The Evolution of the Portuguese Processed Tomato Sector: situation and prospects on the global market

Maria de Fátima M. Lorena de OLIVEIRA*

Jel classification: Q130, L660

Abstract

The aim of this work is to analyze the world and the Portuguese market for tomato products after the 1980s. We also try to evaluate the changes occurred in the food chain. We could verify an increase in production and trade over the past two decades with consequences for the products value. In spite of its competitiveness, Portugal maintains its relative position faced with its competitors. It is possible to highlight some positive changes in the agricultural sector with the increasing importance of producers' organisations and a significant improvement of productivity. It is crucial to shift from tomato pasta production to higher value products.

Résumé

L'objectif de ce travail est d'analyser le marché mondial et portugais des produits de la tomate après les années 80. Parallèlement, on passe en revue les changements qui sont intervenus dans la chaîne alimentaire. Au cours des deux dernières décennies, la production et la commercialisation de ces produits ont augmenté, avec des conséquences sur leur valeur. Malgré sa compétitivité, le Portugal garde sa position relative face à ses concurrents. Il est utile de souligner les changements positifs qui ont été enregistrés dans le secteur agricole, liés à l'importance grandissante des organisations de producteurs et à l'amélioration de la productivité. Il est donc fondamental de passer de la production de la pâte de tomate à celle de produits de plus haute valeur.

1. Introduction

The production of tomato for processing is one the most important sectors of agriculture in Portugal and one of the most important agro-food industries. This paper examines the sector of processed tomato products in Portugal and in the world during the last three decades. Firstly, we summarise the production, consumption and trade of processed tomato products throughout the world. Secondly, we examine the production of tomato for processing and discuss the effects of the EU policy on the agricultural sector. This work is based on a descriptive analysis of data gathered from the Tomato News database, the National Intervention and Guarantee Institute (INGA) and FAOSTAT.

The changes in this sector, as well at a technological and political level, have intensified competition. According to the Global Trade Atlas Statistics, in 2003 the EU15 had an important export share in volume of tomato products (14% and 30% of the world canned and tomato paste exports respectively). During the XX century the world market was dominated by a restricted number of countries such as the EU, Turkey and the United States (USA), but inside the EU the international trade was dominated by Italy, Greece and Portugal

Over the last decades other important suppliers entered the processed tomato market and they achieved an important industrial capacity. In particular, China has become a very important producer and exporter of tomato products. In 2003, China became the largest exporter of tomato paste in quantity, with 25% of the world tomato paste exports, (Global Trade Atlas Statistics). During the 1990's, the USA became a net exporter of processed tomato products. These important changes made the EU slide from the first place to the second among the largest exporters. Despite the entry of new and strong competitors into the world market, the Portuguese position in the processing tomato sector has remained stable over last few years. Portugal is the third largest EU paste producer, with 3% of the world tomato for processed in 2002/2003, with about 10% of the EU production and 8% (average during 2001/2003) of AMITON (Mediterranean International Association of the Processing Tomato) production in quantity.

In 2000 the EU approved the changes in the domestic policy for this sector. One of the most important changes was the new format of the administration of domestic policies and the changes of the production subsidy. Under the new regulation, processors no longer receive the processor aid per unit of processed tomato and they no longer pay the minimum price to the grower. Instead, the subsidy aid is administrated by the growers' organisations. The institutional aid became an important tool for the development of the processed tomato market, but the new changes implied structural modifications of the Portuguese processing tomato sector to make it more dynamic and competitive.

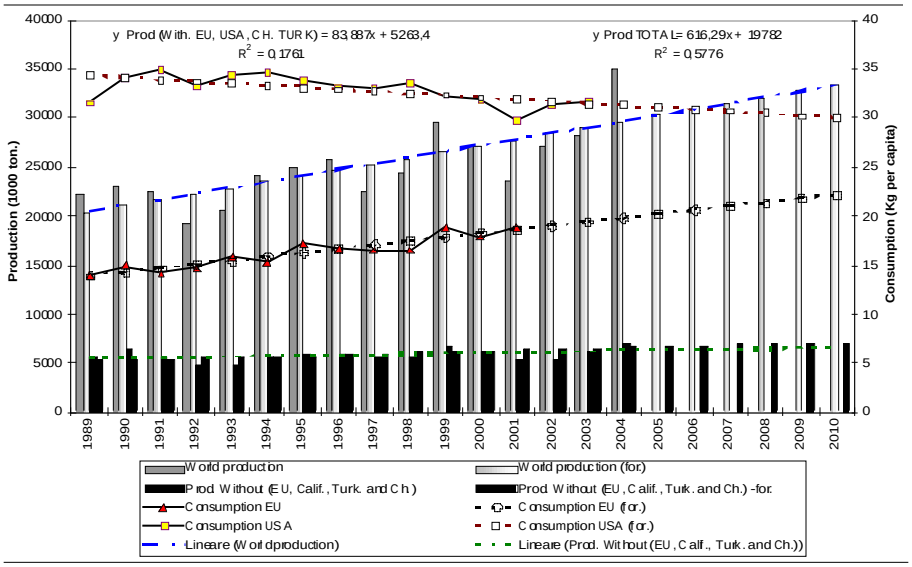
2. The World Processed Tomato Products

2.1. Production of tomato for processing

The competitiveness on this market has intensified over the past few years, not only due to the production increase of traditional suppliers, but also following the entry of new

* CERNAS/ Escola Superior Agrária, Polytechnic Institute of Coimbra. Departamento de Ciências Sociais e Humanas. Escola Superior Agraria - Coimbra - Portugal

Figure 1, *Evolution of the world global production of tomatoes for processing and the world production without EU, California, Turkey and China (1989/2004) and per capita tomato products consumption (1989/ 2001), and forecasts to 2010 (fresh tomato equivalent)*



Source: Tomato News Data (various numbers), Tomato News (October, 2003) and data from USDA/Economic Research Service

suppliers such as China. The production of fresh tomato for processing rose from 21159 thousand tonnes in 1989 to 28206 thousand tonnes in 2003 and to 35216 in 2004. This represents a growth rate of 59% and 33% if we apply the centred averages (an annual growth rate of 2.2% in centred averages). The production evolution in other countries, leaving aside the main producers (EU, USA - California, Turkey and China), and though we observe stability in their production, a significant production increase in Tunisia (a growth rate of about 82% during 1989 and 2004), Brazil, Australia, India and South Africa should not be disregarded. The representative average of processing tomato production without the biggest producers (EU, USA - California, Turkey and China) is approximately 24% of the worldwide production between 1989 and 2004 (Figure 1).

