

Quality of Life and Management of Living Resources

Key Action n° 5

Sustainable agriculture, fisheries and forestry, and integrated development of rural areas including mountain areas

DOLPHINS

Contract QLK5-2000-00593

**The production chain
of typical Italian pork specialties:
considerations on the case of the
DOP pork products from Parma
(extended version)**

Base of the discussion in WP2

Arfini Filippo and Michele Donati

*Università di Parma
Istituto di Economia Agraria e Forestale
Italia*

October 2001

1. THE PRODUCTION OF PORK SPECIALTIES

The national picture

Italy is characterized by a heavy consumption of pork and this accounts for the presence of a large number of breeders throughout the country, particularly in the north where the main meat-packing plants are located, famous for their traditional products. Almost 80% of the production of pork specialties is located in northern Italy, mainly in the regions of Emilia-Romagna, Veneto, Piemonte and Lombardia; while the south contributes to this production in a measure of only about 5%. The high concentration of production is motivated by the presence of large numbers of products that are safeguarded by the Community DOP and IGP marks of quality, which testifies to its special bond with the zones of pork specialty production in this country.

The meat-packing industry specialized in pork products has always had to cope with the tensions of a business subject to recurrent cyclical crises. This can be seen from table 1.1, where the rising trend of production is interrupted by periods which show a decline in production levels. On the basis of statistics supplied by the government ISTAT service on the production of pork products, the latest upward trend began in 1997, the year in which the first consequences of the drop in consumption of beef were felt, and it continued, though at lower levels, through subsequent years, sustained by an increase in the demand for typical products. Furthermore, it is possible to note how growth slows during the period considered, passing to +0.5% in the year 2000, due to a reduction in the national level of butchering (-0.5%). In this connection, the increase obtained in a period of shorter supply of meat by the butchers can be attributed to an increase in the average weight of animals slaughtered, index of a stronger orientation of Italian meat packers toward higher quality pork products.

Table 1.1 : Production and consumption in the period 1992-2000 in Italy (in thousands of tons)

Indicators	1992	1993	1994	1995	1996	1997	1998	1999	2000
Production	995	1.026	1.049	1.031	1.088	1.093	1.071	1.120	1.125
Imports	719	709	665	689	740	722	924	873	850
Exports	46	56	68	73	85	91	83	96	102
Apparent consumption	1.668	1.679	1.646	1.647	1.743	1.724	1.912	1.897	1.873
Per capita consumption (Kg)	29	29	29	28	30	30	33	33	33
Part of demand covered by domestic production (%)	60	61	64	63	62	63	56	59	60

Source: ISTAT

In the face of a growing trend of pork production, consumption, after the peak period of 1998, seems to have stabilized, in terms of availability of products on the market, at a somewhat higher level than prior to 1998, indicating that the substitution effect seen during the brief period generated by the BSE scare has been reabsorbed. In the long term, the behavior of the consumers thus seems to follow dynamics that have little or nothing to do with the economic situation, continuing a substantially stable growth trend in the consumption of pork products. Per capita consumption went from 29 kg of pork purchased on the market in 1992 to about 33 kg in 2000. The favorable trend in the consumption of these products rewards domestic production, considering the high proportion of consumption covered by domestic production, in the vicinity of 60% of the total availability of pork on the domestic market (apparent consumption). One of the elements contributing to this result, observable particularly from 1999 on, was certainly the increase in the market share of typical salami products.

As regards the production of pork specialties, tab. 1.2 illustrates production performance through the seven year period considered, which shows a steady growth trend with an overall positive variation with respect to 1993 of almost 17%. Within the list of products that make up the range of Italian pork products, the sector of hams, both raw and cooked, has a role of primary importance covering almost 48% of the total. Cooked hams, in particular, hold a relatively larger share, however, with a variation of 33%, the strongest growth in the reference period; this increase can be placed in relation to the significant investments in advertising made in recent years, to acquaint the consumers with the quality of the products and to enhance recognition of the brands. Salami consumption also increased, but to a lesser extent than the other categories of pork specialties. The lack of an organ of coordination, safeguard and promotion, such as a Consortium for the salami products of local tradition – sole exceptions, Varzi Salami, Piacentino Salami and Brianza Salami – and the banalization of the industrial product have contributed to a substantially static situation in this sector. This is confirmed by the fact that its share of production out of the total of pork specialties is just 4%, exceeded even by cooked products (mortadella and wurstel) that account for as much as 20% of the total.

Table 1.2 : Production of pork specialties in Italy (in thousands of tons)

Product	1993	1994	1995	1996	1997	1998	1999	Proportion % (1999)	Variation % (1999/1993)
Raw prosciutto ham	207,5	205,3	206,7	217,0	223,0	240,9	238,5	21,7	15,0
Cooked ham	217,8	226,3	243,0	288,5	288,0	290,9	291,5	26,5	33,8
Salami	102,0	101,0	101,0	105,3	101,0	103,5	106,1	9,7	4,0
Mortadella	205,0	211,0	217,3	210,1	201,8	216,5	219,8	20,0	7,2
Other	208,0	211,0	210,0	204,0	237,1	236,6	243,4	22,1	17,0
Total pork specialties	940,3	954,6	978,0	1.058,9	1.062,0	1.088,4	1.099,3	100	16,9

Source: Ismea on ASSICA data

The competitiveness of the Italian pork market develops at the level of differentiation of the products, based on the typical uniqueness of the traditional local products. The productions of typical pork products safeguarded with the Community recognition of quality represented by the DOP/IGP label include about twenty products, largely located in the north of Italy where the meat-packing industry has older roots. Table 1.3 summarizes the typical products recognized in Italy.

Table 1.3 : Regional breakdown by zones of pork specialties with DOP/IGP classification

Emilia Romagna	9	Tuscany	2	Veneto	4
Prosciutto di Parma	DOP	Prosciutto Toscano	DOP	Prosciutto Veneto Berico-Euganeo	DOP
Prosciutto di Modena	DOP	Mortadella di Bologna	IGP	Mortadella di Bologna	IGP
Culatello di Zibello	DOP			Cotechino di Modena	IGP
Coppa Piacentina	DOP	Trentino Alto Adige	2	Zampone di Modena	IGP
Pancetta Piacentina	DOP	Speck dell'Alto Adige	IGP		
Salame Piacentino	DOP	Mortadella di Bologna	IGP	Piemonte	1
Mortadella di Bologna	IGP			Mortadella di Bologna	IGP
Cotechino di Modena	IGP	Umbria	1		
Zampone di Modena	IGP	Prosciutto di Norcia	IGP	Friuli Venezia Giulia	1
				Prosciutto di San Daniele	DOP
Lombardia	5	Val d'Aosta	2		
Salame di Varzi	DOP	Jambon de Bosses	DOP	Calabria	3
Salame Brianza	DOP	Lard d'Anard	DOP	Salsiccia di Calabria	DOP
Mortadella di Bologna	IGP			Capocollo di Calabria	DOP
Cotechino di Modena	IGP	Marche	2	Pancetta di Calabria	DOP
Zampone di Modena	IGP	Prosciutto di Carpegna	DOP		
		Mortadella di Bologna	IGP	Lazio	1
				Mortadella di Bologna	IGP

Source: Nomisma on Mipaf data

The Region with the strongest vocation for the production of typical pork products is Emilia Romagna with as many as 9 products already recognized, not to mention other products currently awaiting recognition by the Community (Felino Salami and Coppa di Parma for example). Some of these products are limited to a very small area, as in the case of Prosciutto di Parma and Culatello di Zibello, while others are scattered over a vast territory covering several regions, as in the case of Mortadella di Bologna that is produced in as many as 8 Regions. In this sense, some doubts could arise as to the real "typical" quality of certain products, because there is less of a bond between the product and the territory in terms of those distinctive aspects ascribable to a certain (farm-style) culture of meat packing. To say that Mortadella di Bologna represents the tradition of producers on the Austrian border in the same way that it represents those on the outskirts of Rome implies that the original geographical dimensions of the product have been overcome. However, if in the content of the typical characteristics of a product aspects of local production are allowed to enter the product as alternatives, it is possible to extend the attribute, and thus to justify it, for many products that have lost their original geographical borders for market reasons. Our aim is not so much to analyze the level of the typical content of different products, but rather to study the bonds that a typical product has in the context of a local economy.

