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SUMMARY – This work aims to present the main results of an overview study of the nut sector in Portugal. Within the group of horticultural products, different kinds of nuts have been receiving EC financial supports for several years. The objective was the achievement of a technical recovery and the improvement of commercial organisations. In spite of this help, the sector does not show a clear signal of dynamism. In this study, information has been taken from data series on production, exports and imports and also about empirical approaches on market mechanisms. These instruments have helped to better identify problems that seem to be responsible for the lack of performance of the Portuguese nut sector in international markets.

Key words: Nut sector, Portugal, marketing mechanisms, organisation deficiencies.

RESUME *– "Développements récents du secteur des fruits secs au Portugal". Cet article a pour objectif de présenter les principaux résultats d'une étude analysant le secteur des fruits secs au Portugal. Parmi le groupe des produits horticoles, les différentes sortes de fruits secs ont reçu un soutien financier de la CE plusieurs années. L'objectif était une récupération technique et l'amélioration des organisations commerciales. Malgré ce soutien, le secteur ne montre pas de signes clairs de dynamisme. Dans cette étude on a utilisé l'information de séries de données sur la production, les exportations et les importations et aussi sur des approches empiriques concernant les mécanismes du marché. Ces instruments ont aidé à mieux identifier les problèmes responsables de l'absence de performances du secteur portugais des fruits secs sur les marchés internationaux.*

Mots-clés *: Secteur des fruits secs, Portugal, mécanisme de commercialisation, insuffisance d'organisation.*

Introduction

The special interest shown by the European Union in supporting and modernising the nut sector is not recent. In 1989, by means of the Regulation 789/89, the Common Market Organisation of fruits and vegetables (EC Regulation 1035/72) was extended to include nuts. It tried to improve actions for producer-organisations involved in marketing circuits and thereby to re-establish a competitive role of Europe in international markets.

Specific measures have been taken trying to solve the continuous difficulties that European production of hard shell fruit encounters. Among them, some actions try to increase consumption of such products and others provide financial support for those producer organisations concentrating mainly on nut production and able to improve quality. Specific grants are provided to achieve warehouse stocks in appropriate conditions in order to face deficiencies in the market and for supply control.

In Portugal, there has been almost no use of these various forms of European support, in spite of the fact that in 1990, the Decree-Law 244/90 made possible the application of these regulations to the nut sector. The pervading situation of this sector, as is the case with most of the horticultural products, has aroused contradictory arguments. Some believe there is a great potential based on the soil quality and the climate conditions, whilst others, taking into account the existing poor commercial organisation, hold that development will not be achieved.

This study presents a discussion on the recent developments within the nut sector. One of the main constraints is the weak dissemination of information in Portugal. The study will deal with production, consumption and foreign trade. In the analysis of external trade, for which the data shows higher statistical coherence levels, some indicators which are able to define the competitive capabilities of disagregated production are presented. It will take into consideration the following products: almonds, walnuts, hazelnuts, chestnuts and pine nuts.

To complete the quantitative description, an evaluation of the recently undertaken measures to develop marketing mechanisms (place of origin, producer-organisations or the goals of associations) is provided. A parallel study of an enterprise devoted to the production and marketing of hazelnuts is presented. This case study should help to draw conclusions on problems and entrepreneurial suggestions; also to find adequate solutions and strategic interests for the sector.

Trends in production

Consumption Patterns

Over history the Mediterranean countries have been traditional consumers of fruits although they have not had agricultural policies specially developed for their cultivation. The plantation of trees has not usually been undertaken to reach appropriate commercial gains. Thus, it is not surprising that rural communities in these countries have difficulties to adapt to new and more competitive production forms. Even today, in these regions, it is not easy to estimate the real value of their fruit production since mostly it is used for home consumption and for selling in local markets.

The keen competition felt by producers in international markets has encouraged most of them to direct their efforts to intensive types of farming on irrigated land with selected varieties which excel in size, appearance and flavour to traditional ones.

High profits resulting from this type of farming cannot be compared with margins resulting from mixed cultivation (with olive or fig trees, as is so commonly seen in the Algarve, for example) on soils with poor nutrients and in sloping lands which makes careful cropping quite difficult.

