Portuguese beef market – potential for differentiated products

O sector de carne de bovino em Portugal: potencial para produtos diferenciados

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Resumo: Nos mercados de produtos alimentares a nível global tem ocorrido uma procura crescente por produtos diferenciados, e a carne de bovino não é exceção nesta tendência. Este produto embora na sua maioria vendido de modo indiferenciado e sem marca, é já alvo frequente de estratégias de diferenciação. Em Portugal, a carne de bovino diferenciada, representando apenas uma pequena quota de mercado, tem ainda assim crescido. Por outro lado, no sector da carne de bovino indiferenciada têm surgido limitações como a quebra no crescimento do consumo anual per capita e o aumento das importações de carne de bovino. Adicionalmente, o sector tem sofrido alterações por força da Política Agrícola Comum (PAC). As reformas da PAC têm fomentado novos objectivos para o sector agrícola, tais como a sustentabilidade e a competitividade, aumentando a orientação dos produtores para o mercado e promovendo as estratégias de diferenciação. Neste contexto é apropriado fazer uma análise do sector de produção de carne de bovino Português, bem como das estratégias de diferenciação que estão a ser implementadas. A análise do seu comportamento de mercado ajudará a compreender o seu verdadeiro potencial e a conhecer quais as preferências de potenciais consumidores por carne de bovino diferenciada.

Summary: Today’s competitive food markets have been showing a growing demand for differentiated products and beef is no exception to this tendency. This food product though mainly sold as unbranded, is often a target for differentiating strategies. In Portugal, differentiated beef products account for only a small share of the market, but nevertheless experience some growth. The undifferentiated beef sector is experiencing several constraints namely in terms of annual beef per capita consumption and the rise in beef imports. Furthermore, the sector has also been subject to changes due to the reforms of the Common Agricultural Policy (CAP). CAP reforms have led to new objectives for the agricultural sector, such as sustainability and competitiveness, increasing the linkage between producers and the market where strategies include differentiating quality approaches. It is therefore appropriate to analyze the Portuguese beef sector as well as the differentiating quality strategies available and their market behaviour, in order to help understand what is the real potential for differentiated beef in Portugal and to allow knowing the preferences of potential consumers willing to pay for quality differentiated beef products.

Keywords: beef sector; PDO; CAP; quality strategies

Introduction

In today’s developed economies, the demand for differentiated food products is an important feature of competitive markets. Many consumers’ behaviour and choices are no longer determined by food prices only. This means that competitiveness in food markets can be linked to the ability to develop innovative quality differentiated products, aiming at those consumer segments not only concerned with pure price based differentiation (Grunert et al., 2004).

In the particular case of beef products, the market and the producers have been following differentiation strategies, and the Portuguese reality is no exception to this trend. Recent past has been marked by changes both in the typical place of sale and in beef products differentiation. Large retail chains (supermarkets and hypermarkets) represent now the location for buying beef for almost 50% of Portuguese consumers (Project AGRO 422), replacing the formerly dominant local butchers. Moreover, beef has evolved from being marketed as a completely undifferentiated product without a brand or label, to being available not only as a branded product, but also subject to several differentiating strategies.

These differentiated beef products, in spite of accounting for only a small proportion of beef production and consumption in Portugal, have had a significant growth. This positive evolution is even more significant, if the undifferentiated beef market growth is considered.

Although some recent available data shows a somewhat stable annual per capita consumption of beef (with values around 16.8kg in 1999 and about 18.7kg in 2009) (INE, various issues), the undifferentiated beef production has been decreasing, and the country’s...
beef imports have been rising at an annual average growth rate of 10% between 2001 and 2008 (INE, various issues). Some of this production decrease and imports increase can be explained by the country’s structural characteristics, but the sector is also influenced by the evolution of the Common Agricultural Policy (CAP).

The last decade has been the stage of major CAP reforms, which shifted its main objectives from food security to sustainability and competitiveness. In order to do so, CAP support mechanisms have been deeply changed. Many of the existing supports to producers were decoupled, no longer influencing producers’ decisions (including output levels), therefore promoting a stronger connection between producers and markets. Supports also became conditional on compliance with environmental, animal health and welfare as well as food safety rules. CAP reforms therefore became one of the most relevant issues to be considered when an agricultural sector, such as the beef sector, is analysed.