The local production system

In Emilia Romagna, the food processing industry is one of the most important sectors in the regional manufacturing sector. In 1994 the sector registered an added value of about 5,350 billion lire, corresponding to over 14% of the income produced by industry as a whole. In particular, the turnover for the meat-packing industry presented in tab. 1.4 indicates, with its almost 7,500 billion lire turnover, amounting to a share of 26% of the total turnover produced, the importance of the sector in the context of the regional food processing industry, where it is second only to pasta and baked goods (32,3% of the total). The data on employment levels (tab. 1.5) are further evidence of the importance of the meat-packing industry in the regional economy. The workers employed in the meat-packing industry are 27% of the total employed in food processing in Emilia Romagna.

Table 1.4 : Turnover of the food processing industry in Emilia Romagna (1996)

Sectors	Piacenza	Parma	Reggio Emilia	Modena	Bologna	Ferrara	Forli	Ravenna	Total
Meat	330	1.670	1.053	2.852	1.209	107	88	174	7.482
Fish	3	78	0	0	18	2	9	1	111
Canned vegetables	49	422	13	24	145	12	42	287	995
Oil and fats	21	37	80	3	3	0	110	1.164	1.420
Dairy products	224	2.670	576	116	478	7	51	69	4.190
Mills	41	383	89	175	431	139	77	74	1.408
Meat products	204	218	554	342	47	7	776	421	2.570
Pasta and baked goods	57	5.627	297	327	1.719	120	873	283	9.304
Beverages	95	72	236	311	303	10	99	184	1.311
Food Industry	1.025	11.178	2.897	4.151	4.353	405	2.126	2.656	28.791

Source: Nomisma on Finance Ministry, Unioncamere and Istat data

In detail, the province of Parma, confirming the long-standing vocation of its economy to the meat-packing business, employs almost 3,700 people in this sector, second only to the province of Modena. In the sphere of the local food processing industry, the meat sector has the role of catalyzing the workforce by occupying a third of the workers employed in the local agricultural industry, preceded only by the sector of various food products which includes the pasta industry. The turnover of pasta and baked goods made in Parma exceeds that of meat, with sales of 5,627 billion, which explains this difference.

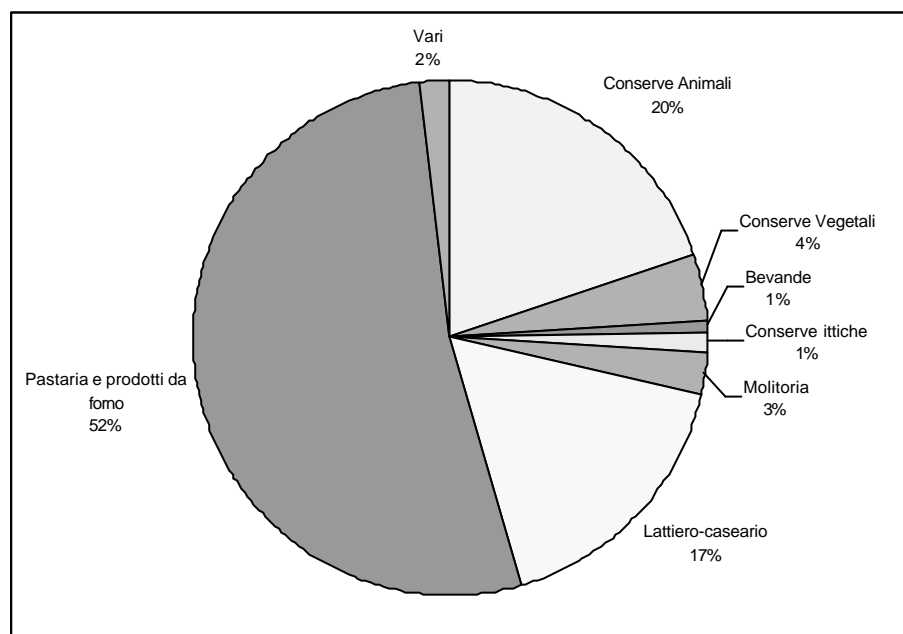
Table 1.5 : Employment in the food processing industry in Emilia Romagna (1996)

Zone	Meats	Canned vegetables	Dairy products	Grains	Meat products	Other food products	Beve-rages	Total	Share % prov.meats/to t.meats
Piacenza	528	288	448	68	209	1.104	163	2.808	4,1
Parma	3.685	317	2.568	310	268	4.397	338	11.883	28,4
Reggio E.	1.969	29	1.227	176	164	1.325	380	5.270	15,2
Modena	4.186	296	1.113	217	174	2.578	656	9.220	32,3
Bologna	843	282	738	129	143	4.350	579	7.064	6,5
Forli	972	181	187	102	493	1.665	185	3.785	7,5
Ferrara	269	247	79	151	8	1.358	159	2.271	2,1
Ravenna	298	916	119	196	208	1.550	763	4.050	2,3
Rimini	225	45	139	165	47	1.529	180	2.330	1,7
Total	12.975	2.601	6.618	1.514	1.714	19.856	3.403	48.681	100

Source: Nomisma on Cerved data

At the regional level, the food processing industry of Parma is by far the most important as the part of turnover of this province, amounting to 11,000 billion, covers almost 40% of the total turnover, followed at a distance by Bologna with about 15%. From a more careful analysis of the data in table 1.4, the province of Parma can be seen as being characterized by a strong connotation of production specialization in three sectors: meat, dairy products and baked goods. The presence of two large companies – one to all effects a multinational company (Parmalat) -, of which one produces pasta (Barilla) and the other dairy products explains in part this marked concentration of the production.

Fig. 1.1 : Breakdown of turnover in the food processing industry in Parma (1998)



Source: UPI

Furthermore, the production of Parmigiano-Reggiano cheese and the presence of a large number of pork specialties in the area are favorable conditions for the specialization of the zone. In particular, the meat-packing industry of Parma can boast the presence of a number of pork products in its local traditions, such as: in the first place, Prosciutto di Parma that is the most important product in the economy of the sector with a market share at the national level for raw ham of 42%; then there are such other products as Salami di Felino, Culatello di Zibello, Coppa di Parma; among the cooked pork products there is the Cooked Shoulder of St. Secondo and industrial cooked ham products.

According to information supplied by the Industrial Association of Parma, the sector of meat-packing and butchering in the province of Parma, as reported in data referring to 1998, was worth 2,300 billion and employed about 3,900 people, of whom 2,179 worked for companies with more than ten employees. In the sector there are about 565 companies with a definite prevalence of small companies, with fewer than ten employees. This is the case of a full 80% of the total number of companies operating in the sector of meat packing, and they employ 37% of the workforce in the sector. Alongside the large number of companies with fewer than ten employees, there are 113 companies, or only 20% of the total, but with 63% of the employees. This figure illustrates the presence in the sector of two types of enterprise, very different from one another: one in which the small business aspect prevails in the production activity; the other in which the company is often structured in the form of a corporation. For this latter type of company it is interesting to observe that the ownership is almost always in the hands of individual families with a very long entrepreneurial history, which means they are deeply rooted in the meat-packing industry of the local economy.