Owing to their rich content of proteins, minerals and carbohydrates, nuts are used to prepare food products of a very healthy nature, often appearing in recipes for balanced dietary schemes. Also, they are taken as a basic commodity for transformation processes (salted, crushed or ground and mixed into various culinary preparations) which gives them the possibility to increase their economic value and consequently of the productive areas (Herrero, 1991). This could be considered one of the reasons why the trends in nut consumption in the European market show, since the beginning of the 1980, an increase which seems to originate from changes in the nutritional choices by consumers who give preference to vegetable protein diets.

In the case of the Portuguese population, and as we see in Fig. 1, the nut consumption increase has taken place mostly in the past five years. Plausible explanation for the latter may have been based on an improvement of household income or on the implementation of better distribution circuits in the highly populated regions.

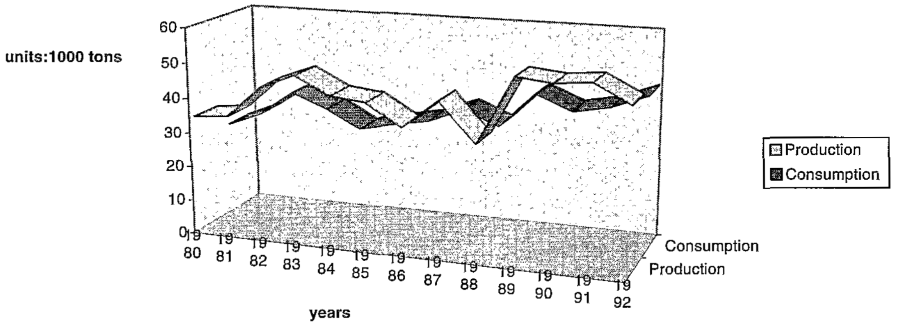


Fig. 1. Production and consumption of nuts (source: INE, 1994).

Production and Profit

Total national nuts production and internal consumption have shown a very similar growth pattern which results in small changes for either exports and imports of this kind of products. Nevertheless, the development trends of these fruits taken separately show some dissimilarities. Table 1 reveals the yield growth of almonds, hazelnuts, chestnuts and walnuts.

Almonds are a typical nut in the Algarve region but it is not only cultivated in this region, but also in a small microclimate area in the Alto Douro. In both cases, almond trees are grown in non-irrigated, rock-laden, poor land, giving very low yields. In these circumstances of traditional farming, there are many regional varieties: 'Parada', 'Verdeal', 'Gama', 'Boa Casta', 'José Dias', 'Bonita de São Brás', 'Duro Italiano', 'Romeira', among others (Pereira, 1995).

Recently, taking advantage of the favourable conditions of the Guadiana basin, more intensive methods with a mechanised cultivation have been established in new orchards with imported cultivars ('Ferragnès', 'Ferraduel', 'Ferrastar' and 'Cristomorto').

The quantity of almonds produced during the last ten years is very irregular according to the data presented in Table 1. These irregularities are essentially due to the climatic conditions that affect mostly traditional non-irrigated crops. Thus, the striking negative variation between the first and the last year, of the period under observation, does not have a great significance. Of greater significance, though, it is the shrinkage in the average production of the last two five years periods which, added to the fixed yields of the cultivated areas, is a sign of the ageing of the existing orchards.

Table 1. Production amounts of different nuts[†] (Source: INE, Estatísticas Agricolas, 1986-1995)