Beef differentiating quality strategies can be included within these CAP’s objectives, as they seek to satisfy some markets’ (and some consumers’) demand. These objectives are clear in the new European Commission “Quality Package” adopted in December 10th, 2010. Furthermore, CAP reforms have moved towards increasing the linkage between producers and the market. Thus, although being a niche market, it can be relevant to evaluate the Portuguese differentiated beef sector, the differentiating quality strategies available and their market behaviour, as it can help delineating the best market strategies for this sector.

In order to do so, a comprehensive description of the Portuguese beef sector is needed, with particular incidence on the factors conditioning the sector’s competitiveness and viability and keeping in mind not only national conditions and constraints, but also EU policies.

Included in a broader investigation about consumers’ willingness to pay for differentiated beef products, this analysis of the Portuguese beef sector is justified in order to identify the existing baseline market trends needed to assess the market potential for new beef products. Hence, the present article has as main objectives:
- To analyze some of the implications the CAP and its reforms had on the beef sector;
- To describe and characterize the Portuguese beef sector in terms of supply, demand and trade.
- To describe the Portuguese differentiated beef sector and to unveil constraints on and opportunities for this sector.

Methods

In order to understand what has been the trend in beef production, trade, consumption and market prices, a descriptive analysis of the available information concerning this sector is needed. Although this kind of procedure doesn’t represent a methodological step forward, it is, nevertheless, the appropriate approach when a detailed knowledge about any given sector is necessary. Therefore we will be looking at data on different variables (namely production figures, consumption, trade, amongst others) and estimating percentage changes, annual growth rates, anticipating underlying trends and, when possible, identifying potential threats and opportunities for the beef sector.

The available data was provided by several public organizations (such as the National Statistics Institute, the veterinarian official services, an agricultural research organism, among others, as well as the European Union institutions) and the gathered information was organized in order to allow establishing time series for different kinds of data.

Hence, the impact of CAP reforms on the Portuguese beef sector and the beef sector’s weight in the Portuguese agriculture are analyzed followed by a brief description of beef production and consumption trends for the last fifteen years. For this analysis the differentiated and the undifferentiated beef segments were considered separately, to allow for a comparative assessment aiming at describing trends and uncovering constraints, whilst trying to answer a main research question: what is the potential for emerging market niches and more sustainable beef production systems in Portugal?

The Common Agricultural Policy and the Portuguese beef sector

The 1992 CAP reform, enhanced by the Agenda 2000, represented the first step in a paradigm shift regarding support mechanisms, by cutting the link between subsidies and output levels, meaning farmers were no longer paid to just produce food. The direct price support measures were reduced and farmers started receiving direct income payments to help maintain income stability. This reform led to a partial compensation (from 1999 onwards) of farmers’ income losses through direct payments linked to production. The direct aids were, for beef production, determined by the number of animals held (headage payments) (Swinbank, 1997).

However, the amount attributed per animal varied with the kind of animal grown. Therefore, these coupled support measures undoubtedly conditioned producers’ decisions. In the Portuguese beef sector the existence of a suckler cow premium was appealing to many producers, which led to a significant increase in the suckler cow figures. In fact, as it can be seen in Graph 1, the number of suckler cows has come to be higher than any other kind of cattle, including dairy cows, representing about 30% of the total cattle in 2009 (INE, various issues).

Data also suggests that the Portuguese beef production sector has been strongly influenced by the 2003 CAP reform. One of the main features of this reform was the introduction of the single farm payment scheme and the decoupling of production-linked direct payments in many of the agricultural sectors in Europe, aiming at enhanced competitiveness and stronger mar-
ket-orientation. There were, however, very different effects on different countries and agricultural systems, namely because each national Government could decide on which cultures and animal productions to decouple (within a predefined range of possibilities).

Some Portuguese agricultural sectors were therefore strongly affected. On the one hand, this decoupling had a strong impact in the Portuguese cereal sector. The few price support measures for cereals were even further decreased, once the sector was fully decoupled (due to a Government’s option). Moreover, the suckler cow premium was maintained fully coupled therefore becoming very appealing for producers.

Furthermore, once the cereals were fully decoupled, extensification payment scheme (EPS) became much more attractive. It had been established as a direct support scheme implemented in the beef and veal sector with specific measures in the form of a reconversion programme of land used for arable crops towards extensive livestock production, and it was extended until 2005 (Ernst & Young Government Services, 2007; European Commission, 2003).