Table 1.6 : Meat-packing and butchering industry in the province of Parma: number of enterprises and employees

Class of employment	no. of companies	Proportion % of companies	no. of employees	Proportion % of employees
Up to 10	452	80	1.514	37
10 – 50	102	18	1.760	43
Over 50	11	2	819	20
Total	565	100	4.093	100

Source: Nomisma and UPI data processed by us

The number of meat-packers operating in the province of Parma can be estimated at around 250 companies, 201 of which are producers of prosciutto. In 2000 the number of prosciutto hams produced amounted to about 16 million, of which 9 million bearing the trademark "Prosciutto di Parma". The particular vocation of the zone of Parma to the production of prosciuttos, in terms of the existence of specialized workers and companies supplying services to the prosciutto plants, has contributed to the opening of numerous prosciutto production plants to the extent that, currently, the production district of Parma satisfies more than 50% of the domestic consumer demand for prosciutto.

Pork specialties and the local economy

The pork specialties sector in Parma is characterized by a net prevalence of typical products, or better, of products whose processing is part of a consolidated tradition within the local economy. In this connection, we can cite a number of important examples, first of all Prosciutto di Parma, to be considered to all effects the most important pork product nationally. It is followed by Culatello di Zibello, which still has only a niche market as compared to that of prosciutto; Felino Salami, traditionally produced in a strictly limited zone of the province of Parma, the town of Felino; and last, Coppa di Parma, an important product in search of differentiation in the pork products industry of Parma.

Table 1.7 : Number of companies, production and turnover of the sector of typical pork products from Parma

Product	Meat-packing companies no	Brand name products tons	Average prod. per company	Turnover in billions of lire
Prosciutto di Parma	201	82000	408	1600
Culatello di Zibello	14	21	2	12
Felino Salami	18	1900	105	39
Coppa di Parma	30	6100	203	105

Source. Nomisma on data of the Protection Consortium and UPI

Table 1.7 shows some fragmentation in the sector of the production of typical Parma pork specialties, confirming the small business aspect of many of the companies operating in the sector, almost cottage industries. In particular, the figure referring to the average production of companies, about 400 tons is to be considered low if we compare it with the companies that produce Prosciutto di San Daniele which have an average more than twice as high as the Parma companies. However, as regards the other products, their presence in the zone is more limited with a total of 62 companies operating, assuming that none of the companies counted produces more than one of the products in the table. The data relative to the average size of the companies that produce Culatello di Zibello are sufficient to enable us to say that this niche product originates in small, or even very small, production plants. The production facilities of the other two typical products, Felino Salami and Coppa di Parma, are also rather small. As regards these last types it should be borne in mind, however, that they are generally associated with the production of other pork products, while maintaining their role as main reference.

The meat-packing industry in Parma exhibits a strong specialization in the production of Prosciutto di Parma from which it nets 1,600 billion lire on sales, while the other sectors of typical production barely reach 7% of the turnover produced by prosciutto. Beyond the aspects related to sales of pork products, to appreciate the real significance of the meat-packing industry of Parma within its territory it is necessary to extend our view to an examination of the activity, in terms of economy and employment, to the sectors that precede and follow production. The Parma meat-packing industry has given rise to a system of relations of territorial integration with all the operators in the meat chain, to the point that they are able to develop synergisms that lead to improvements of efficiency and thus of competitiveness, throughout the sector. Indeed, the role of local economic activation is not limited to the sole stage of industrial transformation but extends to all those sectors that sustain entrepreneurial activity: in the stage of purchase of raw materials, through relations with the slaughterhouses that, in turn, serve as a contact point for an extensive agricultural system consisting of breeders and all the operators connected with that business (feed suppliers, etc.); later, in the stage of industrial transformation, in which a number of specialized operators offer specific services such as aging plants, boning and packaging plants, etc. In addition, the concentration of production units in a limited area has contributed to the birth of industries specialized in the construction and supply of equipment for the meat-packing industry, some of which have become leaders on their market. The involvement in the business of processing meat is also of interest to the credit sector with the development of specific financial products for the meat-packing enterprises as well as for the tourist industry with the gradual growth and consolidation of gastronomic tourism.

The relations among companies participating in Parma's meat-packing industry are animated by keen competitiveness, which stimulates all the operators to seek more and more efficient solutions, and at the same time they are based on principles of cooperation and reciprocal trust, that are the natural result of the sense of belonging to the land, deeply rooted in all the operators. In order to evaluate the proportionate importance of the meat-packing industry in Parma to the local economic system in general we can refer to the coefficients of business by sector calculated by Nomisma on the basis of the input-output tables drawn up by ISTAT. This method will enable us to measure the effect in economic and employment terms that the meat-packing sector has on the sectors involved in production. In other words, through a number of intersectorial indicators, it is possible to measure the wealth produced by the production sector within the economic system. Table 1.8 clearly shows the high rate of activation of the meat-packing sector. In particular, Prosciutto di Parma is responsible for a process of activation of the economic system that is as high as 2.6 times the value of the turnover produced. The other pork products, though at a lower level, generate an economic value of related activities of over 400 billion lire against an overall turnover of about 165 billion. The information reported testifies to the high degree of involvement of the different sector operating before and after the production system. The part of the economic system that contributes the most to this result is the breeding sector – where we find the breeders, the feed producers, manufacturers of equipment, etc -, with a share of about 60% in the production of the global earnings.

As regards the effects of related activities on employment, the meat-packing sector can be considered to give work to over 30,000 full-time employees. According to the information in table 1.8, the businesses operating in the system of Prosciutto di Parma account on the whole for more than 28,000 full-time workers, or nine times the number employed in the sole sector of prosciutto production.

Table 1.8 : Effects of activities related to the main pork products on the economy and employment of Parma

	Prosciutto di Parma	Culatello di Zibello	Felino Salami	Coppa di Parma
Turnover produced (in bill. lire)	1600	21	39	105.1
Direct employment (in SLU*)	3000	0	92	240
Related turnover (in bill. lire)	2560	33.6	59.3	160.1
Related employment (in SLU)	25800	0	798	2160
Total turnover (in bill. lire)	4160	54.6	98.3	265.2
Total employed (in SLU)	28800	0	890	2400

* Standard Labor Unit

Source: Nomisma data processed by us

In this connection, the meat-packing industry has played an important role in the conservation of human resources on the territory. Its development in the province of Parma has undoubtedly contributed to the permanence of the population in the towns of its hills and valleys, preventing the heavy emigration that was necessary in many other regions of Italy.

2. THE CHAIN OF PORK SPECIALTIES IN THE PARMA AREA

2.1 Swine breeding

The structure of the pork chain is composed of various elements: the breeders, the slaughterhouses, the meat-packing industries (producing the various specialties such as ham, salami and by-products), and in the last analysis, the distribution system. Swine breeding is the first link in the chain, the one that supplies the raw material to the slaughterhouses. According to census data, the national swine population is concentrated almost entirely in the north of Italy (75%) in the regions of Emilia-Romagna, Lombardia, Piemonte and Veneto, testifying to the existence in these regions of a very large meat-packing industry oriented prevalently toward the production of pork products. Indeed, the Po Valley is the area of choice of the so-called "circuit" of DOP specialties, that is, of that integrated system targeted at the production of recognized pork specialties and, more in general, of local traditional pork specialties.

On the basis of the partial data from the new census (made in the year 2000) of Italian agriculture, the number of companies operating in the field of swine breeding has dropped dramatically, which is a sign of a structural change in swine breeding. In fact, in the first four regions by number of animals, the number of breeders is down by almost 60% with respect to the 1990 census. Unfortunately, the current data relative to the size of the herds on the national basis are not available yet, but it is plausible to assume that there has been an equally large reduction in the animal capital. Provisional data relative to the size of herds (compare tables. 2.2 and 2.3) in the Emilia Romagna region show a sharp decline in the number of breeders in the ten years since the last census. At the same time, the number of head of swine raised undergoes a definite drop although to a lesser extent than that of the number of breeders, about 20%. This last variation indicates a process of concentration at the level of breeding farms during the time period in question.

