# Quality production in the dairy sector in Sicily: the Ragusano cheese


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# Quality production in the dairy sector in Sicily : the *Ragusano* cheese

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## INTRODUCTION

Dairy-cheese products have a remarkable position in the varied scenario of Sicilian typical and quality productions, and well represent the remote traditions linked to pastoral economics. Pastoral economics was widely present in Sicily and even today it characterises some backward areas, where the peculiar socio-environmental conditions have favoured the continuation of traditional animal breeding, as characterised from the type of farm organisation and management, and from the products obtained. Sicilian cheese represents a good example of typical natural products. However, the inadequacy of the forms of concentration of supply and of aggregated supply's management, the fragmentation of the supply, the backwardness of the distribution system and the absence of adequate forms of protection and promotion of the products, impede the development of the sector and limit its achievements, as well as making more difficult the placing of the product outside the original areas of production. Most of these dairy-cheese products are characterised by good quality and authenticity, as well as by the amount of direct and indirect income they generate (particularly when the quantity supplied is large). In light of this, it is desirable to adopt adequate initiatives in order to obtain proper acknowledgements.

Among Sicilian types of cheese we include only two kinds (*Pecorino Siciliano* and *Ragusano*) that have the protected denomination of origin (PDO). Other Sicilian products (*Caciocavallo Palermitano*, *Canestrati vaccini*, *Piacentino*, *Provola dei Nebrodi*, etc.) are without any kind of acknowledgement or qualitative indication. They would deserve an adequate legal qualitative appellation because of their distinct peculiarity, authenticity and excellence.

Within the dairy-cheese sector, our research has addressed one of the most valuable Sicilian products, which is strongly rooted in the historical memory of the area of production : the *Ragusano cheese*. The production and seasoning area includes the territory of the province of Ragusa and the municipalities of Noto, Palazzolo Acreide and Rosolini in the province of Syracuse.

This has been established by the Ministerial decree of the Italian Minister for Agriculture (MIRAAF) of May, 2nd 1995 (on the acknowledgement of protected denomination of cheese) and the following EC Regulation n° 1263 of July, 1st 1996 (on the acknowledgement of the protected denomination of origin : PDO).

Territorial analyses through direct surveys have been carried out inside the whole area of production in order to better characterise the area of production of the *Ragusano*.

Once the area has been located and the principal characteristics of the sector specialised in the production of *Ragusano* have been examined, it has been possible to make direct surveys on the structural and the productive aspects of animal breeding and of farms specialised in milk processing. Inquiries to and assistance from local public and private bodies, as well as private farms (individual and associated) have contributed to clarify the main aspects of the sector.

After presenting the analysis of the results of the territorial surveys, the paper identifies the principal aspects of the market (technical-commercial characteristics, prices, distributive channels, etc.) and introduces some proposals for the promotion of the product.

## CHARACTERISTICS OF THE AREA OF PRODUCTION

In the enclosed cartography (Figure 1) we find the data and the elements that have been observed with respect to the location and boundaries of the area of production. Direct surveys have been carried out to investigate the dimension of the farms and of the cattle stock (types of breeds by municipality) ; the results of the analyses have been integrated and strengthened with the data from official statistics and of other bodies. All this information has allowed us to determine the main structural characteristics of dairy farms, the total milk production and the corresponding quantities that have been destined to transformation in cheese inside and outside the farms, and to those destined for transformation in *Ragusano* in the individual farms and in the cheese factories (Table 1 and Figures 2 and 3).