The detailed analyses of the two major groups, the EU and California State (USA) show the convergence between the European and the Californian tomato production due to a higher European growth rate with an annual growth rate of 2.3% as against 1% of the Californian production (centred average rate). Figure 2 illustrates the evolution of these two groups and of the most important suppliers.

Many countries are concerned about the evolution of tomato products from China. In the last few years (between 1995 and 2004), the growth rate of China's tomato for processing equaled 84% (an annual growth rate of about 23% with centred average). According to the World Horticultural Report (March, 2004) this increase was not only in quantity but also in quality. The Tomato News (April, 2002) reveals the development recorded both in the production area and in the processing capacity, accompanied by investments in the evaporating capacity with a strong energy-efficiency relation that allowed improvements in colour and in general quality. The most important tomato product in China is the tomato paste and the fresh tomato paste ratio used is 6.0 (6.0 kilos of fresh tomatoes for 1 kilo of paste). The major market for the Chinese paste is the EU.

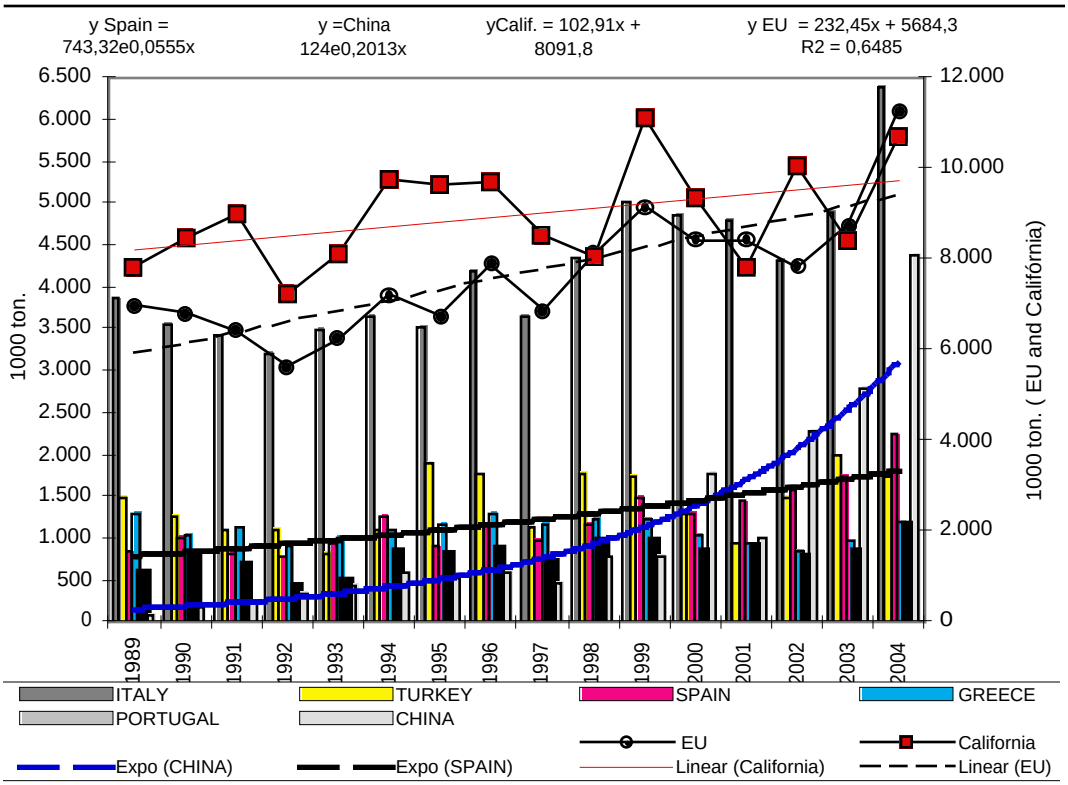
Turkey is a traditional and important tomato producer and tomato products exporter with an annual growth rate of 1.9% during the periods 1989 and 2004, but the growth rate in between is almost null and if we consider the 1995-2004 period, the growth rate is negative (-28%). This behaviour shows a cyclical movement. In the early 1990s Turkey was considered an important and strong competitor for the EU tomato producers and a significant development of Turkey's tomato sector was expected, but in the past few years Turkey's production has been similar to that of the early 1990s. The weight of the Turkish production on the EU production shows a wide variation.

Within the EU it is possible to highlight the development of the tomato industry in Italy. In 2003, Italy accounted for about 19% of the world production and 58% of the EU production in quantity. This value remained stable and the relative position of Italy in the world has not changed between 1989 and 2004 (for.). Spain is another important EU producer, and its relative position has become more and more important in the last few years. Spain represents 18% of the EU production. Portugal represents about 3% and 10% of the world and the European production, respectively.

Figure 3 illustrates the relation between the growth rate and the weight in the EU production. Italy, in spite of its highest production, displays an annual growth rate of about 3%. Portugal has an annual growth rate of 2% and a weigh of 10% in the EU production. Spain is the country with the higher annual growth rate, not only at the EU level but also at the world level. The Spanish paste production is centred in the Estremadura valley, in South-western Spain with the use of a highly advanced technology in processing, harvesting and production of raw tomatoes. During 1986 and 1989 the average producing was 643 thousand tonnes of raw tomatoes; after this period the Spanish processing tomato industry has started producing at a frantic rate as we can see in Figure 2. Between 2002 and 2004 the average production was 1.863 thousand tonnes which represents 20% of the EU production.