Table 2.1 : Number of farms raising swine in Emilia Romagna (year 2000)

	1982		1990		2000		Variazione %	Variazione %
	n.	%	n.	%	n.	%	2000/1982	2000/1990
Piacenza	753	2.7	419	3.8	189	4.4	-74.9	-54.9
Parma	2348	8.5	875	7.9	292	6.8	-87.6	-66.6
Reggio Emilia	2718	9.8	996	9.0	451	10.5	-83.4	-54.7
Modena	2727	9.8	1082	9.8	468	10.9	-82.8	-56.7
Bologna	5388	19.4	2118	19.1	890	20.6	-83.5	-58.0
Ferrara	2314	8.3	790	7.1	314	7.3	-86.4	-60.3
Ravenna	4765	17.2	1931	17.4	574	13.3	-88.0	-70.3
Forlì	4845	17.4	1959	17.7	788	18.3	-83.7	-59.8
Rimini	1914	6.9	921	8.3	346	8.0	-81.9	-62.4
Emilia-Romagna	27772	100.0	11091	100.0	4312	100.0	-84.5	-61.1

Source: Emilia Romagna Region on provisional ISTAT data

The most surprising item is the figure that refers to the province of Parma where the level of the number of companies operating in the sector, as well as the number of head of swine raised, undergoes the largest reduction in the region. The breeders, with respect to the 1990 census, were down by 67% and the number of head of swine was reduced by 43% indicating a loss, since 1990, of 114,000 animals. This redimensioning of the swine population has as its consequence an increase

Table 2.2 : number of head of swine in Emilia Romagna (year 2000)

	1982		1990		2000		Variazione %	Variazione %
	n.	%	n.	%	n.	%	2000/1982	2000/1990
Piacenza	156585	6.9	125477	6.6	122993	8.1	-21.5	-2.0
Parma	309806	13.7	265136	14.0	150931	9.9	-51.3	-43.1
Reggio Emilia	559680	27.8	482258	25.4	399374	26.3	-28.6	-17.2
Modena	721173	31.9	564202	29.7	506391	33.3	-29.8	-10.2
Bologna	137983	6.1	85219	4.5	63014	4.1	-54.3	-26.1
Ferrara	35570	1.6	28853	1.5	29623	1.9	-16.7	2.7
Ravenna	167608	7.4	152017	8.0	82047	5.4	-51.0	-46.0
Forlì	151718	6.7	169544	8.9	150719	9.9	-0.7	-11.1
Rimini	20998	0.9	23894	1.3	15581	1.0	-25.8	-34.8
Emilia-Romagna	2261121	100.0	1896600	100.0	1520673	100.0	-32.7	-19.8

Source: Emilia Romagna Region on provisional ISTAT data

in the average number of swine per farm, up from 132 head per farm in 1990 to 517 head according to the data for 2000. This progressive abandonment of swine breeding can be attributed in part to a process of specialization in farming technology. The earlier practice of raising cattle and hogs on the same farm has undergone a change, due to the reduction of profit margins and the stresses on production caused by the markets. Now the farms tend to specialize in order to acquire more productive

efficiency. Another reason has to do with the reduction of the number of dairy farms, that traditionally also raised swine since they could be fed the whey produced in the processing of milk for Parmigiano-Reggiano cheese, which has contributed to the decline. In the province of Parma since 1990 as many as 50 dairy farms have closed. Lastly, environmental regulations regarding the load of pollutants of swine breeders in the area has forced the farms to keep the number of head of swine down.

Obviously, the breeders in the province of Parma alone are unable to fill the needs of the meat-packing industry. In the same way, the other producers of pork products in Italy often find local supply insufficient, unless they produce a niche products as in the case, for example, of Culatello di Zibello. For other types of production, however, a much larger source of supply is needed. Prosciutto di Parma, for example, to meet a demand of over 9 million hams a year, counts on a system composed of 5,561 breeders, 2,374 of which are closed cycle breeding farms, 3,076 are fattening facilities and 111 raise swine in the intermediate phase (growing). The dimensions of the source of supply of animals is distributed, by necessity, over more than one region, in this case 11. To provide a general picture of the zones of supply of raw materials, we indicate a table which breaks down the supply of meat for the production of DOP pork specialties.

Figure 2.1 : regions of origin of meat for DOP pork specialties

	Emilia Romagna	Lombardia	Piemonte	Veneto	Umbria	Marche	Lazio	Toscana	Abruzzo	Molise	Friuli	Valle d'Aosta	Calabria
Salumi													
Prosciutto di Parma	■	■	■	■	■	■	■	■	■	■	■		
Culatello di Zibello		■											
Prosciutto di San Daniele				■							■		
Prosciutto di Modena	■	■											
Prosciutto Veneto Beriso-Euganeo				■									
Salame di Varzi		■											
Salame di Brianza		■											
Jambon de Bosses				■								■	
Lard d'Arnad				■								■	
Prosciutto di Carpegna					■								
Prosciutto Toscano						■							
Coppa Piacentina	■												
Pancetta Piacentina	■												
Salame Piacentino	■												
Capocollo di Calabria													■
pancetta di Calabria													■
Soppressata di Calabria													■
Salsiccia di Calabria													■

Source : Nomisma on Mipaf data

The distribution of the farms over several regions makes it possible, on the one hand, to dispose of a quantity of meat not otherwise obtainable in limited local spheres, and on the other provides the guarantee of the raw material. For example, extreme concentration of the source of supply would risk blocking the entire chain in case of a swine epidemic. As regards Culatello di Zibello, production uses meat from just two regions, but it is a very small production system. For Felino Salami and Coppa di Parma the sources are about the same as for Prosciutto di Parma, as it is not unusual for the producers in this case to combine the production with prosciutto and at least one of the other two products.

One last comment has to be made about the Consortium for the Heavy Po Hog with members throughout the Po Valley. It provides specific rules for production ranging from the type of fodder to the minimum age at which the swine can be sold. In particular, the heavy Po hog must be born, raised and produced in the geographical area between the regions of Emilia-Romagna, Lombardia, Veneto, Friuli Venezia Giulia and Piemonte, those regions, that is, from which the raw material originates for the production of pork specialties. The Consortium, through activation of a series of relationships between breeders and butchers, promotes an integration of the chain, from meat to specialty, capable of generating a virtuous circle oriented toward the quality of the end product and, thus, the valorization of the entire chain.

2.2 The slaughterhouses

The business of butchering the meats is the link in the pork product chain with the lowest added value. The activity of the slaughterhouses – consisting largely of buying the swine, slaughtering and cutting them into parts, and selling the parts - is configured more as a service industry than as a process of production of goods in the strict sense. This has the effect of limiting the possibility of differentiation of the output, since there is no real transformation of the raw material. In addition, the qualitative content of the meat is not a variable that can be directly controlled by the butcher. A further aspect that distinguishes this business is the low return on capital invested, to be attributed to the limited capacity of creation of added value in a business that, effectively, does not give rise to a consistent transformation of the material.

Since the companies involved in butchering are not strictly connected to either the breeders or the producers of the pork specialties, information on the side of animal supply and on the side of demand for raw material all passes through this operator who thus becomes a strategic link in the chain. It can even be said that the butchering sector appears to be the most interesting part of the chain as, through its central position among the operators, it could function as a coordinator among the sectors upstream and downstream so as to implement, along the entire chain, a policy of quality in the production of pork specialties.