**Figure 1 : Localisation of the area of production of the *Ragusano***

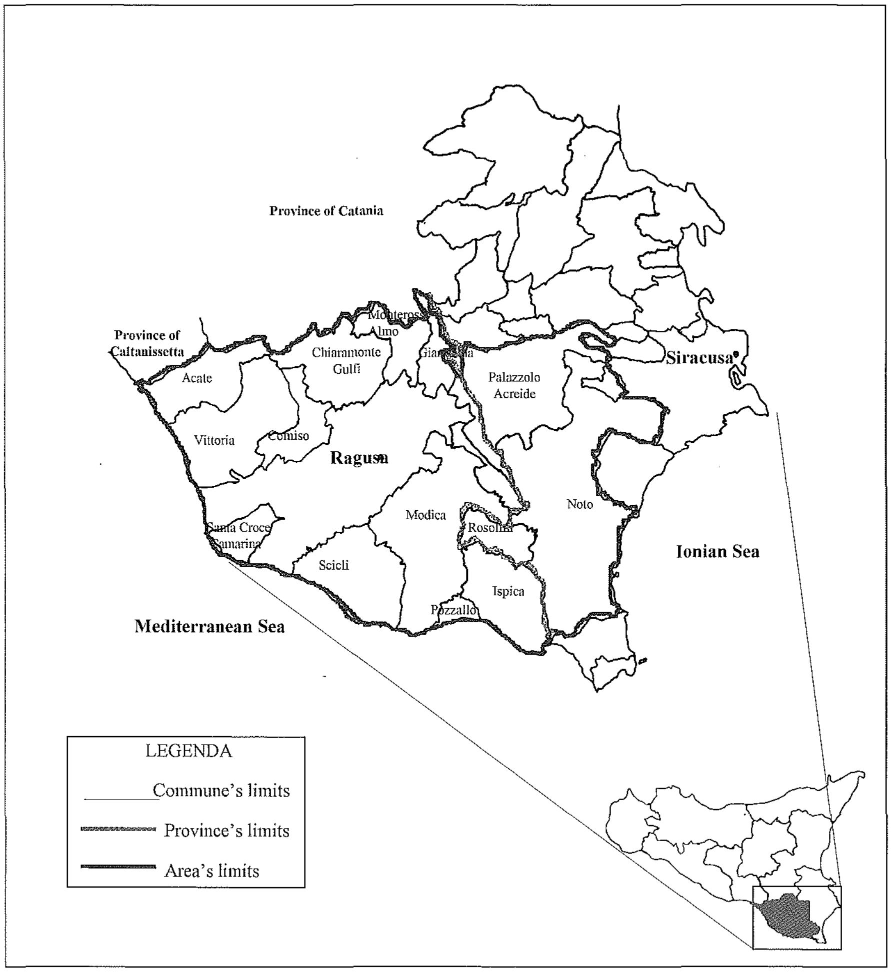
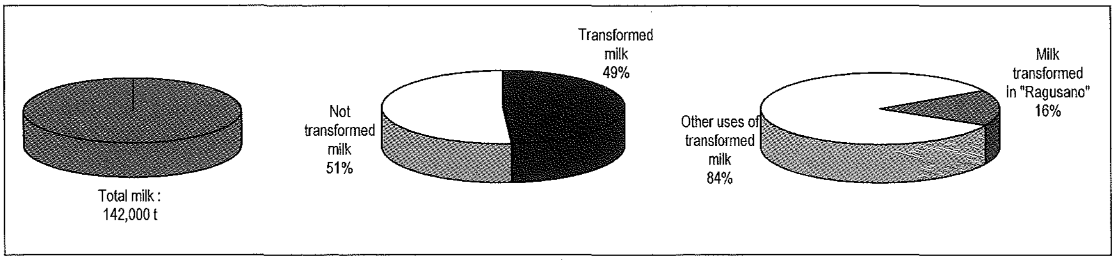


**Table 1 : Principal structural characteristics of dairy farms (1998) ***

| | |
|---|---|
| Farms with dairy farming (n.) | 1,500 |
| Milk cows (n.) | 31,500 |
| Average milk cows per farm (n.) | 21 |
| Average milk production (t/unit) | 4,5 |
| Total milk production (t) | 142,000 |
| Transformed milk (t) | 70,000 |
| - In farms (t) | 18,000 |
| - Outside farms (t) | 52,000 |

* *Our calculations on data acquired by direct research*

**Figure 2 : Total and transformed milk by destination (1998) ***

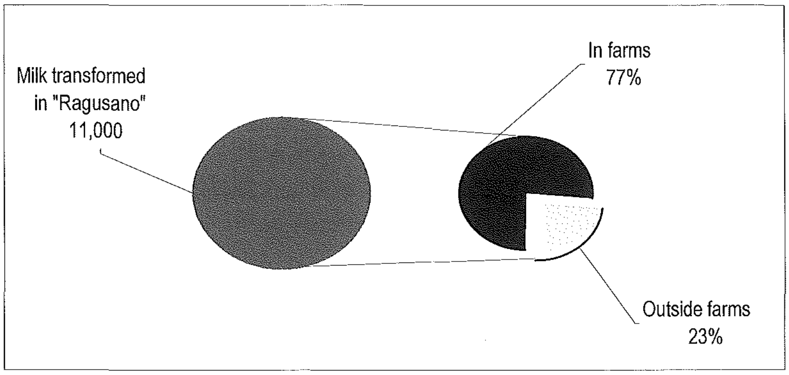



* *Our calculations on data acquired by direct research*

From the results of the surveys we can remark :

