooperatives or POs, when compared to IOFs, benefit a criterion, the value of the beneficiary, in the ranking of the applications.

In conclusion, the policy measures have not been strong and differentiate enough to reinforce the role of cooperatives/POs in the agri-food chain. Thus income redistribution favouring farmers, via vertical and horizontal integration, was not achieved.

If the policy objectives are to maintain a high number of small producers in the agri-food chain, especially in peripheral regions, it is important to secure the existence of economically strong agricultural cooperatives, able to face a global demand and the increasing market power of larger retailers. Hence, a specific financial envelope must be defined for cooperatives, including integrated support for material and immaterial investments for their technical conversion and size increase (scale economies), changes in the structure of property rights, professionalization of management, staff training, technical support to associates and marketing strategies.

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