The establishments for processing the meat are usually located in the vicinity of the breeding farms, (see tab. 2.4) to prevent having to subject the animals to the stress of long trips to the slaughterhouse and, more in general, for reasons related to the minimization of costs for handling the meat, both coming into the farms and going out toward the other processing facilities. The highest concentration of slaughterhouses is thus found, as we have seen for the swine breeding farms, in four regions of Italy: Lombardia, Piemonte, Veneto and Emilia Romagna. On the basis of data supplied by the Health Ministry on the establishments for the production of fresh meat licensed under the terms of directive 64/433 CEE, the first four regions by number of plants account for 47% of the national total and process almost 80% of the total amount of meat butchered.

Table 2.3 : Number of establishments licensed under the terms of directive 64/433/CEE for the production of fresh meat (February 2001)

Region	Deposits	Slaughterhouses	Butchering plants	Total
LOMBARDIA	71	76	123	270
PIEMONTE	24	59	27	110
VENETO	50	44	53	147
EMILIA ROMAGNA	57	37	83	177
CAMPANIA	77	36	35	148
LAZIO	55	26	51	132
TOSCANA	16	25	52	93
SICILIA	77	23	21	121
PUGLIA	47	21	21	89
ABRUZZO	15	21	26	62
CALABRIA	24	20	13	57
SARDEGNA	9	19	18	46
MARCHE	24	17	17	58
UMBRIA	9	13	16	38
BASILICATA	4	9	4	17
FRIULI VENEZIA GIULIA	7	4	17	28
LIGURIA	10	2	11	23
PROV. AUTON. BOLZANO	3	2	12	17
PROV. AUTON. TRENTO	5	2	5	12
MOLISE	2	2	0	4
VALLE D'AOSTA	0	2	0	2
Total	586	460	605	1651

Source: Health Ministry

In Emilia Romagna there are 177 plants for the processing of fresh meat, 13 of which are slaughterhouses, 24 refrigerated storage facilities and 48 butchering plants where the carcasses are cut into usable parts. The provinces with the highest number of plants for the production of fresh meat are Modena and Reggio Emilia, with 52 and 29 structures, respectively, which confirms the particular vocation to food processing of these two provinces, especially as regards the transformation of meat for the production of pork specialties. In the province of Parma, in particular, there are 17 production plants, with 5 specialized in butchering and four of these in butchering swine. The much smaller number of slaughterhouses in the province of Parma as

compared to the large number of meat-packing plants, especially for pork specialties, indicates the existence in the zone of a very large and highly concentrated butchering industry. However, the availability in the zone of raw materials for the production of pork products is not sufficient to cover the needs of the meat-packers, so that their source of supply has been extended to other processing zones. In particular, the sector of Prosciutto di Parma relies upon a system of 152 slaughterhouses scattered in the eleven regions constituting the meat circuit for the production of this specialty.

Table 2.4 : Number of establishments licensed under the terms of directive 64/433/CEE for the production of fresh meat in the Emilia-Romagna region (February 2001)

Province	Deposits	Slaughterhouses	Butchering Plants	Total
Bologna	4	4	12	20
Ferrara	4	1	3	8
Forlì	11	2	9	22
Modena	12	8	32	52
Piacenza	5	3	1	9
Parma	4	5	8	17
Ravenna	6	3	2	11
Reggio Emilia	10	11	8	29
Rimini	1	0	8	9
Total	24	13	48	177

Source: Health Ministry

3. NEW TRENDS IN THE SECTOR OF PORK PRODUCTS

The Italian meat-packing industry is characterized by a mixture of products with a high historical and traditional content, known as typical pork specialties, alongside products that have a more industrial and innovative connotation. This does not mean that the companies that produce pork products are anchored to consolidated situations. As a matter of fact they, like the other enterprises in the food processing sector, are ready to embrace technological change and the development of tastes, the changing needs of the consumer, and to meet the challenges posed by the market and improve their level of competitiveness.

This desire to innovate and improve their position encounters a serious obstacle in the fact that the majority of the companies operating in the sector are medium-small and owe most of their turnover to the production and sale of typical products, that is, products in which innovation of both the product itself and the production process are often strictly bound to "Production Rules" that are very rigid and that, just to guarantee the typical characteristics of the product, do not allow any changes to the methods of production or innovation of the product.

Paradoxically, the companies that produce typical products of quality are, on the one hand, forced to seek greater competitiveness through research and innovation, while, on the other, they have to guarantee the consumer the level of quality achieved. Quality that takes on greater and greater importance the more it is constant in time.

Even for food processing companies specialized in the production of typical products, certain aspects like quality, the guarantees to the consumers and the safety of the products and innovation are strategic elements that tend to condition the operations of the companies and their success, or lack of success, more and more. It becomes important, then, to examine these aspects briefly, highlighting the variables that have the most influence on the strategies of the companies in the sector.

3.1 Quality

Quality is the first aspect that every producer of food products, including those in the meat-packing industry, should consider in deciding their production strategy. The concept of quality, however, can mean different things depending on the purposes that a "quality policy" wants to achieve. Of the many objectives that can be pursued in the name of quality¹ we would like to stress how the implications that derive from the application of quality policies are rather extensive and can involve:

¹ Gios G., Clauser O., (1996) Perceived quality in the agrifood system : economic aspects, in, Quality Food Products : organization of the system of enterprises, INEA, Il Mulino; Venturini L. (1996), Strategies for the recognition and valorization of quality , Quality food products : organization of the system of enterprises, INEA, Il Mulino.

- the producer who, acting on production processes aims to obtain a product that is free of flaws and in conformity with the standards and procedures necessary to obtain it;
- the consumer, who considers the quality product as one capable of satisfying his needs and expectations;
- society, that attributes to the term "quality" a meaning that corresponds to shared values, both as regards the product, and as regards the process used to obtain it;
- the product, for which the concept of quality coincides with the possession of certain characteristics, whether intrinsic, related to the product, or extrinsic, related to the services offered through the product.

It is clear that quality, from the economic point of view, has been considered as an attribute that accompanies a product and is able to enhance, or reduce, the level of its utility by the consumer. On the basis of this principle the consumer makes his choices and the producer develops his production and market strategies. Not always, however, the level of quality of the product corresponds to the expectations. There is what is known as information asymmetry in that only the producer knows the exact level of quality of the product manufactured by him, and it is in the presence of information asymmetry that some producers could be induced to act in a disloyal way toward the consumers who, to protect themselves, purchase goods of known, if not even inferior quality.

On the basis of these elements, the existence of informative asymmetry as regards the quality content, becomes a particularly significant factor in the management of typical pork products, as for these product quality is not due to exogenous components but to characteristics that are intrinsic to the product, often related to methods of processing specified in the rules, to environmental characteristics and human and natural factors existing in the area. For these reasons a number of scientists² have attempted to give the term "quality" as related to typical products a more ample definition, to provide the consumers with the "instruments" they need to recognize and appreciate the qualitative aspects of the product they are purchasing. In other words, rather than define quality as an objective parameter, rules and parameters are defined on which the quality of a specific product can be judged. This theoretical corpus based on the "theory of conventions" (refer to the bibliography), is particularly suited to "quality" food products, especially typical ones, where the quality is the result of a combination of different elements such as personal relations, the general reputation of the product, the bonds with civilian society of certain rural structures and the methods of transfer of information and innovation.

The fact remains that lack of clarity about quality is the big difference between industrial products and those of high quality like typical products. While for industrial products, quality is guaranteed by the large companies operating in the sector, for the typical products, we are often dealing with small and medium companies where the investment reputation based on the use of a company trademark is often a non-sustainable cost and long-term commitment before it produces any significant results for the company.