- The substantial prevalence of small and medium-sized dairy farms with a number of heads up to 25 ; in fact, the average size of cattle stocks has recently increased due to the growth in absolute terms of the stock of dairy-cattle and to the reduction of the total number of fodder-crops and livestock farms specialised in the dairy-cheese sector ;

**Figure 3 : Transformation's place of milk transformed in "Ragusano" (1998) ***




* *Our calculations on data acquired by direct research*

- The predominance of the semi-intensive system of rearing (also referred to intermediate type) which accounts for 75%-80% of the total, and the moderate role of intensive systems of rearing (15%-20%), and of wild or extensive cattle rearing (5%) ;
- The considerable importance of specialised farms (70%-75%) in the production of milk and other dairy products (various types of cheese, cottage cheese, etc.), as opposed to livestock-mixed farms (25-30%) ;
- The strong importance of "coltivatrice" farms (70%-75%) on own or leased land ; in this context, it is useful to remark that leasing of small land plots or whole large farms is quite widespread ;
- The number of milk cows equal to 31,500 ; among these we found the clear predominance of the *Frisona* breed grown in purity (44.5%) and of cows (usually named *Meticci*) that have been obtained from the cross between *Frisona*, *Modicana* and other races (31.8%) ; the presence of *Italian Bruna* (a typical breed for milk production) is in strong expansion (19%). On the other hand, the presence of *Modicana* (a pre-eminently milk breed, which was used to produce most of the milk used in the production of the *Ragusano* in the past) is evidently decreasing (2.2%) ;
- The total yearly production of milk equal to 142,000 t ;
- An average yearly milk production of 4.5 t per head ranging from 2 to 10 t/head ;
- Total milk quantities destined to transformation equal to 70,000 t (25% transformed within the farms and 75% in the cheese factories). Specific surveys have allowed an evaluation of milk transformed in *Ragusano* : about 11,000 t, of which 8,500 transformed inside farms and 2,500 t in cheese-factories. Assuming an average of 10% for the yields from milk, we obtain the total production of the *Ragusano* (1,100 t).

As we can see from the results of the analyses, the development of the sector, is quite slow because of the accumulation of structural elements of delay. Among these are :

- The great number of production and transformation units of the cheese ;
- The process of ageing of the operators of the sector ;
- A scarcely efficient bureaucracy.

On the other hand, the lack of adequate technical-agronomic assistance prevents the improvement of the milk yields, and the improvement of feeding techniques, the fertility of the soil, the introduction of technological innovations, the professional growth of the operators, etc.

## CHARACTERISTICS OF THE MARKETS

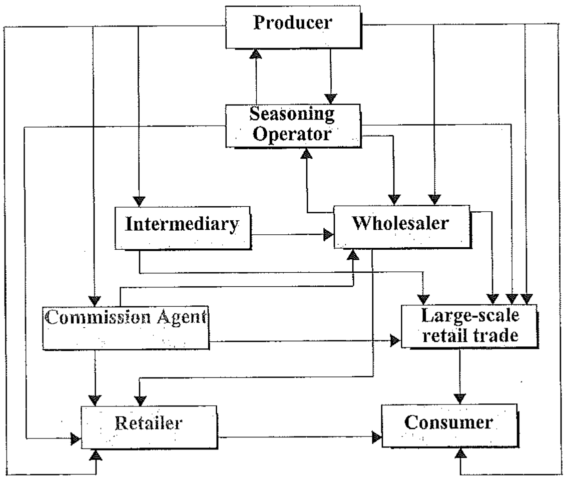
As far as product's sales are concerned we identified both "short" and "long" distribution channels. The short distribution channels relate to direct sales at the farm, or via a co-operative, to retailers, wholesalers and consumers. This can also take the form of sales points and stalls connected to the firm, for instance within the framework of farm holiday activities.