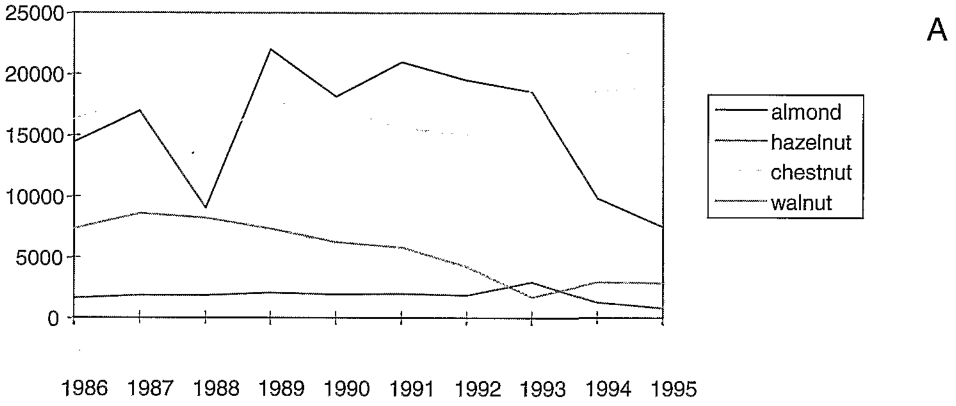
	Almond	Hazelnut	Chestnut	Walnut	Total/year
1986	14450	1611	16325	7342	39728
1987	17000	1807	18000	8554	45361
1988	9000	1800	14500	8200	33500
1989	21960	2080	17640	7300	48980
1990	18190	1900	17120	6200	43410
1991	20963	2000	15600	5800	44363
1992	19530	1800	15000	4200	40530
1993	18580	2927	18800	1720	42027
1994	9819	1234	18580	2927	32560
1995	7500	842	19016	2864	30222
total	156992	18001	170511	55107	400681
%variation	-48.1%	-47.7%	16.5%	-61.0%	-23.9%

[†]Unit: metric tons

Figure 2 illustrates the production of each of these products as well as their correspondent cultivated areas.

Hazelnuts and walnuts are cultivated in Portugal in very small amounts. The plantations of walnuts are spread throughout the whole country whilst hazelnut plantations are largely found in the region of Viseu. In both cases the varieties are very diverse and of meagre quality. The most common walnut varieties are: 'Hartley', 'Serr', 'Amigo', 'Rego', 'Arco' and also 'Franquette'; with regard to hazelnuts there are 'Grada', 'Fertiel de Coutard', 'Ennis', 'Butler' and 'Negreta'.

Since the 1980s there has been some enthusiasm in setting up new plantations of walnut and hazelnut orchards. The areas with best yield are those of the Central Coastal strip, Ribatejo and the Alentejo, for walnut trees and the district of Viseu for hazelnut trees. It should be mentioned, further, that a re-sizing of properties dedicated to plantations of walnut trees has taken place. This cannot be said of hazelnut orchards, however, which have been kept at small sizes.



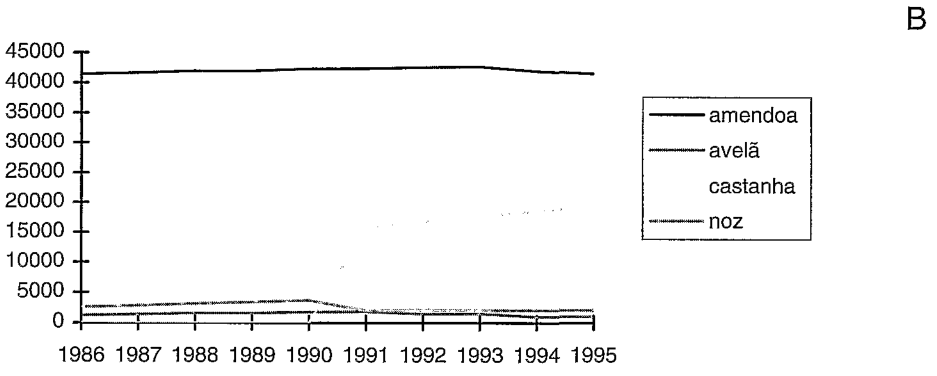


Fig. 2. Produced quantities of nuts (A) and their corresponding production areas (B).

The chestnut is a fruit which, for centuries, has been part of the traditional diet of the Portuguese rural population. Probably due to this fact, the product is of a more attractive appearance and it is becoming of greater interest in the foreign market. Chestnuts are, at the moment, the hard-shell fruit of larger production. In fact, it should be taken into consideration that the values tabulated by the INE and here quoted, might well fall very short of the amounts produce in reality which are around an approximate amount of between 20,000 and 30,000 metric tons. In Portugal chestnut plantations are found mostly in the Beira Alta and Trás-os Montes, but there are also some cultivation in the Beira Litoral and in the Minho region.