This support measure combined with the coupled support measures for suckler cows strongly stimulated arable land conversion into pasture.

However, these pastures would need to be properly managed and improved, without which many of which wouldn’t be adequate for efficient beef fattening (due to low quality output which in turn determines low heage). The natural conditions in most of the country (marginal soils and intense water deficit in summer) do not favour intensive beef production, unless the pastures are well managed and the animals are properly supplemented with feedstuffs whenever it is needed. These improvements are expensive and unprofitable in most cases explaining why farmers didn’t uptake this strategy.

Therefore, as the pastures and forage production are usually not appropriate for efficient fattening, the land conversion eventually led to a bigger suckler cow herd (once these animals are less dependent on high-quality forage, having thus much lower food costs in these conditions when compared to other cattle production).

On the other hand, due to potential social and environmental problems that activity abandonment could raise, some countries were allowed to maintain support payments in some sectors partially coupled to production. Portugal maintained the bovine sector partially coupled, decoupling the bovine adults slaughter premium to 40% but keeping the suckler cow and calve slaughter premiums still up to 100% coupled (European Commission, 2008, 2007; Tranter, 2007). Moreover, the suckler cow premium was the highest one, among the coupling options determined by the EU, and Portugal significantly increased, as well, the number of suckler cow premium rights after 2003 (European Commission, 2008, 2007).

Hence, beef producers continued to opt for this production which has, however, reduced its profitability due to a low selling price for calves and a small number of calves sold per cow (European Commission, 2007).

Consequently, the existing beef production was (and in many cases still is) largely sustained by EU coupled support, which has helped maintaining producers whose potential lack of viability, in an unsupported market, could have lead to activity abandonment. The weight of coupled payments in the farm margin over variable costs is around 60% for Portuguese beef breeder farms (European Commission, 2007). Moreover, the European Commission has reported, in 2007, that Member States (MS) with higher reliance of farm income on coupled payments are more sensitive to any suppression of direct payments. In Portugal, specialist breeders switching to a negative economic margin in case of total decoupling own 19% of the suckler cows (European Commission, 2007), showing the kind of social problem that decoupling could imply.

As it can be seen, after this continuous series of CAP reforms, most of the Portuguese beef sector has continuously increased its subsidy dependence, therefore loosing competitiveness. This is somewhat contrary to what should be one of the CAP’s new directions, which is to promote and support market oriented production, leading producers to a closer linkage to markets and consumers’ demand.

In order to analyze the national bovine herd evolution (somewhat shaped by CAP’s reforms) in the Portuguese beef sector trends, regarding the national agriculture in particular, and economy in general, a detailed characterization of the sector follows in the next section.

Portuguese beef sector characterization

The beef sector within the Portuguese economy

In 2000, the Gross Value Added (GVA) of agriculture in Portugal accounted for 2.5% of the Gross Domestic Product (GDP), and in 2009 that value had decreased to 1.6% (basic prices) (GPP, 2011). These figures are in accordance with the natural development of an Economy. Considering employment data, the agroforestry sector (including agriculture, forestry, hunting and fishing) represented 16.1% of the civil working population in 2000, whereas in 2009 it represented 14.7% (GPP, 2011). Thus, the employment evolution in this sector may show some activity abandonment (although it can also represent productivity increases in some cases).
Both these two trends are in accordance with the general tendency in the EU. EU-15 share of agriculture in the GDP has also decreased in the mentioned period as well as the civil working population in the agro-forestry sector (European Commission, 2009).

Portuguese animal production sector has slowly grown, coming from representing 32.7% of agricultural production value in 1990 to 37.1% in 2010 (current prices, base 2000) (GPP 2011). Although plant production still accounts for the highest proportion, animal production has increased its share on the gross value added of agriculture. In 2010 the beef sector value represented 6.9% of the animal production sector value (GPP, 2011).