The long distribution channels relate to the sale of product to the wholesaler possibly via the service of an intermediary or an operator paid by commission. In the latter case, the product for sale is transferred to the warehouse of the agent hired to sell the product.

The economic agents which intervene in the sales and distribution circuit are shown in figure 4.

The information we collected on the distribution process of the product allows an analysis of the quantities of *Ragusano* marketed via the economic agents shown in figure 4.

**Figure 4 : Channels of sale**




At present, about 30-35% of the product is sold with the service of commission-paid agents ; about 15-20% is sold directly from the producer to the retailer, the large scale retailers and/or the final consumer. Finally, about 50-60% is sold directly from producer to wholesaler.

Figure 4 highlights that a large part of the production is dealt with by several operators. Clearly, this implies a significant rise of marketing costs, which contribute significantly to the rise of the price to the consumers.

Several reasons push the producer towards using the "long" and indirect distribution channels. These are the low degree of concentration of agricultural supply, the low tendency to innovate, the inadequate policies to improve the sector, the small dimension of the individual farms, which are also poorly linked to the lower stages in the production and marketing chain, and the lack of adequate facilities for product storage. All of these characteristics force the producer to use "long" and indirect distribution channels, with the resulting substantial increase in costs and the price to the consumer. The use of the more direct distribution channels would instead allow significant reductions in distribution costs, and a reduction of the price to the consumer.

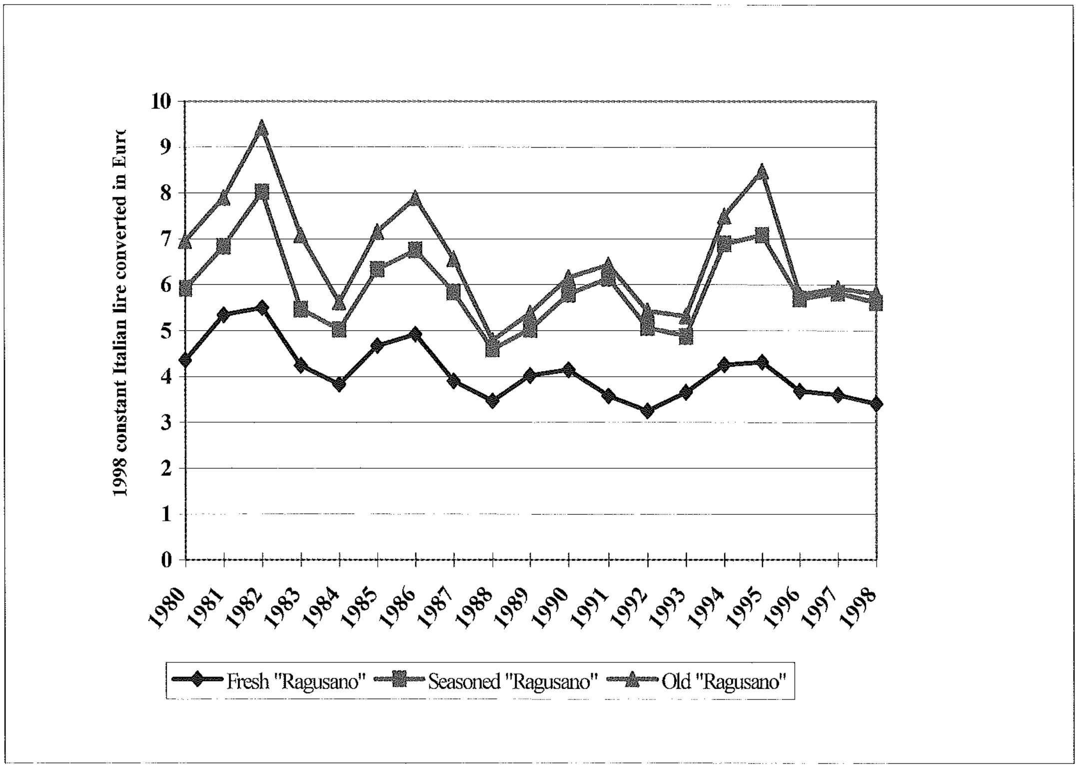
Regarding the analysis of wholesale product prices, it should be pointed out that the cheese is classified in "fresh", "seasoned" and "old" depending on the period of conservation.

- Fresh (up to 15 days) ;
- Seasoned (up to 3 month) ;
- Old (more than 3 months).