Also for this reason, many small and medium enterprises in the agrifood sector have banded together in Consortiums for the protection of the typical products, which have the task, in addition to safeguarding the products, of adopting collective measures capable of coping with the problems generated by informative asymmetry on the intrinsic features of the product, prevent unfair behavior by the enterprises, acquire the trust of the consumers through campaigns of information and the promotion of the Consortium trademark. This then becomes the instrument of valorization of the member companies because it becomes the guarantee of a level of intrinsic quality expected by the consumer and sought after for that reason. In other words, the Consortium trademark that is, to all effects, a collective trademark, becomes the mark of quality that each company in the Consortium can guarantee its clients, as a minimum, thereby gaining a reputation in the eyes of the consumers.

This concept is particularly apparent in the meat-packing industry as regards high quality products, such as the typical products, where the guarantee to the consumer of the intrinsic characteristics does not arrive through the industrial trade name of the company but precisely through the collective trademark of the Consortium for protection.

The fact remains that it is up to the company, in any case and if it wishes, to add further qualitative attributes to the product capable of guaranteeing the consumer as regards the necessary level of hygiene and healthiness or to facilitate the use or storage of the product by adding extrinsic attributes capable of enhancing the overall quality of these products (for example, pork products sliced and packed on trays).

3.2. Safety and traceability of food products

Among the many factors that contribute to define the quality of a product two are increasing more and more in their importance to the eyes of the consumer, that of the healthiness of the food and that of the possibility of tracing it back to the producer to verify his effective responsibility in case of problems that reduce its level of intrinsic quality. The two aspects are closely related as, to guarantee healthy and thus safe food products (from which the term food safety derives) it is necessary to be able to trace back down the chain to determine what has happened and prevent problems from occurring at the source, especially in case of health risks that can affect the consumer.

² (Bajolle D., Sylvander B. (2000), Some factors of success for Origin labelled products in agrifood supply chains in Europe : Market internal resources and institutions, in The socio economics of origin labelled product in agrifood supply chains , 67 EAAE Seminar, INRA.

The question of food safety has been shaken in recent years by the explosion of a number of episodes that have involved the agrifood sector and severely undermined public opinion and consumers, like "mad cow" disease, chickens contaminated with dioxin, and botulism, all very damaging to consumer confidence toward particular food products. The problem of food safety did not arise only now and only as a result of these events. Rather, they highlighted and focused on a problem connected with the changes that have taken place in the agrifood sector at all levels as a consequence of the liberalization of markets and the circulation of goods on a global level. Today, affecting the safety of food products and imposing the use of safeguards are causes like disease, nutritional anomalies (from animal meal to GMOs) and the inappropriate use of pesticides and chemical compounds, if not even substances that are prohibited except for therapeutic use, like hormones and antibiotics.

The consumer is thus disoriented not only because of the difficulty in obtaining certain information but also for the excessive availability of often contrasting information that only contributes to alarm him further. He becomes more attentive to his health and more diffident, demanding information that is clear, correct and above all guaranteed. In this connection the guarantee of quality cannot be limited to a single stage of the production process, but must be extended to all stages, or better, to the entire chain. Furthermore, in order to have the necessary reputation, the guarantee of quality cannot come through the action of the individual but through the intervention of the consumers themselves, or by public intervention or a collective action of the producers.

At the legislative level, health safeguards, are a right sanctioned by the Italian Constitution and the European Union that take it upon themselves to safeguard the health of the consumers through control of the healthiness of the food products. In this connection, the three main documents produced are:

- The "Green Book" (General principles of legislation on the subject of food products in the European Union) on European legislation concerning food products, published in 1997.
- The Communication "Health of the consumer and safety of food products" of 1997.
- The "White Book" on food safety published in 2000. This latter is a set of proposals that serve to guarantee a high level of human health and safeguards of consumers through a complete and integrated approach that involves the entire food chain.

It is the White Book that indicates as extremely important the collection and analysis of data useful for the identification of potential food safety problems in an attempt to achieve certain goals that will ensure better control of food hazards such as: a) daily and regular management of information in order to deal promptly with problems; b) proactivity in the identification of risks; c) planning in the long term; d) definition of priorities that should be adopted. To achieve these goals general food regulations must be developed for the purpose of harmonizing the actions and activities of safeguard and recognition among the countries of the Union and Third World countries that comply with European standards. In addition, it reiterates the role of information stating that "the communication of a risk should not be a passive transmission of information, but should have a dimension characterized by dialogue and feedback with all the parties involved".

In the light of what has been said and while awaiting improvements in the systems of control and vigilance, systems of control of the chain have been implemented in autonomous forms so as to guarantee the consumer, not only as regards the methods of food preparation but also as regards the origins of the raw material. It is a widespread opinion, in fact, that the implementation of a system of traceability can resolve many of the problems related to food safety, just because it would involve the operators at all levels of the food chain making them responsible for the quality of their work. The application of chain traceability necessitates a documented knowledge of the flows of raw material and the identities of the operators who have contributed to the production of a specific item in order to clearly identify individual responsibilities.

In the case of meats, and in particular pork, implementation of the principles of traceability is far from simple and involves numerous implications of a strategic and operational nature. It should always be borne in mind that Italian ranching is characterized by smallness and enabling the consumer to trace back to the producer is not enough as, unless the breeder is known personally, the level of confidence toward him has to be considered rather low. To have a real competitive advantage, in addition to traceability it is necessary to add also the "force" of a company, or a public institution (Controlling Body), capable of providing the necessary guarantee to the consumers, so that, even if they do not know the breeder personally, there is someone who guarantees for him, someone who enjoys the necessary reputation in the eyes of the consumer.

From a strategic point of view, a company policy that uses the principles of traceability presents two aspects : a) one that is external to the company, guaranteeing the consumer of the quality and healthiness of the product and, b) one that is internal to the company, enabling it to implement a policy that aims to further improve the level of intrinsic quality of the product, by working, for example, directly with the breeders through the stipulation of contracts.

From a strictly operational point of view, in addition to the problem of guaranteeing the traceability of the raw materials (feed and animals), there is the problem of guaranteeing the traceability of the separate cuts of meat that can take different routes.

The current situation in the Italian pork sector as regards traceability faces two contrasting situations: on the one hand, the concrete and implemented possibility of tracing the complete history of the heavy hog used in the production of DOP products, on the other there is a persistence of the condition of commodity of the light hog, anonymous and undifferentiated, and not yet

traceable. Furthermore, although for the heavy hog traceability is applied to the hams, that is, the part that goes to the meat-packing industry for transformation into prosciutto, for the remaining cuts the sector still needs to find a way to apply traceability to the entire carcass of the animal extending identification to the other cuts of pork as well.

Although since the mid-Nineties, the ANAS initiative for development of the mark "Mediterranean swine" has been operational for light hogs, with a view to organizing an efficient Italian chain of pork for butchering through a strategy of product differentiation, the results are still not really appreciable. On the other hand, in France, success of the "Label Rouge" trademark is worthy of note since, in addition to guaranteeing full traceability it insures the consumer a "chewier" type of meat with, however, a high degree of healthiness .

The position of ASSICA (the Association of Meat Industries) is similar to that of ANAS so that the safety of the meat is an unquestioned prerequisite while the quality and traceability are an added value that, at least for now, is optional but will become compulsory in the future.

Particularly in the case of pork, and specifically in that of certain typical pork products that have obtained DOP labeling, at the same time that the product is certified its traceability is also certified. In this case, traceability increases the level of quality of these typical products even more as it not only enables anyone to trace the chain but also guarantees that each segment of the chain has correctly applied the production code.

In this connection the experience of the Consortium for Prosciutto di Parma and the Parma Quality and Nord Est (IPQ and INEQ) institutes is significant, and allows us to draw a number of important considerations;

- traceability no longer concerns only niche products but has become a global necessity;
- it is not enough to control the origin of the raw materials but the entire process;
- it is necessary to further increase the collaboration among the operators in the chain starting from what has already been done;
- the results achieved in the sector of DOP pork products must be valorized better in terms of advertising.

