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Chapter

Optimal Procedures to Valorize High-Quality Traditional Dairy Products

Catia Pasta, Rosario Petriglieri and Margherita Caccamo

Abstract

Traditional cheeses represent by themselves high-quality productions that are expressions of a production system highly linked to the territory. Biodiversity factors rising from the natural system have been extensively studied, and their effect on the quality of dairy products has been scientifically shown. CoRFiLaC is among the main contributors to this field with many studies developed on traditional productions in different environments. The main goal of the chapter is to highlight through case studies the methods applied in scientific protocols in order to define, besides the identification of biodiversity factors affecting quality, and valorize health properties and safety aspects and to understand consumer reactions and intentions to purchase depending on specific characteristics of final products. The combination of research performed in every single aspect of traditional production is the real challenge and good strategy to valorize high-quality goods.

Keywords: biodiversity, consumer expectations, traditional products, marketing

1. Introduction

Traditional productions, result of a historical evolution of a territory, provide a population with richness and dignity, besides being socially useful and environmentally sustainable. All these concepts are valid for all the productions that respect natural biological cycles, but nevertheless the agro-food sector finds its best expression: the traditional production of milk and cheese implies a perfect equilibrium among mankind, animals and environment. For example, livestock overcrowding per surface unit is not allowed as it causes lack of resources. Environmental cycles and the related processes (e.g. seasonality) cannot be altered.

Globalized processes cannot follow these nature-driven rules, by altering farming systems through intensive strategies. This implies a huge increase in investments, an exasperation of production processes and, unfortunately quite often, an alteration of the environment. Thus, creating a condition of illusory wealth undergoes downward market rules and will create only the effect of subjection and poverty.

With all of this premised, this does not mean that traditional production processes cannot be supported by advanced technology. On the contrary, research has to improve and not to alter production processes.

In order to valorize any traditional production process, it is necessary primarily to understand their origins and then the motivations at the basis of their development.
and establishment, to study historical events, the human characteristics of the operators, the characteristics of bred animals, the culture of farmers ended down by generations and the technology that allowed to obtain high-quality products for that specific area. As an example, it is sufficient to think about seasonality and the availability of forage and water, technology and services.

Research needs to understand traditional production processes from inside in order to appreciate quantitative and qualitative richness of feeds, to study their nutritional and aromatic characteristics and to assess their transfer both to milk and consequently to the deriving productions.

After a preliminary phase of investigation based on the study of the production process, it is possible to evaluate eventual intervention plan for each specific sector of milk production (land cultivation, forage quality, breeding systems, farm management, milk quality) and of the dairy production process while being careful to not alter tradition and history.

However, very often the sector that needs most interventions lays in the post-production phase and in marketing, promotion and selling activities. Traditional productions are the results of a particular environment and non-replicable expression of culture and tradition. Traditional dairy products and cheeses in particular give the consumers the possibility to taste and experience a unique product deeply linked with the territory of origin, from which it draws its peculiarities. For this reason the concept of “traditional dairy product” became relevant and is conceived as a territorial brand. It represents the interaction mean between the market and consumers to promote both cheese varieties and territories.

It is important to make these products recognizable and traceable for consumers, by characterizing them scientifically and describing their properties in order to promote high-quality traditional dairy products.

2. Identification of factors influencing traditional cheese productions

CoRFiLaC is a dairy research centre that carries out research actions taking into account all the aspects of the dairy production chain, from the animal nutrition, management and animal welfare and quality of milk and dairy products to finally their consumers’ acceptance and product valorization. For these purposes, it has developed several projects, together with other national and international partners, with the aim of creating a network between the research and public institutions involved in the agricultural sector, the control bodies that certify quality products and cheese producers. To strengthen this network, a common shared strategy to support the actors of the dairy chain is necessary in order to improve the quality of the productions, to reduce the geographical isolation limits and to raise consumers’ awareness.

The real challenge is to demonstrate scientifically that traditional dairy products are healthy, high-quality and pleasant for consumers and carriers of cultural elements that provide an identity to a specific area of production.

Several and specific factors are responsible for the bio-organoleptic diversity of the traditional dairy products.

Every traditional cheese originates from complex production systems characterized by several “biodiversity factors”, such as the environment, the macro- and microclimate, the natural pasture, the breed (often autochthonous) of the animals, the use of raw milk and its natural microflora, the use of natural coagulants, the use of natural ingredients, the use of traditional equipment and the ageing conditions [1]. The characterization of such production systems is basically
important both from a scientific point of view and for the valorization of the deriving productions.