The establishment of new factories in Estremadura and

Figure 2. *EU and EUA production of tomato for processing (raw tomatoes), 1989 - 2004.*



Source: Tomato News Data (various numbers)

Andalusia has increased the production capacity from 1.5 million tonnes to 1.7 million tonnes (Tomato News, p.43, July/August, 2004). Furthermore, the development of new facilities and cooperative systems can induce even a higher level of production. The exponential behaviour of the Spanish production worries the national and the European authorities because, in the current market situation, this explosive growth is not justified and such a behaviour can have a strong negative impact on the European subsidies. According to the Tomato News (p, 43, July-August, 2004), the exceptional development of the Spanish processing objectives will lead to a serious clash with the European regulation for subsidy estimates. Despite the serious problems this situation can induce, national authorities have not put forward a concrete proposal yet to solve the current situation.

2.2. Processed tomato consumption

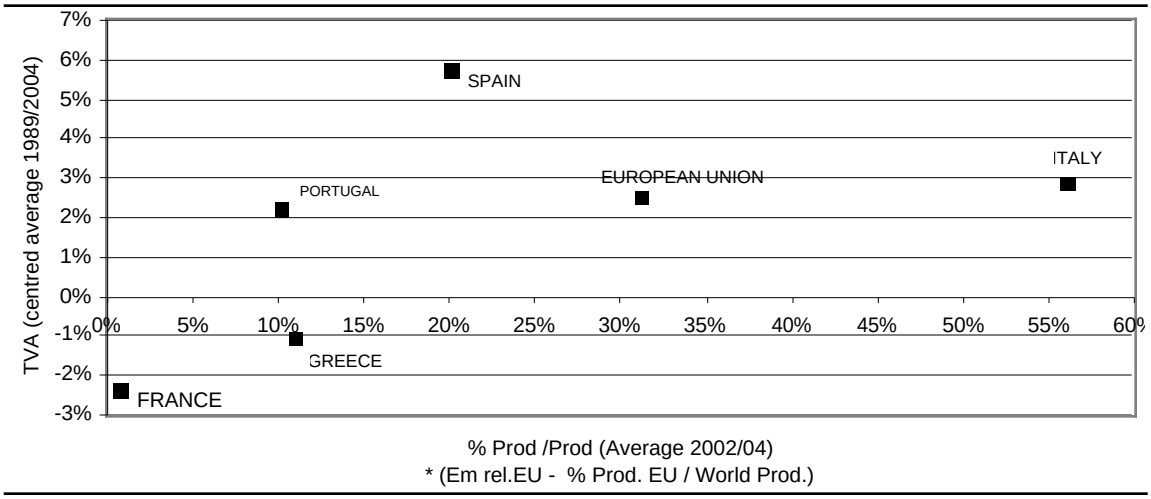
The United States of America (USA) and Western Europe are the most important tomato products consumers. Over the period from 1989/90 to 2001/02, the apparent European Union total consumption rose by 65% and the per capita consumption increased by 36%, resulting in an annual growth rate of 3.8% and 2.3%, respectively. The per capita consumption rose from 13.88 kg to 18,93 kg per capita (fresh tomato equivalent). The evolution of the apparent consumption is not the same for all products categories. Sauces and Ketchup exhibit significant growth rates as well as the "Other products" (an increase of about 84% for the "Sauces and Ketchup" and of 77% for the "Other products" between 1989/90 and 2001/02), while the apparent consumption of peeled tomatoes slightly decreases in spite of the stability of the last few years (a decline from 2.,96 to 2.07 kg per capita between 1995 and 2002). The per capita consumption of "Sauces and Ketchup" rose from 7.17 to 11.83 kg and the consumption of the "Other products" increased from the 2.73 to 5.02 kg per capita in fresh tomato equivalent (Tomato News, October, 2003).

The general trend is the increase in high-value products and the decrease in the consumption of first-stage transformation products. Figure 6 shows that the consumption of second-stage transformation products (the "other products") has generally increased since 1995. The apparent drop in 1989/1992 was due to a category change in one part of the passata products to pasta tomatoes.

The period from 1995 to 2001 is characterized by the rise in the apparent consumption of new products, made of tomato pulp or diced tomato with the addition of various ingredient. The development of the new packing systems (aseptic bags of 220 kg) increased the development of diced tomato products. The trend of tomato consumption is slowly increasing. The increase is likely to result from the continued expansion in food-service demand, the search for new taste products, especially for Italian and Mexican-style dishes and the search for saving time. The increase may also be partially due to the rising public awareness of the health benefits of processed tomato products (the effects of carotenoids in disease prevention).

The economic development of Eastern Europe and the growth of the fast food market will increase the consumption of healthy sauces and tomato sauces in these countries. The development of organic tomato for processing will be important for consumers who are very sensitive to environmental problems and health issues. Organic tomatoes for processing can attract new consumers with a strong economic power and they represent a new opportunity for this market. Indeed, the current trend is the expansion of the

Figure 3. *Relation between the annual growth rate and the relative weight in EU Production.*



Source: Tomato News Data (various numbers)

global market for organic food.

An analysis of the apparent consumption in the EU countries over a long period of time indicates two distinct groups of countries. Care should be taken when drawing conclusions because the data come from different sources. Despite the source issue, the two groups exist unquestionably. In the first group comprising Italy, Germany, U.K., France and Spain, consumption is much higher than 200.000 tonnes. In the second group, which includes the other European countries i.e. Belgium-Lux, Denmark, Netherlands, Sweden, Finland, Austria, Ireland and Portugal, consumption does not exceed 200.000 tonnes. The per capita consumption is not significantly different in several countries. This means that the lower consumption can be ascribed to the lower population density.