The evolution of the sector in terms of economic dimension of the beef farms is also relevant. In 1997, beef farms classified as having a large economic dimension (definition based on farms’ gross margin; expressed in Economic Dimension Units; 1 UDE dimension (definition based on farms’ gross margin; € 1200) represented 40% of the gross margin value generated by the total of the beef cattle farms, whereas in 2005, that percentage raised to 64%. In 1997, these economically larger farms represented 7% of the total number of beef cattle farms; in 2005 they represented 13% (INE, various issues), reflecting that some farms are increasing in terms of economic dimension (and possibly economic efficiency as well), and are therefore more likely to cope with the sector’s constraints. Nevertheless, these are still a minority (13%).

There are also signs that the undifferentiated beef production sector may have been experiencing some constraints, as the sector’s production figures help to show.

Portuguese beef sector production

The beef production trend for the last decade is in many ways related to the CAP policy evolution with the consequences described previously, and also to natural and structural constraints inherent to the livestock production conditions in Portugal.

The suckler cow herd increase can be seen looking at the slaughtered animals between 1993 and 2009 (Graph 2). Calves have come from representing around 15% of the slaughtered animals in 1993 to around 34% in 2009. Heifers have dropped from 66% to 50% in the same period (INE, various issues).

The tonnes of meat produced follow this trend: the quantity of beef from calves increased at an annual average growth rate of 6.7% between 1993 and 2009, whereas beef from heifers and adult cattle decreased around 1.9% and 1.6% during the same period. The total beef production growth was therefore negative for the period 1993-2009 (-0.7% average annual growth rate) (INE, various issues).

These figures are the consequence of a much lower meat output per animal, when veal is considered. This can, to some degree, be explained by the high production costs associated with the fattening operation (which is mainly characterized by confinement productions and feeding throughout the animals’ life), namely due to the feedstuff prices (where they can represent as much as 80% of total costs), among other factors (GPPAA, 2007). Notice namely the price spike that took place in 2008 for these products in world markets.

However, considering the smaller and more recent period from 2001 to 2009, the total beef production growth is positive (1.0% average annual growth rate) (INE, various issues).

Also, beef sale values have grown from around 70 million Euros in 2001 to 106 million in 2007 (current prices) which means a growth from 70 million Euros to 98 million Euros in real prices (base year = 2002) (5.6% average annual growth rate) (INE, various years).

We will look now, in the following section, to what has been the trend in beef trade.

Portuguese beef trade

Portugal has had, at least since 1994, a self-sufficiency rate for beef and veal below 60% (except for the years 1996, 1997 and 2005) (GPPAA, 2004-2006). These exceptions may be due to a reaction of Portuguese consumers to the BSE crisis, although the available data is insufficient to prove it (and thus justifying the need for further investigation).

Between 2001 and 2008, beef imports had an annual average growth rate of 10.4% in quantity, representing an annual increase of 12.4% in value (real prices) (INE, various years). The balance of trade for this period is clearly negative as expected by the low self-sufficiency rate and the imports growth.

Not surprisingly, in 2005, almost 95% of the imported beef had the EU as provenience, mostly from Spain (57%), the Netherlands (16%), and France (8%) (GPPAA, 2007). This means our competitors are obliged to the same production rules as Portuguese beef producers, and still manage to be competitive in the Portuguese beef market.

Beef imports from South America (Brazil, Uruguay and Argentina), although not yet representing a large proportion of total beef imports (around 8% in 2005), are growing (GPPAA, 2007). Once some remaining trade barriers (some related to food safety issues, but most related to tariff quotas) are removed, as part of future global trade negotiations, this growth can increase, introducing in the Portuguese markets new price-competitive products, and with potential quality differentiating strategies.

Graph 2 - Evolution in slaughtered calves, heifers and adult (INE, various issues)
The growth potential for South American beef imports, as well as the considerable dominance of European beef imports over the Portuguese beef market can be considered significant threats to the Portuguese beef sector.

**Beef consumption in Portugal**

The Portuguese per capita beef consumption since 1995 hasn’t varied much. The growth from 16.8 kg in 1999 to 18.7 kg in 2009 represents an average annual growth rate of around 1% (INE, various issues). This small increase doesn’t allow forecasting any significant growth in beef consumption, even because beef is one of the most expensive meat products available, which could impair its usage as a substitute for other kinds of meat. Between 1995 and 2000, beef and veal were the only meat group to decrease its share in Portuguese consumers’ meat expenditure (Banovic et al., 2006). Moreover, according to the same authors, Portuguese consumers’ share of expenditures with food at home have been diminishing, with meat expenditures showing the highest decline in real terms, when compared with fish and other food products.