The opinions of the operators in the sector seem largely to be shared by the consumers. The point of view of the users of traceability can be partially summarized by the position of the National Council of Consumers and Users which reports as a priority the identification and the quality of products through product certification. The main criticism by the consumers has to do with controls by public institutions, considered often inadequate, and the need to have a single reference organization for all matters related to food safety. This latter request reiterates a concept that has emerged before and is discussed in the White Book, regarding advertising. We know that to have the necessary success, the public has to be made aware of this initiative as the consumers, though they acknowledge the necessary reputation of the Consortium of Prosciutto di Parma, does not have the same esteem and trust toward private organizations of guarantee, even when they operate according to the UNI standards and European laws.

4. ANALYSIS OF CASE HISTORIES

4.1 Felino Salami

In Emilia Romagna, thanks to the ancient farm traditions which called for butchering hogs during the winter, there are a large number of pork products, including pancetta, coppa, prosciutto, cotechino, salami, etc. Of these products some have obtained protection of their trademark by the European Union on the basis of regulation 2081/92 and 2082/92 relative to DOP and IGP labeling. Among the specialties made from DOP pork are Prosciutto di Parma, Prosciutto di Modena, Culatello di Zibello, Piacentino Salami, Coppa Piacentina and Pancetta Piacentina; while the products that have obtained IGP labeling are: Mortadella di Bologna, Zampone di Modena and Cotechino di Modena. Many products, therefore, of the regional pork specialty tradition have obtained Community recognition and protection, while others are awaiting scrutiny by the EU. Among the products awaiting a final answer from the departments in charge of examining applications for recognition is one of the most deeply rooted products in the history of the province of Parma, that is Felino Salami. This salami, whose history is lost in the mists of time, has given rise, in the Parma area, particularly in and around the town of Felino, to the installation of many manufacturing plants that make the product according to the same original procedures. The production companies now number about 18, all equipped with modern meat-packing equipment, in some cases with all the characteristics of real conversion industries. Indeed, to respond to the market demands and minimize production costs, the companies produce Felino Salami all year round and not just during the traditional winter season, as in the past and as is still the case today for other typical products such as Culatello di Zibello. Furthermore, the need to optimize utilization of the production facilities has forced some companies to flank their production of Felino Salami with other types of pork processing, such as prosciutto. However, the salami remains the main product for these companies, as most of the manufacturers who include this product in their range of production cover over half their turnover with it.

The production of Felino Salami, as can be seen in tab. 4.1, has grown over the years and in 1997 reached a level of 35 billion lire corresponding to a production of almost 3,290,000 pieces. With respect to the two previous years it will be observed that the increase in the quantity produced was in the measure of about 15%, leading to an increase in the turnover of about 24%. This result is the outcome of a strategy implemented by the enterprises operating in the sector based on the increased visibility of the product, in terms of awareness of the quality of the raw materials used and the production process, through marketing strategies centered on a ramified network of agents in the territory maintaining continuous contact with the clientele. The sales force of the product therefore resides in the ability of the producers to apply marketing strategies oriented toward distribution, capable of making sure that the end consumer receives, even if through mediators, all possible information relative to the quality of the product, differentiating it thereby from the other specialties on the market.

Table 4.1 : Production of Felino Salami (year 1995-97)

	1995	1996	1997	Variation % 1997/1995
Turnover (in billions of lire.)	31.4	35.4	39.3	24.2
Production (in tons)	1,797	1,910	2,073	15.4
Production (no. of pieces)	2,256,000	2,458,000	3,289,000	45.8

Source: Nomisma on UPI data

The raw material used for the production of Felino Salami derives from butchering heavy hogs by specialized structures located in the vicinity of the production zone. The business generated by the relations between salami manufacturers and slaughterhouses amounts to about 15 billion lire, which is a significant figure indeed if we considered that there are just four slaughterhouses specialized in the production of pork located in the province of Parma. It is important to remember that the production of Felino Salami contributes to the continued breeding of this breed of hogs, grown mainly by breeders in the north of Italy. The production of pork of the heavy Po hog breed is the main ingredient of the so-called "high quality" Italian pork specialties, and the more common types of pork products are made from meat of other breeds of hogs (often imported from abroad, that respond better to the requirements of mass production and cost reduction.

The industry for the production of Felino Salami occupies a very small place in the more general sector of meat-packing, as it does not account for even 2% of the turnover produced in the sector in the province of Parma. This makes it possible to qualify it as a niche product in the vaster market of pork products. In this connection, tab. 4.2 indicating the number of workers employed in the industry for production of Felino Salami, provides the measure of the size of the sector. Of the approximately 20 companies operating in Parma just over 200 people are employed, and about 7% are seasonal. Since the seasonal nature of the meat-packing which was traditionally carried out during the winter, has given way to year-round processing, temporary labor is used by the smaller companies to replace their regular employees on holiday during the summer months. Culatello di Zibello, however, resorts to the use of seasonal labor during the winter months, the only time for processing the hams used for the production of this specialty.

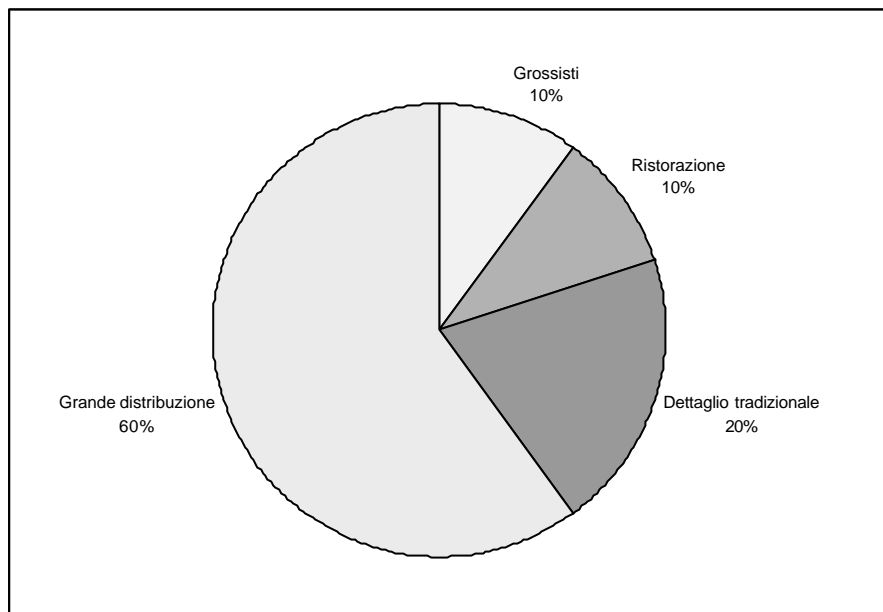
Table 4.2 : Number of employees in the Felino Salami industry (years 1995-97)

	1995	1996	1997	Variation 1997/1995
Regular employees	205	201	212	7
Seasonal workers	13	14	14	1

Source: Nomisma on UPI data

According to figure 4.1, Felino Salami is sold mainly through the large supermarket chains that are the channel through which 60% of the sales of the companies located in the province of Parma. take place. This is followed by the traditional retail shops with 20% of the total, that is the channel in which the intrinsic quality of the product is best valorized, in view of its position among the highest priced pork products. The supermarket chains, more oriented toward amplifying their sales margins, tend to approach the positioning of the product to that of an undifferentiated salami product. Another factor contributing to the risk of disqualifying the product is the existence on the market of many products called "Felino type" salami. In the presence of a consumer market that is not well-informed or not informed at all of the differences between a Felino Salami and another with a name that reflects the characteristic method of production, this can only reduce the possibilities for development of the market of the typical product.