In the first group we find the three largest EU tomato producers. Although Portugal is one of the most important EU tomato producers, the Portuguese consumption of tomato products is low, about 10.30 kg per capita in 2000/01 as against the European average of 14.57 kg per capita. Processed tomato products are not an important component of the Portuguese cuisine.

To complete our analysis it is important to take into account the US consumption. The US per capita consumption during 1980/2003 totalled 31 kg per capita (average values). Between 1980/82 and 2001/03 it rose by 12%, but in the past ten years (between 1991/93 and 2001/03, with centred average) the tomato products demand has declined by about 10% and the average per capita consumption was 33 kg.

The evolution of the apparent consumption rate in the EU and in the USA and the world production growth rate suggest a higher production growth rate than the consumption growth rate. The exceptional production growth is not followed by consumption and this will lead to serious problems on the market. Figure 1 presents an approximate simulation until 2010 based on the world consumption and production (through a SPSS software). If we consider the present parameters, the exceptional production of Spain and China (figure 2) is not justified by the consumption growth.

2.3. Trade

According to the FAO database, since 1980 the world imports of tomato paste have risen by 200% and exports have risen by 182% in quantity, while imports have risen in value by 166% and exports by 180 % in current values (centred average). Between 1990/92 and 2001/2003 the tomato paste imports increased by 39% and exports by 49% in quantity. In current values the world imports increased by 4% and exports increased by 21% (centred average). Figure 4 shows the evolution of the tomato paste trade in volume and value (in this work the values are expressed in US $ dollars in current values as indicated in the FAO Database).

Although the processed tomato products exchange has increased in quantity, the value of the tomato paste trade is declining as global production and trade increase. The behaviour of countries such as Spain and China with a rise in tomato processing may further flood the market and continue to reduce prices as we can see in Figure 5. Many small developed and developing countries are concerned about the slide in paste prices.

China has become the largest tomato paste exporter and has great responsibility for the increase in exports. Moreover, its exports share is expected to increase significantly in the next decade. Foreign investment is playing a critical role in developing the processing sector."Companies such as Danone, Cadbury, Cargill, Hormel, Perdue, Nestle, Kraft, Pillsbury, Tricon Global, Chaeron Pokphand, Jollibee, and others have all heavily invested in China's market. FIEs (foreign-invested enterprises) and are generally larger scale than the Chinese enterprise, as well as technologically more advanced" (GAIN Report, Number: CH2809, 2002).

Overall, as stated before, the leading tomato producers are also the major consumers of processed tomato. In this way the tomato products exchange takes places mainly in the EU area. Until 1986 the major importing countries were Germany, the United Kingdom and the Netherlands with 72% of the imports in quantity (in 2002 these countries represented 50% of the imports). Italy has become an import-

ing country in the past few years (with 22% of the imports in quantity). The increase in the Italian imports is due to the low-cost paste imports from China. "Most of the imports from third countries, and especially from China, are done under a temporary (inward processing) import regime. This means that they are generally imported to Italy at zero duty. After processing or packing they are then re-exported to other third countries, mainly to North Africa. Temporary imports of tomato paste from China amounted to 68% in volume in 2003 creating difficulties for the Italian production on the export market" (GAIN Report Number: IT4011, 2004).

The globalisation issue can be addressed in the light of the agreement on tomato products signed by Italian companies and China. According to the GAIN Report Number (IT0020, 2000), the "Italian companies have secured export sales of technology and processing machinery to China in exchange for agreeing to purchase contracts for Chinese tomato production". Even with the world competition (the world slide price), China expected increases in exports.

Although the world production and trade have increased, exports from Spain have increased by 173% in quantity and by 25% in value between 1989/91 and 1992/02. Spain's imports have also increased. The behaviour of this country is also difficult to understand and despite the EU penalty (the EU imposes a penalty of 14.9%, which will be subtracted from the subsidy in 2004/05 according to the World Horticultural Trade U.S. Export Opportunities, June, 2004), processors expect a significant increase in both paste production and exports. The slide in price affected these countries as well as the rest of the world as we can observe in Figure 5. The behavoiur of Spain is very important to Portugal because it is not only an important competitor with the same agricultural conditions but it may contribute to the Portuguese development in the agricultural sector as demonstrated in the next section.

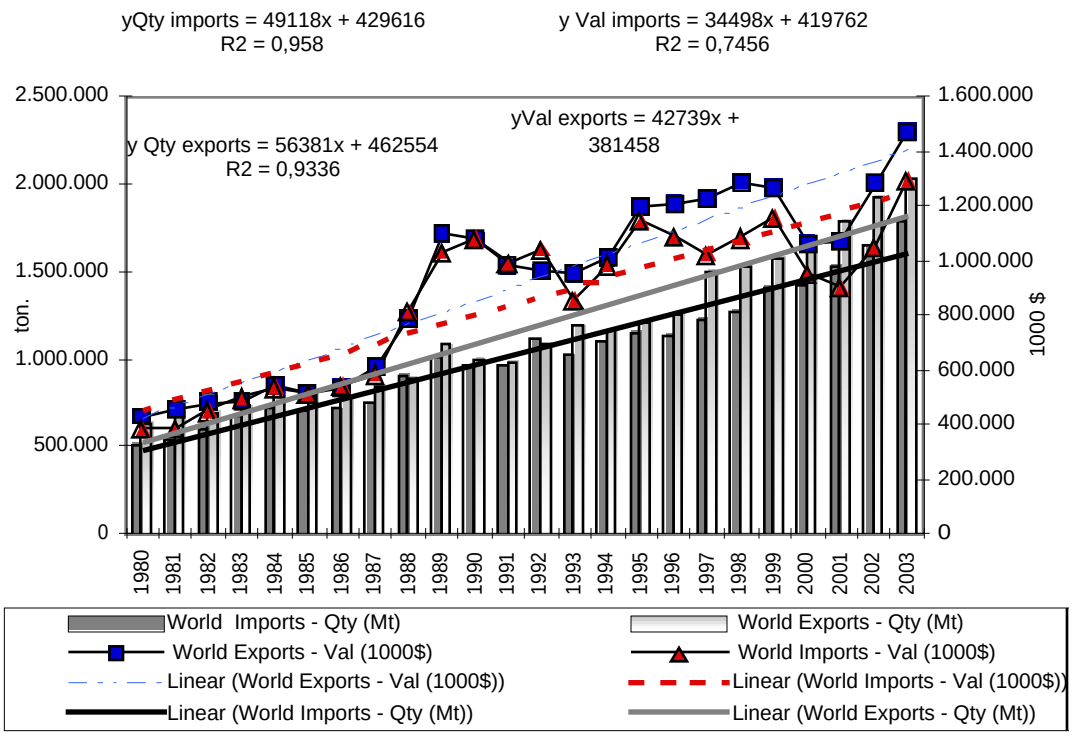
3. Portuguese tomato production for processing.