Besides expenditure changes, this may also reflect Portuguese consumers search for healthier food products (similar to many other European consumers) (Grunert, 2004; Wezemael, 2010), which may impair some beef consumption. Beef may be considered an unhealthier meat product for several reasons. On the one hand, it may be associated with food safety issues, namely BSE. In the other hand, consumers may consider beef to have higher fat contents (Grunert, 2004; Wezemael, 2010). In both cases, beef may be replaced for other meat products (namely poultry) or fish.

When comparing the Portuguese and the EU’s meat consumption, the Portuguese beef gross human apparent consumption per capita in 2007 was of 18.6kg, and for the EU18 it was of 8.8kg (EUROSTAT, 2008). And, as it can be seen in graph 3, beef represents in Portugal a higher percentage of animal protein intake, if compared with the EU’s (EUROSTAT, 2008).

Furthermore, Portugal has the highest per capita fish consumption in the EU (EUROSTAT, 2008), which is translated into a very high per capita animal protein intake. Altogether, this means the Portuguese beef sector as a whole can’t expect much stimulus from an increase in demand.

However, there may be niche markets for beef relying not on an increasing demand in quantity terms, but on an increasing demand for quality differentiated products. As Antle (1999) reported, across Europe, consumers have been demanding, not more quantity, but more quality differentiated products. Here quality means very often not only a tastier or tenderer meat, but also healthier, safer, or animal and environmentally friendlier meat (Bernués et al., 2003; Resurreccion, 2003; Aguiar Fontes et al., 2008; Wezemael, 2010). Portugal is no exception, as it can be foreseen in the growing demand for differentiated beef products, which will be analysed in the following section.

A SWOT analysis (S: Strengths; W: Weaknesses; O: Opportunities; T: Threats) is now given as a result of what was discussed in the previous sections and some literature review.

**The Portuguese differentiated beef sector**

The previous analysis has shown strengths, weaknesses, opportunities and threats associated with the Portuguese beef sector. There is, however, some differentiated beef production in Portugal that may be resisting to the described constraints and evolving more in line with the CAP’s philosophy. The available data suggest viability for this subsector, as it is growing in terms of produced quantities, production values and market share (Graphs 4.1 and 4.2) (IDRHa, 2001-2007, 2004). Therefore, the differentiated beef sector is worth looking further at.

The existing literature shows that in developed economies demand for food is increasingly influenced by factors other than price. In fact as Antle (1999) stated, consumers’ concerns about food in developed economies have increasingly shifted from the availability of food to food quality. It must be kept in mind that the notion of quality changes along with changes in our life and in society and, when it comes to food, as income raises society is ever more aware of issues other than simple availability.

For beef products there are several differentiating strategies available for producers that allow exploring consumers’ demand for quality. In Portugal, beef products with Protected Designation of Origin (PDO) and organic beef are two of the more consistently available in the market and are therefore worth analysing.
Table 1 - Beef sector SWOT analysis (Aguiar Fontes et al., 2008; Banovic et al., 2006; European Commission, 2007; GPPAA, 2004-2006; IDRHa, 2001-2007, 2004; INE, 2002, various issues; Project Agro 422)

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<th>Strengths</th>
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<td>- Value of Portuguese animal production growth and increased share on agricultural GVA.</td>
<td>- Agricultural sector employment data may show some activity abandonment and difficulty to attract new generations.</td>
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<td>- Structural change, with the share of beef GVA coming from large producers increasing from 40% to 64%.</td>
<td>- Beef production still largely sustained by coupled support: producers’ decisions still not completely market driven.</td>
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<tr>
<td>- Productivity increases and efficiency gains consistent with structural changes in production.</td>
<td>- Total beef production growth was negative between 1993 and 2009.</td>
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<td>- Beef sales values growth from 70 million Euros to 98 million Euros (real values).</td>
<td>- Negative balance of trade and low self-sufficiency rate.</td>
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<td>- Previous research concluded that in a sample of 800 Portuguese consumers, 80% claimed to like beef or like it a lot.</td>
<td>- Beef products are very expensive compared with other food products of animal origin.</td>
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<td>- Well established distribution channels, both in large and small retail, with solid market shares.</td>
<td>- Beef and veal decreased its share in Portuguese meat expenditure.</td>
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<td>- Total beef production growth was positive between 2001 and 2009.</td>
<td>- Main problems in beef marketing: lack of uniform supply, uneven quality, lack of promotional activities, high price.</td>
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Table 1 (continued) - Beef sector SWOT analysis (Aguiar Fontes et al., 2008; Banovic et al., 2006; European Commission, 2007; GPPAA, 2004-2006; IDRHa, 2001-2007, 2004; INE, 2002, various issues; Project Agro 422)