3. Marketing cheese valorization

To understand market and consumer habits is the key point to better position goods. This rule of thumb is valid also for niche products such as traditional cheeses strongly tied to the territory of origin. It is necessary to keep in mind that not all consumers are alike and that not all areas are similar in terms of background, rules, laws, custom habits and preferences. Even if brand managers are marketing experts in logistics, price promotions and advertising, most often they are not in consumer acceptance or compliance [2]. What managers miss is the level of consumer knowledge.

The influence of consumer knowledge [3] extends beyond product choice and consumption. Beliefs, attitudes and perceptions are all aspects that strongly drive consumer act of purchase. In order to better valorize cheese on the market, consumers’ knowledge is the first step to face to adopt correct marketing strategies. Besides, consumer research constitutes the base for getting hints on a potential wow effect [4] that is often personally induced when not only expectations are satisfied but consumers obtain something more.

In order to valorize niche productions strongly tied to the originating area, CoRFiLaC has always supported technical with marketing research trying to highlight important aspects under consumers’ point of view to improve market share and product selling power.

3.1 Consumer research

There are many ways to approach consumers. Primary and secondary data and qualitative and quantitative research approaches are developed in order to deeply understand consumer thinking processes. Even the new area of the Marketing 4.0 studies focus on consumers by defining a new trip across five principal A’s: aware, appeal, ask, act and advocate [4]. In various studies carried out by CoRFiLaC, one of the main objectives was to understand consumer awareness and knowledge to obtain relevant hints to affect the appealing process. In the aware phase, consumers know for what they have already experienced, listened, suggested and indirectly known through the word of mouth (WOM). In 2003 [1, 5], through a phone survey (933 Sicilian people), CoRFiLaC aimed to show the main criteria of consumer selection for traditional Sicilian cheeses and people personal definition of traditional cheese. The main criteria driving cheese consumers’ decision-making resulted to be safety food (92.3%), natural raw ingredients in the method of production (82%), healthy properties (75%) and local product (73%) and then followed by product denomination of origin (PDO) brand of recognition (68%), artisanal products (67%) and typical flavour (66%). However, external cues that have been the focus of many marketing research and have been considered to be the most important criteria for consumer decision-making (i.e. price and brand), in this study, seemed to be less relevant according to participant claims. Through a factorial analysis, we detected two main factors according to the elbow plot which together explained 83.83% of the total information generated:

- New criterion believers (51.47%), with the only exception for “price”
- Classic criterion believers (32.38%) (Table 1)
Besides, participants considered that traditional cheese had a different flavour compared to industrial one. According to a PC factor analysis, two main factors explained consumer tendency for 90.69%. Among participants there were:

- Flavour oriented, 54%
- Biodiversity fellows, 36% (Table 2)

This information was very important in building related strategies for Sicilian cheeses. In fact communication highlighted the importance of factors such as raw milk, tools, local method of production, product safety and better flavour.

Similarly, in 2013 in an international project (T-Cheesimal), CoRFiLaC carried out a study that implied different steps: (a) consumer pilot study at the beginning (56 Maltese people) and (b) face-to-face survey with Maltese consumers (1194 people) and restaurants (131 restaurants) to support marketing strategies for a local cheese called Gbejna.

Through the pilot study, CoRFiLaC tried to withdraw information concerning Maltese consumers such as consumption habits, preferences, cheese awareness, traditional cheese definitions and attitude towards both Sicilian and local Maltese cheeses. Besides, typical average portion for packaged cheeses, types of cheeses present on the shelves, prices for both local cheeses and competitors and cheese merchandising were gathered in the pilot study. The first analysis showed that Italian cheeses were highly mentioned (more than 50% of people) either for the