Foreign trade

General Trends

The weight of nuts in the Portuguese external trade balance has had, for decades, an important significance. In this paper attention is concentrated on almonds, walnuts, hazelnuts and chestnuts.

Chestnuts have been exported at differing processing stages and it is not possible to draw conclusions on the true effect exerted by selection processes or peeling in order to conquest better commercial quotas in international markets. During the last five years their exports have shown a downward trend of about 17% and parallel reductions have also occurred for hazelnuts and walnuts exports, with consequent losses of markets for un-shelled walnuts. Growth in exports of almonds and of shelled walnuts has taken place (Table 2).

Table 2. Export amounts and export values of different nuts (Source: INE, Estatisticas do Comércio Externo e Estatisticas do Comércio Internacional, 1986-1995)

Products	1991	1992	1993	1994	1995	% variation
Export amounts†						
Almond 1	1035	1161	1220	1036	418	-59.6
Almond 2	359	383	667	1254	917	155.4
Hazelnut 1	1.4	1.7	2.2	1.8	2.3	64.3
Hazelnut 2	7.7	5.3	1.1	0.2	1.4	-81.8
Chestnut	7657	6996	389	6806	7051	-7.9
Walnut 1	2.5	3.4	4.5	5.9	6.1	144.0
Walnut 2	61	48	91	23	18	-70.5
Pine nut	3959	8113	932	2875	2442	-38.3
Pistachio	0.4	0.7	1.6	11.2	15.5	3775.0
Cashew	0.7	5	5.5	2.1	2.1	200.0
Total	13083.7	16717.1	3313.9	12018.6	10873.4	-16.9
Export values††						
Almond 1	488	538	718	375	369	-24.4
Almond 2	36	43	84	149	183	408.3
Hazelnut 1	1.5	2.7	2.9	1.8	2.6	73.2
Hazelnut 2	1.9	5.2	0.7	0.2	1.1	-42.1
Chestnut	1261	1822	781	1731	1788	41.8
Walnut 1	5	9	12	13	12	140.0
Walnut 2	25	30	55	19	13	-48.0
Pine nut	2048	2009	627	778	714	-65.1
Pistachio	0.4	1.2	2.9	5.3	9.6	2300.0
Cashew	1.4	1.2	5.5	6.1	2.1	50.0
Total	3868.2	4461.3	2289	3078.4	3094.4	-20.0

†Unit: metric tons
††Unit: 106 PTE

The main buyers of Portuguese nuts are groups with low requirement levels for quality or quantity. For hazelnut and walnut products, the loss of competitiveness in the international marketplace shows that they are tagged as deficient and inconsistent production processes. Our commercial partners of PALOP, namely Angola, are considered our best clients.

On the other hand, the European countries are our best clients for almonds and chestnuts, as they present a better quality-price ratio. More especially, Belgium and Holland, Spain and Germany are the main importers of almonds and Brazil, Spain, France, Italy and Venezuela the main buyers of chestnuts (IMAIAA, 1994).

In profit terms, in 1993 (Frutas, Legumes e Flores, 1994), the revenues derived from hazelnut exports were nearly insignificant. Almonds and chestnuts represented, on the contrary, a total income from exports of 1,583.4 (10^6) PTE, nearly 22% of the 7,001.0 (10^6) PTE exported by the fruit sector in the season 1993/1994 (calculations extracted from the Statistic of International Commerce include citrus fruits and melons).

The imported quantities of nuts (Table 3) show an increase greater than 15.4% in the past five years; a situation resulting, not only from the small increase in consumption but also from the low yields in some ageing orchards. The main countries supplying Portugal are Spain, USA and Germany for almonds; France, USA and Chile for walnuts; Spain, France and Italy for chestnuts; and imports of hazelnuts are very small indeed.