The Portuguese tomato for processed production is centred in Ribatejo-Oeste and Alentejo and it plays a crucial role for Portuguese agriculture. The planted acreage and the production have changed significantly between 1996 and 2003. We can see in Figure 6 a cycle variation, the increase in raw tomato production and the improvement of raw tomato yields since 1997. It is worth noting that the surface has increased between 1994 and 1998. The EU CAP (Common Agricultural Policy) reform of the tomato sector was implemented in 1997 and during this period Portugal's production quota for tomato paste rose from 832,945 tonnes in 1996 to 994,592 tonnes in 1997/98, but it declined to 884,592 in 1998/99. This quota change may influence the growers' behaviour and can be important for the surface change (Figure 6).

The behaviour in the two major production zones is not similar. In Alentejo we observe a higher decrease in the production surface than in Ribatejo, and the decreasing production surface is more visible during 1986-1995. The relation between the productivity in the two regions remained stable until 1994. At present the productivity in Ribatejo - Oeste is on the increase whereas it is decreasing in Altentejo. After 1998, the productivity relation between the two zones reached the same balance as before. Despite these changes in productivity, the area of Ribatejo always shows higher production levels (Figure 6). The forecasts about the surface and yield were made by applying a SPSS software.

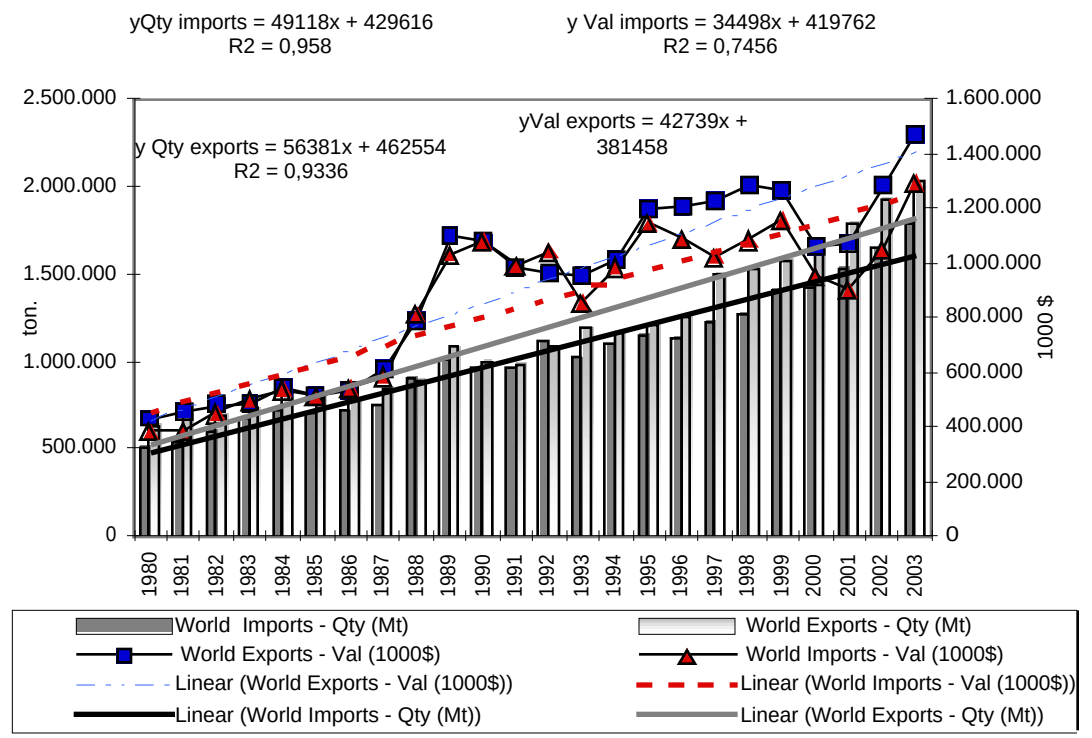
Under the EU reform plan, the quota will be recalculated every three years, based on the produc-

Figure 4. *Word Trade of tomato paste in quantity (tons.) and in value (1000 US $).*



Source: FAOSTAT Database

Figure 5. *Tomato paste export and import prices in the World and in Europe (1000 US $/tonne).*



Source: FAOSTAT Database

tion for that period. Growers and processors have demonstrated their capacity to produce an average of 950,000 tonnes to 1,000,000 tonnes of tomato and they are together pressuring the EU Commission into reviewing their production quota.