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<thead>
<tr>
<th>Rotated factor pattern</th>
<th>Factor % explanation</th>
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<tr>
<td></td>
<td>VAR</td>
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<tr>
<td>New criterion believers</td>
<td>8.75</td>
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<tr>
<td>Artisanal product</td>
<td>0.93</td>
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<tr>
<td>Safety food</td>
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<tr>
<td>Previous use</td>
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<tr>
<td>Locally produced</td>
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<tr>
<td>Natural raw ingredients</td>
<td>0.88</td>
</tr>
<tr>
<td>Price</td>
<td>0.88</td>
</tr>
<tr>
<td>Product denomination of origin (PDO)</td>
<td>0.87</td>
</tr>
<tr>
<td>Easy to use</td>
<td>0.76</td>
</tr>
<tr>
<td>Healthy properties</td>
<td>0.73</td>
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<tr>
<td>Classic criterion believers</td>
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<tr>
<td>WOM</td>
<td>0.91</td>
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<tr>
<td>Plain flavour</td>
<td>0.86</td>
</tr>
<tr>
<td>Industrial product</td>
<td>0.83</td>
</tr>
<tr>
<td>Packaging</td>
<td>0.77</td>
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<tr>
<td>Advertising</td>
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<tr>
<td>No OGM</td>
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<td>Brand</td>
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Table 1. Principal component (PC) factor analysis criteria of selection.
larger variety compared to other countries or for the territorial proximity. Maltese cheeses did not have a good recognition among dwellers: in fact people had a positive quality perception for imported rather than local cheeses. Maltese people, independently from the sex, defined a “traditional cheese” as a fresh product with a different taste, made both with pasture locally produced goat milk and according to the tradition of the place, and a well-known product. Therefore, from few data we found out that there was a general confusion. Italian cheeses, including Sicilian ones, due to the halo effect of the country of origin, Italy, [6] were considered per se good and identified as traditional. However, once we asked to describe what a traditional cheese meant for them, they overall indicated a fresh cheese, locally produced even if the perception about the local Gbejna was not so good. In comparison with other Sicilian products after a taste, the Gbejna was considered, on a nine-point Likert scale, appetizing, pleasant, satisfying, quite exciting as a product and not expensive and obtained a good overall evaluation. After the trial, the quality of the Gbejna was not considered so high and not so unique. The willingness to buy (WTB) was low compared to the others [7]. And people did not consider Gbejna “exactly for me” (Figure 1). The halo effect for Italian cheeses was still there. In fact, the pilot study showed that Maltese people tended to buy imported cheeses among which Italians were the preferred and often identified as traditional cheeses. The Gbejna was well known among dwellers. They used the cheese as part of their own culture but unconsciously preferred and considered imported cheeses as better products with higher quality. This implied a strategy to improve and fortify product intrinsic quality. Under a marketing point of view, it was necessary to raise product positive perception by highlighting good aspects of the product not only among dwellers but also focusing on tourists by pulling Gbejna use inside of the restaurants.

To confirm pilot study indications and deeply understand both consumer habits on a large scale, two surveys were carried out with representative samples: one on consumer population over 15 years old and another one with restaurants. A part of both studies focused on criteria affecting quality cheese perception in terms of fortifying the image of the Gbejna. In both studies sampling was withdrawn proportionally to the actual composition of the targeted population [8, 9]. For consumers, a list of nine criteria on a nine-point Likert scale (1 = very unimportant; 9 = very important) was presented [10], and a PC analysis for consistency was performed taking into account age (15–24; 25–34; 50–64; over 64), sex (female, F; male, M) and area of residence in Malta (Southern Harbour, SH; Northern Harbour, NH; Southern Eastern, SE; Western District, WE; Northern District, ND).

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<tr>
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<th>Factor % explanation</th>
<th>VAR</th>
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<tr>
<td>Flavour oriented</td>
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<tr>
<td>Different flavour</td>
<td>0.95</td>
<td>3.23</td>
<td>53.85</td>
<td>53.85</td>
</tr>
<tr>
<td>Better flavour</td>
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<td>0.94</td>
<td>2.21</td>
<td>36.83</td>
</tr>
<tr>
<td>Biodiversity fellows</td>
<td>Tools</td>
<td>0.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local usage</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw milk</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthy properties</td>
<td></td>
<td>0.85</td>
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Table 2. Principal component (PC) factor analysis of traditional cheese.
Two main components explained in the PCA are more than 65% of the variance. The main component was represented by intrinsic product qualities such as taste, pleasantness and high quality and, on the other side, perceived characteristics, such as superior quality, healthy, appetizing, uniqueness of the product and the product representing consumer personality. According to age, sex and area, the criteria worked in different ways affecting consumers (Figure 2).