Table 3. Import amounts and import values of different nuts (Source: INE, Estatisticas do Comércio Externo e Estatitiscas do Comércio Internacional, 1986-1995)

Products	1991	1992	1993	1994	1995	% variation
Import amounts†						
Almond 1	561	853	796	1143	828	47.6
Almond 2	1	17	112	113	3.6	260.0
Hazelnut 1	109	71	90	118	166	52.3
Hazelnut 2	161	121	131	165	94	-41.6
Chestnut	23	12	400	156	8	-65.2
Walnut 1	214	235	254	471	340	58.9
Walnut 2	1858	2552	1716	2411	1739	-6.4
Pine nut	24	44	83	154	63	162.5
Pistachio	893	1241	1414	1277	1281	43.4
Cashew	508	540	575	616	499	-1.8
Total	4352	5686	5571	6624	5021.6	15.4
Import values††						
Almond 1	299	476	636	983	630	110.7
Almond 2	0.1	9.5	62	68	0.6	500.0
Hazelnut 1	54	30	47	74	84	55.6
Hazelnut 2	43	34	6	61	29	-32.6
Chestnut	7	2.1	96	24	2	-71.4
Walnut 1	171	211	268	413	305	78.4
Walnut 2	594	738	603	729	588	-1.0
Pine nut	39	84	79	127	59	51.3
Pistachio	471	707	754	602	655	39.1
Cashew	377	326	391	421	313	-17.0
Total	2055.1	2617.6	2942	3502	2665.6	29.7

†Units: metric tons
††Units: 10^6 PTE

Market structure

Regulations

Horticultural Portuguese exports have a major role in regional growth processes and they can have a decisive influence on producers and the balance of trade. In order to do so they have to fulfil conditions which are favourable which means implementing the most recent production and packaging techniques, to be aware of the most appropriate transport and marketing methods for their products or to ease the way into the market place (Alimentacion, 1991).

Nuts are particularly suited for exports, because of their localised production in soils of specific type and also a fairly concentrated consumption in time and space. Institutional arrangements trying to improve the subsistence of the sector and to invigorate market mechanisms, especially for exports, have a particularly important role to play in regional development and employment.

As a result of the agreements discussed at the Uruguay Round, import tariffs have been reduced and trade for European horticultural products might become difficult. In the case of nuts it is particularly crucial since it clearly shows how these agreements have aggravated the marketing situation of the European Mediterranean countries who have serious competition from Turkey, taking into account its large quantities exported at a low price for figs and hazelnuts, and from USA, considering the excellent quality and power of its trade in the almond and walnut sectors.

Lowering controls may affect differently the countries involved in the exchanges. It is really the nature of the trade balance which can best clarify the biggest or the smallest difficulties that each country has to overcome. In the Portuguese case, it has been a clear importer of fresh and processed horticultural products during the recent decade. Therefore, the opening up of the international marketplace serves also to open the floodgates for production to enter this country at highly competitive prices. It will put competitive pressure on producers that will obviously affect the structure of their business.

All those firms that are not able to keep up with the requirements to market low-priced production or all those that have not taken the path of upgrading product quality may well find serious difficulties.

Exports in the horticultural sector continue to grow, with an increasing contribution from the European member-countries which have joined our clientele. The trade intensification with the European countries (66% in 1993 and 68% in 1994, for exports) might indicate that only a small fraction of the Portuguese production will be affected by the outlined restrictions.

For Portugal, the horticultural OCM (Common Markets Organisation) has been the fundamental restructuring mechanism for horticultural products including the nut sector. The required compliance of a regulation on essential standards which will place constraints upon product quality or, on the organisation of producers within the different links of the chain, will only be beneficial for the better management of producer organizations and trade. The OCM regulation (EC, inter-institutional Dossier No. 95/024 of 14 October 1996), begins by defining all the products embraced therein, setting out quality standards to be met for fresh produce with the exception of those with a rapid delivery time (i.e. maybe within the area of its cultivation), or which are directed to processing or packaging places.