<table>
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<th>Opportunities</th>
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<td>- CAP reforms towards more market oriented farmers, more able to face competition.</td>
<td>- Imports from Argentina, Brazil and EU member states.</td>
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<td>- New dynamics in agricultural employment: younger and more qualified people, more competitive and directed to the market.</td>
<td>- High internal and external competition based on price.</td>
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<td>- Potential growth margin of domestic production in face of low self-sufficiency rate.</td>
<td>- Fish is a quality product substitute; Pork and poultry are lower price substitutes.</td>
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<td>- Increased demand for quality differentiated products.</td>
<td>- Expenditure away from home and on convenience foods increased.</td>
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<td>- Previous research showed that consumers trust national products, which can be used in marketing strategies.</td>
<td>- Future CAP reform and its consequences on the sector due to possible support cuts.</td>
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<tr>
<td>- There are support policies aiming at extensification and environment, animal welfare, food safety, etc, which can be applied into quality differentiating possibilities.</td>
<td>- Periods of economic recession: lower disposable income.</td>
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<td>- Market opportunities for premium priced products (substitution effects).</td>
<td>- Red meat is often considered a less healthy food product.</td>
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The PDO is a quality differentiated label regulated in the European Union since 1992 and it was established to encourage diverse agricultural production, protect product names from misuse and imitation and help consumers by giving them information concerning the specific character of the products (European Commission, 2010). It is presently regulated by Council Regulation (EC) No 510/2006 of 20 March 2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs.

Products aiming at a PDO label must have characteristics essentially due to its geographical environment (which includes factors such as climate, soil quality, local know how, local breeds, etc). Also, the entire production chain must be located within the geographical area associated with the PDO.

The PDO scheme can thus be applied to different kinds of agricultural products, and many of the procedures are not product specific. In the case of PDO beef, as it can be seen schematically in Figure 1, producers of a given breed included under a PDO registration are organized in producers’ organisations. These are responsible for the definition of the production specifications needed for obtaining the PDO denomination, and also for the general production management (Barreira et al., 2009).

The PDO specific legislation requires that "an agricultural product or foodstuff bearing such a description should meet certain conditions set out in a specification" (Council Regulation (EC) No 510/2006). Thus, farmers comply with rearing, feeding, lodging and transportation rules included in the specification document and the animals must be registered as belonging to the specific pure bred involved in that designation. Very often production practices are established according to regional traditions (Barreira et al., 2009).

Transportation, meat processing facilities and distribution channels are usually managed by the producers’ organisation. A third-party certification entity is responsible for verifying the compliance with the set specification throughout the whole chain (Barreira et al., 2009). The beef produced is certified and thus labelled with the PDO European symbol and producers benefit from the exclusive right to use that PDO product name.
High certification costs contribute to higher production costs, and most likely to higher consumer prices. It thus shows some consumers are willing to pay more for quality differentiated beef, helping support through their demand this production sector.

Moreover, previous studies have shown relevant consumer perceptions about PDO beef, such as associations with increased food safety and higher quality, product genuineness, and, perhaps more important, with increased juiciness and tenderness (Aguiar Fontes et al., 2008; Ribeiro et al., 2008). The same authors also found that consumers think of PDO products as a good way to promote regional development.

Nevertheless, the designation is still unknown to many beef consumers and many don’t even know if they have already tasted PDO beef (Aguiar Fontes et al., 2008).

Considering now the PDO beef sector evolution, these niche productions have steadily increased at much higher rates than undifferentiated beef productions since they were introduced in the national market (when compared with undifferentiated beef).

PDO beef production began in Portugal in 1997 and, as shown in Graphs 4.1 and 4.2, it has been consistently growing. The production value had an average annual growth rate of 5.7% between 1997 and 2005 (real prices, base 2002 (INE, 2002)), and the produced quantities an average annual growth rate of 7.7% for the same period.