Fig. 4.1 : Sales channels for Felino Salami (1997)



Source: Nomisma on UPI data

From the point of view of marketing the product abroad, sales account for about 10% of the total turnover generated by the meat-packing industries and follows the growth in value of total sales in the same measure. In fact, since 1995 the percentage of production going for export accounts for 9-10% of the total turnover of the sector. In particular, foreign sales amounted in 1997 to 3.9 billion lire, up with respect to 1995 by 17%.

4.2 Coppa di Parma

Among the products of the highest level of Parma's pork specialties, alongside the more famous Prosciutto di Parma, Culatello di Zibello and Felino Salami, we also find another product derived from processing the meat of the heavy Po hog: Coppa di Parma. This is a specialty made from the upper part of the hog's neck, between the head and the lumbar region, with a cylindrical shape that is somewhat narrower at the ends. This cut of pork is salted all over, spiced and left to ripen for 10-15 days. The process traditionally consists of eight steps: salting, repose at low temperature, washing with water and red wine, packing in natural or synthetic gut, tying with string or netting, soaking, drying and, finally, aging. The last step must last for at least 60 days for small pieces and 90 for the larger ones.

In the province of Parma, the companies that produce Coppa di Parma amount to only about 30, in general characterized by medium-small size. Coppa production is normally accompanied by the processing of other cuts of pork in order to optimize the production process in the company. In a few cases, also, this product has been added to the references by plants that have a more extensive production, where the prime reference is generally Prosciutto di Parma, thus enabling them to make more efficient use of their production plants. The organization within these companies is similar to a large extent to that of the family enterprise, but with a high capital investment. The activities of management and marketing are left to the owner and his family, while production is often under the responsibility of a production manager employed by the company. The meat-packing industry of Parma is thus characterized for its marked connection between the abilities of entrepreneurs who have succeeded in adapting to the competitive modern markets and a knowledge of the product handed down from father to son in farm tradition.

The production of Coppa di Parma followed a trend, from 1995-97, that was substantially upward, sustained more by the generalized increase in the consumption of pork than by mechanisms of growth of its own. Table 4.3 illustrates this, showing an increase in the turnover of 9 billion lire, corresponding to +9.8% in the three-year period taken as reference. The dynamics seen for turnover reflect in an almost identical way those of production with a volume that grows by 10.2%. The number of tons of coppa produced show a lesser increase than that of the number of pieces processed (8.4%), indicating a higher weight of the average coppa, which in turn indicates that cuts from heavier animals were used.

Table 4.3 : Production di Coppa di Parma (years 1995-97)

	1995	1996	1997	Variation % 1997/1995
Turnover (in billion di Lire.)	61.5	63.4	67.5	9.8
Production (in tons)	3,600	3,730	3,968	10.2
Production (n. pieces)	1,955,000	2,016,000	2,120,000	8.4

Source: Nomisma on UPI data

If we compare the data on turnover relative to sales of Coppa di Parma with those relative to the turnover produced by the companies in which this specialty is produced, we will see that the main share of sales is given just by this product with percentages in the three year period taken as reference over 60%. This reveals that, on the average of the companies that produce coppa di Parma, this product is the most important reference. The thirty companies that produce coppa have an average turnover of about 3 billion, indicating the medium-small dimensions of the companies operating in this niche market.

Table 4.4 : Incidence of the turnover of the companies that produce Coppa di Parma (years 1995-97)

	1995	1996	1997	Variation % 1997/1995
Turnover of Coppa (in billions of lire.)	61.5	63.4	67.5	9.8
Turnover of companies (in billions of lire.)	96.1	98.8	105.1	9.4
Turnover in % Coppa/Companies	64.0	64.2	64.2	

Source: Nomisma on UPI data

Alongside the companies that produce Coppa di Parma with their own trademark, there are a number of other companies that process this cut of meat on a commission basis, valorizing their experience and leaving the client the burden of placing the product on the market. The commission companies are often engaged in production with their own trademark as well and use the commission business to optimize utilization of their production system. From table 4.5 the importance of this type of collaboration among companies in the sector of production of Coppa di Parma can be seen very clearly. For example, as much as 35% of total production of this specialty is supplied by the acquisition of the service of processing the meat outside the company that markets the product. Furthermore, over 35% of the turnover produced pertains to the commission plants.

Table 4.5 : Turnover of Coppa di Parma produced on commission (years 1995-97)

	1995	1996	1997	Variation % 1997/1995
Turnover of Coppa (in billions of lire.)	34.6	35.4	37.6	8.7
Turnover of companies (in billions of lire)	96.1	98.8	105.1	9.4
Turnover % Coppa/companies	36.0	35.8	35.8	

Source: Nomisma on UPI data

From this picture of the system of production of Coppa di Parma we can draw an interesting consideration: many of the companies that produce this specialty on commission have a definite specialization in the procedure of processing this meat but lack sufficient commercial strength, which means they are unable to offer, alongside this product a series of other major products such as Prosciutto di Parma or Felino Salami. It would appear that Coppa di Parma functions as a product used to complete a set of retail offerings in which more widely known products are featured.

From a brief examination of the data on employment in this sector (compare tab. 4.6), the substantially static demand of employment is clear as in a three year period only five more new employees entered the sector with respect to the date relative to 1995. As we have seen for Felino Salami, workers of a seasonal type represent a very small percentage of the total employed in this sector.

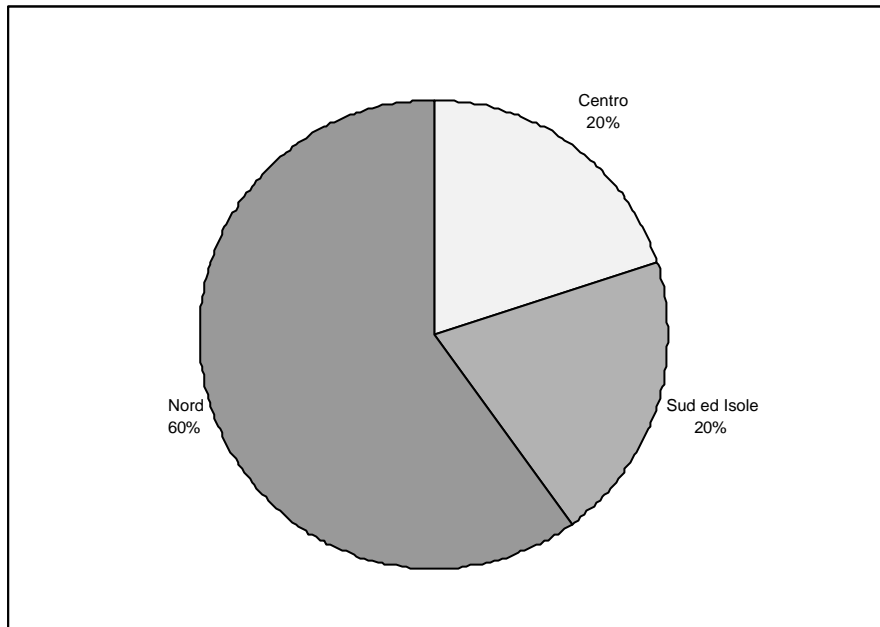
Table 4.6 : Number of employees in the industry of Coppa di Parma (years 1995-97)

	1995	1996	1997	Variation 1997/1995
Regular employees	295	298	300	5
Seasonal workers	12	14	14	2

Source: Nomisma on UPI data

As regards the consumer market, graph 4.2 shows how sales of Coppa di Parma are concentrated in the north of Italy, where consumption of pork specialties is more deeply rooted in the habits of the population. The privileged channel of sale of this product is without a doubt the large supermarket chains that account for more than 60% of the sales.

Fig. 4.2 : Sales of Coppa di Parma by geographical area (year 1997)



Source: UPI

On the export front, Coppa di Parma benefits from a high ratio of product turnover on foreign sales to total product turnover, almost 19%. In other words, of the 67 billion turnover of sales of this specialty, 4 billion come from foreign sales.