A key element of the regulation is the constitution of producer associations and the interrelationships among professionals in a way which envisages financial support. There are provisions that, in the case of regions in which the level of organisation is very weak, the Member States can be authorised to lend financial aid on a successively adding basis to the main pool of useable capital. Also to increase this aid, as long as, those countries have less than 15% of the fruit and vegetable production sold by the envisaged types of organisation. Even though the participation in the total horticultural production may be higher (above 15%), then the Community might eventually cover these national costs.

For the group of horticultural products, further comparisons of prices are made between home and foreign production upon which compensatory subsidies can be granted. There is, at the moment, a system which without doubt needs more control and a greater degree of administration (which has very often been too easy-going and inefficient). This requirement would create the entry of products from outside the Community at more competitive prices.

However, the fact that the new legislation will provide possibilities to control the quality of products commercialised within the European Union, may change the present trends of the international market. There will be greater difficulties in the entry of successfully competitive produce due to higher quality-demands and much more rigid standards. In the mid term, countries like Portugal, where production methods and skills are still traditional, should be able to take advantage of the aid to organise their marketing systems and to update their productive methods. Only then such countries can trade advantageously in international markets offering at least for Mediterranean products the "deserved" competitive advantage.

It is highly arguable whether Portugal, as sketched in the above conclusion, corrects its general terms and then shall face up properly the competitive specific circumstances or whether should prematurely become transformed into a number of broken down sectors. The dried-fruit sector in Portugal is a source of concern, because inspite the institutional attempts to strength the sector, during past years, results are still not clear and the recovery of the productive processes and marketing mechanisms have hardly taken place.

In Portugal, the Regulation 789/89 of the EU, which is an extension to dried fruits of the aims already mentioned in the OCM (Common Organization of Markets) for fruits and vegetables (Reg. CEE No. 1035/72), only became applicable in 1990 (Decree-Law No. 244/90). It was then possible to complete for applications of dried-fruits specific aid, particularly those actions which were intended to improve and develop the quality as well as to give new life to the marketing of the products. Despite the unarguable interest shown by the EU, the awakening of the producers business individuals and their organisations was late to be useful. Until 1992, no assembly of producers was recognised to take advantage of any measure of support for hard-shell fruits. Also noteworthy, it was a slight rise of dried fruits imports accompanied by problems of getting them into the market place (Frutos e Legumes, 1992). Strangely, for chestnuts, which have gone through periods of success and there are some establishments with active producers, it is not included in the group of products planned for benefits to which we refer.

Beyond the planned measures embracing horticultural produce, the new OCM foresees for nuts a financial aid share of up to 50% of the operations dealing with technical progress and the enhancement of its consumption. It means the promotion of the products quality by for example, marketing studies, search of new uses, preparation of new processing methods, dissemination of marketing advice to the various operators of the sector, as well as to the organisations or taking part in festivals and other shows, exhibitions, competitions and the like.

Production Supports

Almond. Only 7 projects were approved until the end of 1993, within the range covered by the different EU regulatory mechanisms to stimulate trade structures for dried fruits (Reg. CEE-355/77, Reg. CEE-866/90). These projects aimed at the addition and improvement of equipment in such a way that after achieving the first stage of change, would increase, industrial supplies. The projects aimed at the second stage of change, using the almond kernels as the raw material, also made a very important impact on the flow of production, since this product reached high prices in the national and international markets.

Hazelnut. In this case, almost all produce has been marketed in the large urban centres of Lisbon and Porto, marketing rings restricted almost to a local scale, and sold by traditional retailers. In fact, the large majority of suppliers do not deal at national level.

The country cannot take advantage of a sufficiently well organised commercial structure which can establish competitive prices, such as that of Turkey, the main worldwide producer of hazelnuts. The demand for national produce can increase significantly whenever detrimental weather conditions take place in countries of high production levels, as it occurred in 1993.

Chestnut. Chestnuts are very sensitive to weather conditions even if there is ground water. The weather, in some parts of the north, is suitable for the cultivation of chestnut trees, and the nuts do not always ripen to a large enough size or quality which allows them to export or to be consumed, freshly picked, in the home market. Industrial supplies present an important assurance for marketing flows which tend to improve with the introduction of processing plants. Up to 1993, only three projects which involved plans for the preparation and processing of chestnuts were approved.