Since 1999 improvements have been recorded both in terms of production yields and in terms of production stability. These improvements of raw tomato production have helped the industrial capacity to develop, have allowed the industry to restructure and have enhanced production planning. The introduction of irrigation in raw tomatoes cultivation was an innovation in Portuguese tomato for processing. This improvement allows higher raw tomato yields, but the new technology needs to be applied carefully not to reduce the Portuguese tomato quality, which has an excellent reputation all over the world. Other changes in the production structure have taken place in the last few years. Until a few years ago, most of the processing tomatoes were produced on small farms (5-10 ha) which limited the use of mechanical harvesting. This farm size now represents 10% of the total production and has been replaced by modern farms of twenty or more hectares, which allocate one-third of their surface area to tomato production using the most modern technology. (Gain Report Number: PO4010, 2004). According to the INGA data, the surface by growers rose from 6.4 ha in 1999 to 14.4 ha in 2003 (a 126% increase).

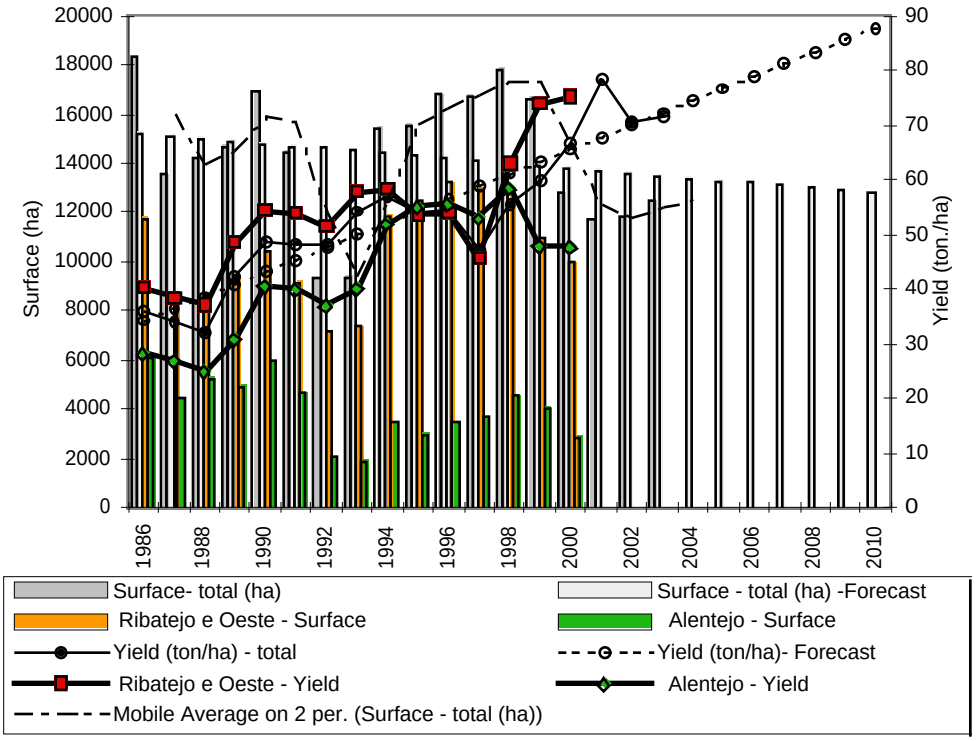
The number of growers decreased by 62% between 1999 and 2003, from 2620 tomato growers to 868 at an exponential rate as we can see in Figure 8. The increased surface by producer and the fall in the number of growers suggest a real increase in the farm size, the abandonment of small farms and the abandonment of production in boundary areas as well. The replacement of small farms by the modern farms with more than 15 ha makes it possible to apply modern technologies and irrigation as described earlier.

Between 1986 and 2003, the surface declined (a decrease of 32.06% resulting in an annual growth rate of 1.89% in "centred average"), but there are wide differences between time periods. Over the considered period, from 1986 to 1997, the surface declined by 8.54% but, between 1997 and 2003, the surface dropped by 25.71% at an annual growth rate of -8.4,6%. Tomato productivity has increased since 1986 (a rise by 100.47% resulting in an annual growth rate of 6.11% in "centred averages"), and two time periods are important: before 1997 and after 1997. Before 1997 the tomato production yield has increased by 32.04% (an annual growth rate of 4.41% in centred average), after 1997 the yield has increased by 51.83%, nearly 8% per year (Source : INGA)

The alternative crops for tomato production are cereals, sunflower and other horticultural crops such as melon and watermelon. Cereals and oilseeds are the first sectors in the EU reform plan with a strong decline in the internal subsidy program. Consequently, these crops have become relatively less profitable whereas cereal and sunflower producers have been encouraged to shift their production to processing tomato on larger-size farms (10 to 90 ha). On the other hand melon and watermelon growers are faced with a quickly saturated market and the price crisis and therefore, they prefer to shift their production to tomato for processing.

Processing tomatoes are under the CAP agenda (Common Agricultural Policy). Since 1978, the CAP has introduced the EU domestic subsidy program. This Common Market Organization (CMO) included direct payments to processors with the aim of paying the minimum price for growers to cover the difference between the EU cost production of raw tomato and the cost of non-EU countries.

Figure 6. *Planted acreage in hectares, raw tomato production yield in Portugal (1986-2003 and fore - casts to 2010) and by agrarian region (1986 -2000)*



Source: INGA.

The subsidy rate was adjusted according to the dry weight content of raw tomatoes.

This aid had a strong impact on the development of the sector and contributed to the production increase and to the spread of technologies. Since the demand increase did not follow the same rhythm as the production increase, this sector developed surplus production. In order to limit the production levels, the CAP has introduced the Threshold regime which limits the maximum quantity for the aid. This regime was temporally replaced in 1991/92 by the quota system that limited the aid to a fixed quantity per processing factory. In the marketing year 1992/93 the Threshold regime was reintroduced. The differences between these two regimes lie in the market management and in the individual responsibility of the factory for the production level.