Facing such values, and although PDO beef has never accounted for more than 2.5% of the heads slaughtered and approved for consumption (GPPAA, 2004-2006; IDRHa, 2001-2007, 2004), this market niche can’t be ignored. As it was discussed in the previous sections, undifferentiated beef production will no longer have much of a growth margin, and competitiveness will probably continue to be lost. If there is some room for growth, it is for the differentiated market, which, though a niche market, can represent interesting opportunities for producers.

Moreover, the PDO beef sector has been growing, in spite of high certification costs, when compared to undifferentiated beef prices (GPPAA, 2004-2006; IDRHa, 2001-2007, 2004). High certification costs contribute to higher production costs, and most likely to higher consumer prices. It thus shows some consumers are willing to pay more for quality differentiated beef, helping support through their demand this production sector.

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Other differentiated beef products in Portugal

Within the differentiated beef sector, there are also organic products. Although these products are not the main scope of this article, and data is very scarce, it is worth mentioning that the organic bovine livestock units have grown about 20% since 2005 (INE, various...
years). However, the organic beef production growth may be due not to market demand, but to EU subsidies (there was a 45% increase in the number of bovine animals under organic production systems supported by subsidies between 2004/05 and 2005/06 (IFADAP, 2007-2008)). The CAP seems therefore to have worked as a major force for organic conversion.

Organic agriculture is included in the agri-environmental measures which support specifically designed farming practices going beyond the baseline level of good farming practice, which helps to protect the environment and maintain the countryside.

Moreover, a large proportion of organic production animals are held in Portuguese regions classified as Less Favoured Areas by the EU (Banovic et al., 2007; European Commission, 2007; IFADAP, 2007-2008), where breeding conditions for intensive fattening are poor, thus helping conversion to organic systems.

However, there is no data to support that there is a consistent production increase or a demand growth.

**Constraints and perspectives for the differentiated beef sector**

One of the major weaknesses of the Portuguese PDO sector is the large number of existing PDO registrations, some of which are not even effectively making use of it. By 2005 there were nine PDO beef registrations (and three Protected Geographical Indication (PGI) registrations). Of these nine, one PDO accounts for more than 42% of the quantities produced, and other three for more 36%. This means the other six represent very small productions (Fragata et al., 2007; IDRHa, 2001-2007, 2004).

Although there has been an interesting contribution of national breeds (Banovic et al., 2007), with production translated into PDO products, some breeds’ production is fairly small, indicative of limiting factors, such as small livestock farm size, and inefficient production and commercial structures. Fragata et al. (2007) refer the diversity of resources, dynamic and capacities of the PDO management entities to differentiate and commercialize their products as one of the reasons for the low market shares. These productions are so small and uncompetitive that it is not possible to channel the majority of them into large retail operators, thus only being sold locally, and reaching only a small number of consumers. This might also contribute to the already mentioned lack of awareness of many consumers about this designation.

A study undertaken by Barreira et al. (2009), looking at PDO producers (and after performing a factor and a cluster analysis) identified three major groups. Optimistic producers (who believe PDO is the way to be in the market in order to achieve their goals), Pessimistic producers (who have more difficulties with market relations and price variability) and Flyers.” Flyers” are producers who can change their options very easily, meaning they place their productions in the differentiated market, or in the undifferentiated market, according to the best price, which is adverse to developing a successful marketing strategy.

It is important remembering there are costs associated with PDO products, such as increased production and certification costs, which sometimes may be high enough to diminish producers’ margins in such a way that it is preferable to place their products as undifferentiated. Such behaviour can lead to the unavailability of PDO products for consumers, thus impairing the labels’ success and it is incompatible with the development of a well known and properly established brand or quality sign. It is also contrary to large retailers’ commercial strategies.

At first sight a considerable number of PDO products could represent an active sector, but it is not so. For such differentiated products to achieve successful market shares, the production, commercialisation and marketing structure should be integrated into a business solution, in order to aggregate and reduce business costs, gain economies of scale in both production and marketing and thus lead to a more efficient and competitive sector.