Walnut. There has been some growth in the export quantities of unshelled walnuts, but not even this has contributed to any improvement in this sector. Only one project for marketing this product has been approved.

For the development and application of these plans, Portugal has a structure heavily based upon state organisms, but markedly fragile on organisations and associations of private interest (Fig. 3).

Products
Almonds Hazelnuts Pistachios Carobs

↓

Minimal Amounts for Portugal (Quotas)		
Producer	Minimal number of associates	Minimal production volume (t)
Almonds	10	150
Hazelnuts	10	50
Walnuts	10	50

↑

Support institutions and their functions			
Direcções Regionais de Agricultura	Direcção Geral Mercados Agrícolas e Industria Agro Alimentar	Instituições Nacionais de Investimento Agrícola	IFADAP Instituição Financeira de Apoio ao Desenvolvimento da Agricultura e das Pescas
- Divulgation of supports - Reception of requests - Control on elegibility conditions - Control on the applied subsidies	- Coordination of the support system - Acceptance of the associative groups - Approves improvement planning proposals	- Responsible for the payment of subsidies and financial help to improve the productive or commercial structures	- Responsible for the payment of complementary subsidies and financial help to improve the productive or commercial structures of associative groups

Fig. 3. Support system to the nut sector in Portugal (Source: IMAIAA, 1994).

Producer organizations

Up to 1996 the number of farmers or contractors who took advantage of the special programmes for EU aid, either for promotion or for quality and commercial skills improvement was extremely small after, at least, four years of disseminating information. The number of marketing structures dealing with nuts is very small, according to a recent estimate through local agricultural authorities responsible for handling information on associations registered in each region.

The number of associations set up specifically with the intention of producing and marketing nuts are listed in Table 4. An attempt to further investigate the number of associations as well as the amount of products gathered by each of them and other characteristics has not reached any success. However, COFRAL, Cooperativa dos fruticultores do Alentejo has been quite helpful and it can be regarded as a recent case of relative success (Pereira, 1995).

Table 4. Number of associations set up specifically with the intention of producing and marketing nuts

Direcções Regionais de Agricultura	Co-operatives and Associations related to Nuts production
Direcções Regionais de Agricul-tura de *Entre-Douro e Minho*	No co-operatives or associations related to the sector have been reported
Direcções Regionais de Agricultura de *Trás - os - Montes e Alto Douro*	Associação dos Produtores de Castanhedo
	Associação Portuguesa dos produtores de Avelã
	Associação dos Produtores de Amêndoa do Alto - Douro
	Associação Comercial e Industrial de Lamego e Vale do Douro
	Associação Interprofissional para os produtos Agroalimentares de Trás-os-Montes
Direcções Regionais de Agricultura da *Beira Litoral*	Cooperativa Agrícola de Mangualde (avelã)
Direcções Regionais de Agricultura do *Ribatejo e Oeste*	Associação Nacional dos Frutos Secos e Passados
Direcções Regionais de Agricultura do *Alentejo*	Cooperativa de Fruticultores do Alentejo
	Associação Portuguesa de Produtores de Frutos Secos
Direcções Regionais de Agricultura do *Algarve*	Agrupamento de Alfarroba e Amêndoa, C.R.L.
Direcções Regionais de Agricultura da *Beira Interior*	(No answer to the inquery has been supplied by the Regional Directorate)

Firm strategies: A case study

We present the firm, Frusantos Lda., as an example to show purposes and objectives of the majority of handlers in the sector of fresh and dried fruits and vegetables, particularly of nuts.

The enterprise is small, it employs 8 permanent employees and 25 seasonal workers, gathering chestnuts from about 1,500 farmers, more or less grouped in the neighbourhood, for marketing purposes. The handler does not have any pre-arranged agreements with the farmers either with respect sales or quality.