The evolution of the aid and the minimum price is displayed in Figure 8. The share of the minimum price covered by the subsidy averaged about 30%. The minimum price and the aid to processors were gradually reduced, but at different rates (between 1978 and 2000 the growth rate of the aid to processors declined by 54% as against 12% for the minimum price).

Under the CAP reform agenda, in July 1994, the European Commission (COM(94) 360 final - 27 July 1994) proposed reinforcing the positive features of the market organisation. In November 2000 the EU approved the changes in the CMO for fruit and vegetables for processing. The main modifications pertain to the administration of the COM policies in the processed tomato sector. Following these modifications, the production subsidy is provided directly to the growers via producer organisations (PO's) rather than to the processors. The scheme is based on contracts between recognised PO's and processors approved by the Member States and the aid is given to PO's according to the quantity of raw material delivered to processors under the contracts.

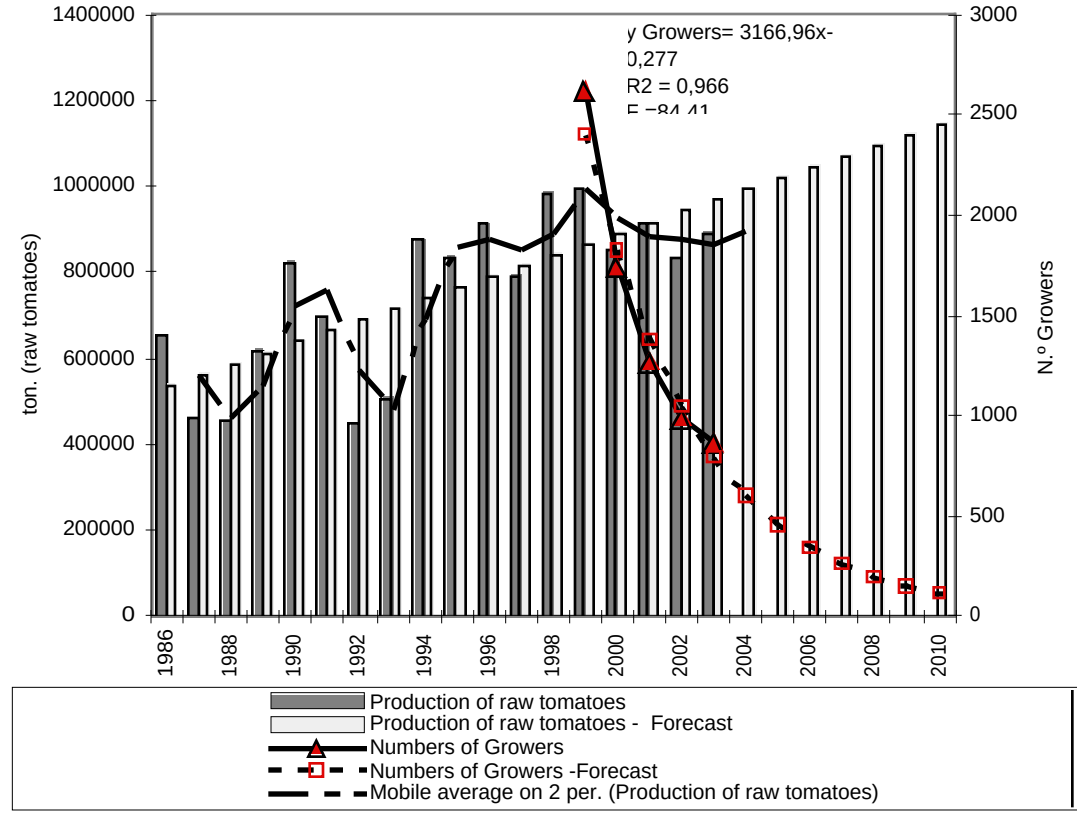
Under this regime, the growers received a price deriving from the free negotiation of the PO's with the processor at international market prices and aid as complement title. This regime is more flexible as there are neither restrictions on the specific type and quantity of each type of processed tomato product (except that it has to be a type of product included in the previous quota regime) nor restrictions concerning where the raw material is delivered and where processing takes place.

Under the new regime, the quota quantity and the entitlement quota have been eliminated and the Community and national processing thresholds have been introduced. Only if the Community processing threshold is overrun, the aid fixed for the product in question is reduced in all the Member States in which the corresponding threshold has been overrun. However, if there is one or more Member States that do not use their total national thresholds, their unused aid will be transferred, uniformly, to the Member States that overrun theirs. Under this new threshold regime for processed tomato products, Portugal is allowed to produce up to 1,050, 000 tonnes of fresh tomato equivalent and the aid price is set at 34.5 Euro/ton.

Portuguese Producers have been adapting promptly to the new regime but there have been some problems concerning the management tools the producer organisations have to handle under the new regime. The most difficult adjustment observed was making the producers understand the market rules necessary to negotiate prices with the processor at international market levels and with the "paper work" related to the new regime.

There are 35 Producer Organisations (PO's) in 2003/04 marketing year and 7 are responsible for 50% of the total production. This fragmentation is a problem since small or-

Figure 7. *Production (tonnes) and growers (number) of raw tomato for processing, 1986-2003 and forecasts to 2010.*