Obviously, the longer the conservation period, the higher the market price of the product.
Price trends, in constant 1998 Italian lira (and in Euro) are presented in figure 5 for the period 1980-1998.

Following the initial positive trend during the early 1980s, prices have followed an oscillating pattern with a slight tendency to decline. The negative trend has become particularly evident during the last four years. This overall pattern applies to the three product categories examined (fresh, seasoned and old). The price change from year to year is in part related to the quality of the cheese in each year. In turn, this is mainly determined by the quality of the fodder used in the production of milk. The quality of the fodder changes according to the climatic characteristics of each year, which determine its vegetative growth. The prices changes are also related to the quantity of cheese produced in the various year and to the stocks of cheese unsold during the previous year, since the existence of large stocks will determine a decrease in the price level. Finally, the price variations are also related to the changes in the price of certain other cheeses such as *Pecorino, Grana* and *Parmigiano Reggiano*, which especially effect the price of higher quality *Ragusano* product.

**Figure 5 : Evolution of average annual wholesaler prices (1980-1998) ***




**Our elaboration on data coming from the Chamber of Commerce of Ragusa*

## CONCLUSION

In the agri-food economy of Ragusa, the livestock sector holds an important role. This is because of *ad hoc* peculiarities that characterise some local productions (for example the *Ragusano* cheese, the *Provole*, the beef and pig breeds, etc.), and because of the role that this activity covers in less favourable areas, particularly in those areas in which there are poor financial resources and limited alternatives to the prevalent productions.

In the backward areas it is necessary to define a policy of "Integrated Rural Development", also taking into consideration the environmental protection and the socio-economic equilibria.

The brief conclusions of this study represent a useful source to private and public operators involved in the development of policies to support the sector.

The results of the surveys on the *Ragusano* cheese have highlighted both elements of strength and weakness, as well as some opportunities for development and factors of risk. The elements of strength include the highly typical and traditional character of the products, which derives mainly from the feeding system employed, the specific characteristics of the factors employed, the traditional working techniques and the role played by the *Consorzio per la ricerca sulla filiera lattiero casearia* and the *Consorzio di tutela*. The role of the first of these two institutions is to facilitate the improvement of the quality of the product. The role of the latter is mainly the promotion of the *Ragusano*.

The main factors of weakness seem to be :

- The high structural fragmentation of the sector, and particularly for what concerns the production, transformation, preservation and commercialisation of the cheese ; the considerable number of small and medium-sized enterprises, and their small technicaleconomic dimensions, do not allow the exploitation of increasing returns to scale ;

- The difficulty in the enforcement of the laws on the hygienic procedures pertaining to the transformation of milk ; in this respect, however, in line with the existing E.C. directives, the Sicilian Region has introduced a derogation which should facilitate the processes of adaptation to the laws in force ;
- The low contractual power of producers ;
- The high variation of the quality of the cheese ;
- In the poor links between the various stages of the production and marketing chains ;
- The limited introduction of technological innovations ;
- The inadequacy both of the forms of concentration of supply and of the aggregate management of quantities supplied ;
- The competition by other substitute typical products such as *Pecorino* ;
- The low consumer knowledge of these products, which is due both to the modest amount of advertisement and the inadequate distribution system.

The opportunities for development originate from the possibility of producing a "biological" cheese, depending on the type of rearing employed (semi-intensive) and the prevailing feeding system (which has to be from open pasture land). This also depends on the development of the demand for quality products and from the protection of these products at the European level.

The risk factors originate from the severe health legislation, from the reduction of retail outlets where most of the *Ragusano* is sold, and the high importance of price in the factors regulating consumer's demand.

The development of valid policies to support the sector should aim to expand the potential markets for the products. In particular, it is desirable to introduce policies in order to facilitate :

- The development of collective bodies to exploit increasing returns to scale and reducing the impact of current structural constraints ;
- The strengthening of the vertical integration in the production and marketing chains ;
- The standardisation of quality, with particular care for management and technological factors ;
- Quality certification ;
- The technological innovation, in order to improve the efficiency of the ageing process ;
- The increase in market visibility.

## NOTE

(1) *The work is the result of full collaboration and therefore both authors accept full responsibility for it. The actual writing of sections 1 and 3 is attributable to Filadelfio Basile, while sections 2 and 4 to Vera Teresa Foti.*

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