It is not surprising that the uncertain weather conditions have a very marked influence on the amounts of chestnuts available, not allowing the farmers to guarantee the required supply stability. In poor years, the firm has to sell its production to factories located in different regions. This alternative clearly brings some losses without any aid in the vertical co-ordination. Handlers are at great commercial disadvantage when sales of fresh products have to be made as row materials to factories at great distances with high increases in transport costs. This firm does not deal exclusively with only one product. Its chestnut business accounts for a quarter of its total volume of sales, and it also deals with seed-potatoes and other fruits. An approximate maximum weight of 1,500 metric tons of chestnuts is handled. The produce is calibrated, selected, packaged in packets of 1 to 25 kg and sold in the domestic and the foreign markets.

The firm makes no use of advertising campaigns or publicity and only very rarely it finds customers during visits to national or international fairs. According to the owner, sales are carried out by "...the natural way - word of mouth by customers recommending the firm to others...".

The national clientele is made up of three distinct types: (i) about ten wholesalers in Lisbon, Porto and Coimbra; (ii) some hyper-markets who take deliveries directly; and (iii) by a large amount of small distributors who take the trouble to buy directly from the warehouse door and transport to traditional shops all over the country.

The owner gives the impression of being satisfied with its exports. Apart from some discouraging years it has been possible to make progress in exports to countries like Brazil, Canada, USA, France and Italy.

Plans for enlarging its productive capacity seem more directed towards innovation technology rather than towards the areas of internal organisation and markets stimulation. The owner is having plans for a future partnership with one of his Italian clients with the idea of introducing further development for processing chestnuts and changing the firm technological innovation skills.

The reasons for its limited participation in EU programmes is because of the excessive red tape surrounding applications, usually a limiting factor of small firms. In fact large sums have to be lent, which are really more to the advantage of large firms, those who are able to show more substantial assets. The owner of the firm believes that a horizontally co-ordinated organisation would be possible with more than ten firms that exist in the country which have the same goals, similar activities and interests. This would bring them clear advantages to stimulate the nut sector. Nevertheless, there are not interests whatsoever, by any of the other firms, in a short-term plan of an association of this kind.

Conclusions

After having finished writing this overview it should be interesting to point out a few but clearly identified problems, strictly related to price determinants or quality deficiencies, in order to be able to build up optimistic statements. Contrarily, the analysis of the nut sector in Portugal indicates deep structural deficiencies which are extensive to other parts of the horticultural complex.

Considering the different kinds of nuts, it seems that chestnuts do present a better performance in the national or international markets of fresh products. This product, when used as a raw material, seems to be interesting for the recently created processing firms. The fact that this product development is not accompanied by European financial supports confirms the opinion that the development of certain traditional "filières" do require other aid instruments that are more urgent than supports for investment.

Portuguese nut producers face at the same time three difficulties that surpass their resolution capabilities:

(i) Hard international trade conditions created by other countries able to supply at lower prices or with better qualities.

(ii) Ageing of the orchards and the need of substitution with new ones. This is a natural condition and the new trade liberalisation imposes, more than ever, the development of non classical commercial mechanisms to find the respective international market quota for each product. Producers are aware of these difficulties and they fear to participate in risky investments. In order to partially solve this lack of confidence, the Ministry of Agriculture does need to inform producers about the more recent knowledge related to new qualities or new and more productive methods. However, rural extension has disappeared in Portugal more than ten years ago. Besides, is there a research institute where adequate quality of nuts for the specific soils is being developed? We found none.

(iii) The last problem is the most serious one. There is a great inability of Portuguese producers to organise or create vertical or horizontal marketing mechanisms. After many unfortunate experiences of cooperativisme during the mid 1970s, most of the entrepreneurs still do believe that co-ordination of interests is the same as cooperativism and this a signal of unsuccess. Convincing producers to join associations is an adventure, even if they already know that their choice for individual circuits impedes them to reach the circuits of the big distribution, growing at a surprisingly high speed in Portugal.

We shall finish this article wishing that a recovery of the Portuguese nuts sector could emerge. Either because of new producers' attitudes or because different schemes developed by the Ministry of Agriculture, or because a reinforcement of our traditional Mediterranean diet and a certain taste "for the rural" could still bring many people to the traditional and local markets.

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