Some Portuguese PDO beef products have already caught on this philosophy, once several producers (sometimes most of the producers in an entire region) all work under the same label (and certification schemes), channelling one single brand of quality product into the market (Banovic et al., 2007). This allows having bigger productions, and lower certification and commercialization costs, increasing producer margins (Ribeiro et al., 2008). It also favours selling their product in large retail supermarkets (Banovic et al., 2007; IDRHa, 2001-2007, 2004), which obviously leads to a much bigger number of consumers getting in touch with their products.

Hence, we can argue that other Portuguese PDO beef labels would largely benefit from some production concentration (although remembering the regional character of such productions). This concentration would help prevent the flyer behaviour, once production, certification and marketing costs would be contained due to economies of scale. The absence of Flyers, and a generally bigger production for the existing labels would only help these products to enter the large retail supermarket operations. This would be an unquestionable advantage for these products, as supermarkets are one of Portuguese consumers’ preferred food shopping locations (Gracia e Albisu (2001) report 59% of

**Graph 5 - Production shares of PDO beef producers in Portugal, 2005 (IDRHa, 2001-2007, 2004)**
food sales in Portugal being made in hypermarkets and large supermarkets).

Nevertheless, the small retail distribution channel should not be disregarded. Another study shows that 54% of respondents from a sample of Portuguese consumers still prefer the local butcher as the location to buy meat (Aguiar Fontes et al., 2008) (with the same kind of values being referred by Fragata et al. (2007)), namely because they trust them more. This trust in the butcher's advice could help overcome the lack of awareness and recognition many consumers assume to have regarding PDO labels (Aguiar Fontes et al., 2007), possibly generating enough demand to compensate for higher distribution costs associated with product dispersion in smaller retail channels.

The possibility of reaching more consumers could also allow exploring one of the PDO beef characteristics: its national origin. Portuguese origin is valued by many Portuguese consumers (Aguiar Fontes et al., 2008; Fragata et al., 2007), thus representing by itself a quality dimension many are willing to pay for.

Additionally, the same authors report that PDO beef is considered safer, more genuine and of higher quality when compared to undifferentiated beef, by the respondents considered in the study. Once many consumers now search for healthier foods, (and may have thus diminished their consumption of what they consider to be unhealthy meat) this consumer perception about PDO beef should be explored.

For those consumers who really like beef but are nevertheless concerned about their health, this could be a quality option to be considered. As the quantities these people would consume would probably be relatively small, the premium prices could be accepted due to the healthiness perception.

In order to confirm or not these market opportunities, more information about the differentiated beef sector is therefore needed, namely concerning (consumer) prices for PDO and organic beef, number of slaughtered organic bovines, among others.

Additionally, and once this analysis is included in a broader investigation about consumers’ willingness to pay for differentiated beef products, it would be relevant to know more extensively what consumers want as quality characteristics. For example, still to be explored is to what extent consumers’ have preferences for eco-sustainable production methods, which could also be a way to market PDO beef products.

Conclusions

The reported Portuguese beef sector analysis, aiming to establish the existing baseline market trends, allowed drawing some conclusions.

Although CAP reforms had as one of its main goals to promote agricultural production decisions more driven by market demand, some Portuguese agricultural sectors may not have been able to adapt to a more market driven agriculture. Some of the Portuguese policy options regarding implementation of the 2003 CAP reform led to a weakened undifferentiated beef production sector, with high subsidy dependence. Also, the country has high dependency on imports.

On the other hand, Portuguese consumers already have high meat per capita consumption, which means the Portuguese beef sector can’t expect a significant increase in demand that could work as a stimulus. This stimulus must be looked for in other alternatives.

All these factors suggest the need to establish differentiated Portuguese beef products, who could be competitive not because of their prices, but other quality characteristics. Of course, price will still has a role to play and this is why this kind of differentiated products will remain a niche market.

In fact, and in spite of all the difficulties inherent to this sector, PDO beef has had a sustained growth which was above the undifferentiated beef production growth rate for the same period.

PDO beef production can thus be an alternative, but this niche is not consolidated. It is therefore important for this sector to invest in improving its organization, by concentrating certification and marketing costs, leading to increased producer margins. Additionally, higher concentration can help PDO beef to be marketed through larger retail supermarkets, thus reaching more consumers.

Concluding, PDO beef represents a niche market, aiming at a defined group of potential consumers that are willing to pay for quality differentiated beef products. Research should help define whether there are other demanded quality characteristics still to be fulfilled, or if the ones already supplied in the market are the only ones worth investing in.

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