In the PCA, the data showed that Gbejna was considered of a certain quality mainly from consumers between 35 and 64 years old. Women in the range 35–49 dwelling in the Western and Northern District and Southern Harbour considered the Gbejna as “A cheese for me”, appetizing, unique and pleasant. Rather men in the western area focused on the flavour and on the pleasantness of the cheese, and similarly men in the Southern Harbour considered the quality a little bit superior. However, the main target for the cheese was people in the range 50–64 years old with no area distinction. In specific men of the southern area considered the Gbejna “A cheese for them” with a good flavour, pleasant, with a superior quality, and unique. In fact, from the survey these two targets of people represented the heavy Gbejna cheese consumers (35–49 daily consumers for 14%, 50–64 daily consumers 13%, over 64 daily consumers for 10%). Hence, these consumers represented the main targets to focus in order to push Gbejna quality awareness and perception. What was interesting was the range 15–24 years old that did not consider the Gbejna as “A cheese for them”. Young people considered the product low in quality, with
an unpleasant flavour. Actually, the same target tended to identify the traditional cheese with a product they were used to since the childhood but did not represent actually a typical or local product tied with the territory. Very often the youngest tended to mention industrial imported cheeses [11].

Similarly to consumer survey, we tried to understand quality product perception under restaurants’ point of view. Managers and owners were interviewed. To get information on criteria affecting overall cheese quality perception, we proposed once again on a seven-point Likert scale (1 = very unimportant, 7 = very important).
nine criteria of course considering that the target was different (Figure 3): the importance of (1) knowing the producer, (2) PDO certification, (3) TV advertising, (4) industrial systems, (5) awareness of the place of production, (6) recommendation by sellers, (7) local origins, (8) artisanal systems and (9) traceability of the product was withdrawn by a face-to-face questionnaire (Figure 3).

Data showed that restaurants are considered as main criteria for quality perception traceability, local origin, awareness of the producer, awareness of the place of production and PDO certification. TV advertisement was considered less important. Restaurants tended to look for information from producers, sellers and strongly trusted blogs and websites. A good strategy to affect their act of purchase was to propose trials and certified products (i.e. PDO). A quality cheese was identified with a traced product, a product with local origin or whose origins were easily recognizable, a PDO certified product and a well-known place of production. Besides, they required more frequent deliveries in order to have very fresh products [12]. All these aspects were relevant to generate an advantage for Ghejna cheese compared to the imported cheeses. Therefore, a suggested strategy was to cooperate and to set up activities in order to fortify the image of the product pushing on the origin, the place and the producers and setting up a process for obtaining the PDO certification, very important for restaurants as a consequence of the tourist targets. The relevance of a brand or recognition such as the PDO is attributable to the fact that in Malta region guests exceeded 1.5 million [13] and the main tourists come from France, Germany, the United Kingdom and Italy. It is easy to get the need for restaurants to present certified products to these very high demanding customers especially for cheeses.

3.2 Packaging

In many of our project, CoRFiLaC supported local producers by realizing packaging prototypes to help small realities to better sell their products. In all studies there was a frequent problem: producers did not have time to dedicate for marketing activities. For this reason, in some projects a pack prototype was defined as an indicative way to communicate through product qualities. The prototype was generally the result of a multilevel analysis. Four levels are worth to be considered.
The first level included (1) definition of the objectives for the packaging, (2) analysis of the actual selling variety in the targeted channels and (3) analysis of the correlated communicative context by evaluating packaging dimensions, materials, merchandising, exhibition on shelves and counters and formats of all direct and indirect competitors. This approach is really powerful to define packaging strategy and to follow in order to create the right suit for the product under analysis able to communicate correctly to consumers [14].

The second level included the study of the most important elements (materials, shape, dimensions, colours, graphics elements, brand, labelling and slogan). Therefore, graphic elements and in turn brand and labelling along with slogan definitions are strongly related to consumer market analysis.

The third level was the conceptualization of the analysis in prototypes, subsequently subject to qualitative analysis, depending of course on money availability and time (focus groups, laddering interview, depth interview).

The fourth level was a first selection of prototypes based on the qualitative analysis and according to people actual message perception and selecting prototypes in line with the packaging communication objective. Then these prototypes were proposed to a larger number of final consumers, by gathering quantitative data, and the final packaging was chosen according to its ability to achieve the communication object with consumers.