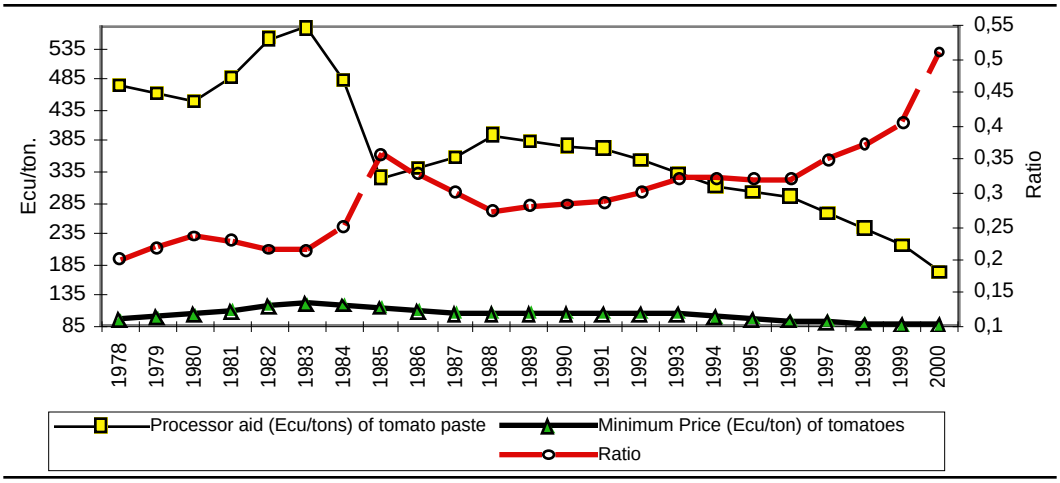
Source: INGA

ganisations don't have the management tools to deal with the regime. The number of Producer Organisations has dropped from 47 (27.04 Growers by PO) in 2001/02 to 35 (24.80 Growers by PO) in 2003/04 marketing year, and will continue to decrease and smaller organisations will merge with larger ones, since small organisations will not have the necessary tools to face the challenges of the sector. The responsible for this sector and the INGA agrees on the concentration of the small organisation as a way to reduce the fragility of this sector and to generate PO's of a sufficient size to negotiate (Pinto and Fragata, 2002).

Table 1 shows the relation between the place where tomatoes are produced and the place where processing is carried out. Under the new regime the exchange of raw tomatoes between the EU countries is possible. Given this flexibility, 31000 tonnes produced in 2002/03 by Portuguese PO's (3% of the total production) and processed in Spain rose to 51840 tonnes (5% of the total production) in 2002/03. The interchange was in both ways but in lower quantity. The Spanish PO's delivered to Portuguese processors 22150 tonnes in 2001/02 and rose to 26000 tonnes in 2002/03 (2% of total tomatoes processed in Portugal) (Source: INGA). In 2001/02, Spanish processors seek tomatoes only from the Alentejo region and in 2002/03 they seek raw tomatoes from Ribatejo (30%) and Alentejo (70%).

Despite the improvements of the commercial structures and of tomato crop monitoring, processors are worried about the tomato quality, because there is a growing tendency to the decrease in tomato Brix degree, with serious consequences on the industrial efficiency. Processors discuss the need to introduce new improvements in the criteria to set the tomato price, such as, the colour quality,

Figure 8. Evolution of minimum price, processors aid in ECU/ton. and the relation between the two variables, 1978-2000.



Source: Daniel et al. (p. 23, 2001)

amino acid and lycopene degree (Pinto and Fragata, 2002). Another challenge for the Portuguese tomato sector is represented by the new market demands. The main trends in food consumption are healthy and safe food.

Table 1. *Distribution of contracts by PO zone*

			Producer organizations							
			Ribatejo		Alentejo		Spain		TOTAL	
		Year	tons	%	tons	%	tons	%	tons	%
Processors	Ribatejo	2002/03	765.458	94%	24.630	3%	26.000	3%	816.088	77%
		2001/02	762.979	89%	70.113	8%	22.150	3%	855.242	81%
	Alentejo	2002/03	107.633	58%	78.750	42%	0		186.383	18%
		2001/02	94.010	56%	75.197	44%	0		169.207	16%
	Spain	2002/03	15.600	30%	36.240	70%	-		51.840	5%
		2001/02	0	0%	31.000	100%	-		31.000	3%
	TOTAL	2002/03	888.691	84%	139.620	13%	26.000	2%	1.054.311	100%
		2001/02	856.989	81%	176.310	17%	22.150	2%	1.055.449	100%

Source: INGA

The main export market for Portuguese tomato is the EU market followed by Japan. The Japanese market for the Portuguese tomato products is growing and it is the third largest market for organic food after the EU and the US (Organic Monitor press release, 7/11/2001). These factors are important for the development of production and processing of organic tomatoes, but such a development need investments in crop production and in the processing sector. These worries are already in the processors' mind not only for organic products but also for the applicability of Global Crop Protection. The processors responsible call the attention to the need for two separate production lines for processing tomato coming from Global Crop Protection. This need creates industrial management difficulties (Pinto and Fragata, 2002).

Despite the growing market, the increase in production levels and the improvements of producer organisations, the future of the Portuguese tomato crop for processing systems can be put at risk, if the process of single farm payments independent of the production (the subsidies will be paid independently of the production volume) is applied on COM for fruit and vegetables for processing (Avillez et al., p 303, 2004). In fact, the absence of specific payments dependent on the quantity produced will reduce the competitiveness of this sector. The future of this system will be possible if there is an increase in tomato price and a reduction of land value in the production costs. According to Avillez et al. (2004), the increasing price desire is of about 20-30%. The same authors think that this price increase might only be reached if the industry is restructured with the aim to produce higher value added processed products (Avillez et al., p. 304, 2004)

4. Conclusion

This paper describes a sector which is undergoing structural changes at both national and international level. The increasing production along with the increasing consumption but at different rates have induced a price decline. The entry of new and strong competitors into the market have modified the competitiveness patterns.

The sectoral COM reform has posed a great challenge and induced structural changes for growers and processors. The declining number of growers doesn't mean a decrease in competitiveness. It has induced an increase in productivity and allowed to apply the new crop technology. However more structural changes are needed as the improvement of producer organisations. Policy changes are very important and policy makers have to consider the importance of the sector not only in the framework of EU agriculture but also of EU food industry. As to other sectors, the CAP reforms may be very problematic given the strong international competitiveness. To face this new reality and to enhance competitiveness, it is therefore crucial for Portugal to shift from tomato paste production to higher value products

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