In the T-Cheesimal project, the goal of the packaging was to communicate to consumers that the Gbejna:

- Was a cheese locally produced
- Was obtained using milk from local breed cows fed with natural pasture
- Represented somehow Malta
- Presented a higher quality
- Was traditional

Once data were gathered from the pilot study and from the survey with consumers, a group of ten prototypes of packaging were set up with two different slogans. A focus group with experts and with students of the University of Malta was run. People attributed each prototype a vote from 1 (the most liked packaging) to 10 (the less liked packaging), after which discussion started in order to understand their motivations. On the external aspect, we realized that they appreciated red and green colours, shape and different appearances compared to what was already present on the market, and they liked very much a graphic element present on some of them: a wave. Besides, people tended to prefer the same slogan. Hence, among the 10 packagings, we selected 5 that were evaluated from 175 people. In a random way, packaging was presented in one exhibition in Malta, and we asked to choose two of them. Then, we gave two pieces of paper to put inside the corresponding bag under the package asking to write the motivation of their choice. The packaging was selected not just according to the most preferred but considering people perception from it. The one indicated in Figure 4 was the most liked because:

- Local animals were represented in the packaging.
- The green wave both represented the natural pasture and unconsciously recalled the sea and the Maltese landscape.
• The colours were liked because they represented the Maltese flag.

• The writing was easy to get, clear and simple.

With this packaging we achieved the main goals, but not all of them. Of course for us it was a starting point to let producers raise the perception of higher-quality Gbejna cheese.

3.3 Training and word of mouth

Once a new product idea enters into a market, in order to succeed, it is important that features, characteristics and advantages reach final consumers through available information. Word of mouth is the most powerful way [15, 16]. In consumers’ perception the word of mouth reduces the risks and becomes the most important referring source especially when finding information on specific products is difficult. Nowadays [4] social influence is determining the success or the decline on the market of many products. All of us strongly trust what is communicated through the network. In the social, however, the new tendency is to jump in and out the Net to verify the information collected, strongly relying on the F factors: family, friends, fan and followers [4]. For this reason we believe that a strategy we pursued in the 2009 for Sicilian cheeses would be successful for other cheeses around the world. By collecting data on supermarkets, specialty shops and big distributions’ point of sales, we realized that people working at the daily counter did not have expertise on dairy product. This was very common inside the big distribution. Therefore, we decided to start a collaboration with a local chain to support traditional cheese selling. We set up training on local traditional cheeses by combing training and awareness but most importantly emotional experience playing on sensorial aspects and environmental comfort. We tried to combine research knowledge and selling experience in a simple way to define consumer strategy approach. To involve emotionally counters that were daily in touch with final consumers, it was the main strategy to fortify their abilities in selling and in positively affecting consumers looking for specific information. Consequently, it turned to be a strategy to increase consumers’ willingness to choose and buy these niche products. A positive word of mouth was generated on
specific products, on counter service and on the distribution chain brand [17]. A multistep flow allowed at first on Sicilian cheeses and subsequently on other projects (i.e. Gbejna) to increase product awareness, selling skills and in turn selling volume and value (Figure 5). The high turnover of people employed as counters requires a frequent and continuous training in order to support and improve the selling volume of niche products sector that does not have the possibility to invest a huge amount of money in advertising and publicity.

4. Conclusions

Every traditional cheese originates from complex production systems from which the specific bio-organoleptic properties are drawn. In order to valorize high-quality
traditional dairy products from any place of the planet, some specific practical steps are needed. First of all research needs to understand traditional production processes from the inside in order to deeply appreciate quantitative and qualitative richness of feeds, to study their nutritional and aromatic characteristics and to assess their transfer to milk and consequently to the deriving productions.

This preliminary phase tied to the production systems is the base of an action plan to follow in the production chain.

However, small producers, even when they are favourable to apply and correct specific aspects of their own method of production by adapting their farms to the research, face the lack of knowledge on consumers and final user needs under a marketing point of view.

The best product will remain unknown until consumers become not only aware of but get involved with. Therefore, research should be twofold oriented. On the one hand, research should be addressed to improve and determine traditional cheese internal qualities and characteristics to prevent contamination and to guarantee consumers safety, to provide high-quality products in any conditions standardized and not standardized and to safeguard the territory of origin and all the biodiversity factors determining the peculiarity of these dairy products.

On the other hand, research should get insights from consumer/final user criteria driving decision-making on traditional cheeses, by segmenting targets and elements on which to build incisive marketing strategies suitable to targets. These strategies should be able to affect consumer appeal and to maximize their trust process, resulting in consumers’ repeated purchasing acts, positive word of mouth and of course positive returns to small producers. In this chapter, we attempted to explore some of the ways in which behavioural aspects should be analysed along with technical product aspects in order to set up better selling and marketing strategies for traditional dairy products.

Author details

Catia Pasta*, Rosario Petriglieri and Margherita Caccamo
Consortium for the Research in the Dairy and Agro-Food Sector (CoRFiLaC), Ragusa, Italy

*Address all correspondence to: pasta@corfilac.it

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