

QUANTITATIVE AND QUALITATIVE ANALYSIS OF TRADITIONAL CHEESE PRODUCTION IN ROMANIA

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Abstract

Certification of traditional products is a voluntary quality scheme, recognized in the EU, which provides producers with viable tools to identify and promote products. The national regulation was issued in compliance with the provisions of Government Decision no. 1,016/2004 on measures for the organization and implementation of information exchange in the field of technical standards and regulations, as well as the rules on information society services between Romania and the Member States of the European Union, as well as the European Commission, as subsequently amended and supplemented. Among the conditions for attesting traditional food products is the production capacity of one or more products. The indicator on the maximum quantity of certified product/products regulated by the specific normative act allows and encourages the agricultural activities of small producers in rural areas, which have an important role in the rural economy and, in particular, in disadvantaged areas. The sustainable development of products belonging to this niche will ensure the sustainability of traditional production and the maintenance of local traditions. The traceability of agri-food products, by applying and developing the concept of "short agri-food chain" will provide consumers with fresh food from local production, at affordable prices. Easy information of consumers interested in these products is possible due to the creation and posting on the Ministry of Agriculture and Rural Development- MARD website of the National Register of Traditional Products. Through this paper, an analysis of traditional products in the category of dairy products and cheeses has been made, so as to identify the potential and promote its use for areas in Romania by registering such products, using in this sense the statistical basis of information of the National Institute of Statistics, NIS, in terms of livestock.

Key words: registration of traditional products, sustainability, short agri-food chain, rural development

INTRODUCTION

Before Romania's adhesion to the European Union, at national level, specific legislation was adopted for the protection of food categories whose tradition was well-known. Thus, the traditional product was defined for the first time in the MARD Order no. 690/2004, respectively "the product to be obtained from traditional raw materials, to present a traditional composition or a mode of production and/or processing that reflects a traditional technological process of production and/or processing and that is distinguished in clearly of other similar products belonging to the same category". This normative act has been subject to modifications/completions in order to

improve and perfect, at present, being represented by Order no. 724/2013 with subsequent amendments and completions which makes it possible for the quality scheme governing the attestation of traditional products to be accessible not only at national level but also to producers belonging to other Member States.

Having regard to the fundamental principles of the two strategies implemented by the new CAP, namely the Fork to Fork Strategy and the European Green Pact [2], in order to ensure the sustainability and sustainability of the agri-food sector, MARD, through the Strategy for the development of the agri-food sector medium and long term Horizon 2020-2030 aims to capitalize on the traditional potential of the local rural space [4].

The promotion and capitalization of these niche products whose intrinsic value is conferred by the preservation and cultivation of gastronomic habits, regional and national traditions, must correspond to the requirements and profile of consumers and at the same time respect the rules of food safety and nutrition [6].

Certification and marketing of traditional products are viable tools to identify and promote products in an easy, impactful and easily recognized way to support and promote small producers, with effect on the development of the rural economy, consumer awareness of the quality and authenticity of these products.

The concern for increasing the number of traditional products, through the use of simple recipes is justified by the importance and need for superior capitalization of local raw materials, promoting the short agri-food chain [1].

What distinguishes the category of these products from other similar foods are, in addition to the use of local raw materials, the lack of food additives in their composition, the use of a traditional recipe, a traditional mode of production and/or processing.

The benefits generated by these products consist in the socio-economic impact and protection of the environment, by creating jobs in rural areas, preserving and capitalizing on local dowry, creating a supply of healthy and nutritious food, cultivating consumer respect and awareness national culture and tradition [7].

In order to increase the visibility of Romanian products, in general, and explicitly of traditional products with a strong local/regional imprint which represents, by their very name, a national geographical area / area, specific legal instruments are created by the European Commission (regulations for their registration on quality schemes (DOP, IGP, STG) (Table 1).

Consumer preferences and orientations for traditional products are determined not only by the physiological need from a nutritional point of view but also by factors such as distinct olfactory and gustatory properties related to the emotional memory of childhood,

for the aromas of goodies prepared by grandparents [5].

Table 1. The main systems in the field of agricultural and food quality

Protected Origin Designation (PDO)	(a) designation of origin: means the name of a region, a specific place or, in exceptional cases, a country, used to describe an agricultural product or a foodstuff: — originating in that region, specific place or country, and — the quality or characteristics of which are essentially or exclusively due to a particular geographical environment with its inherent natural and human factors, and the production, processing and preparation of which take place in the defined geographical area;
Protected Geographical Indication (PGI).	(b) geographical indication: means the name of a region, a specific place or, in exceptional cases, a country, used to describe an agricultural product or a foodstuff: — originating in that region, specific place or country, and — which possesses a specific quality, reputation or other characteristics attributable to that geographical origin and the production and/or processing and/or preparation of which take place in the defined geographical area.
Traditional Specialty Guaranteed (STG)	(c) defines a traditional agricultural or food product whose specificity has been recognized by the European Community by its registration in the register. The name in order to be registered must express the specificity of the food or agricultural product. Traditional specialty guaranteed does not refer to an origin, but in order to obtain protection, the product must have a traditional composition (recipe) or a traditional way of production. The raw materials or the mode of production give the product the traditional character in relation to other products. To gain recognition, a product must be on the market for at least 30 years.

Source: Regulation EP no. 1151/2012 [3].

The concept of quality of traditional products is complex, including a multitude of factors that define it: the qualitative value of local raw materials and ingredients used, the traditional technological process used, the

specific local production method, authentic and invariable, and the packaging used, storage and transport conditions.

With regard to the category of dairy products and cheeses which is the subject, we note that, in order to be certified as traditional products, the following are necessary and decisive: the raw milk must come from the country where the finished product is obtained, which contains additives obtained by chemical synthesis (food additives, flavors, vitamins, minerals); the ingredients used in the preparation of the product must meet the same conditions as regards the composition, ie they must not contain additives obtained by chemical synthesis; the specific local production method and/or technological process must present an element or set of elements by which a product differs from other similar products belonging to the same category, giving the product tradition quality.

MATERIALS AND METHODS

The purpose of this research is to perform a quantitative and qualitative analysis of traditionally certified products in Romania, and especially those in the category of dairy products and cheeses, so as to identify the local potential of such products and promote them in order to capitalize on the materials. local prime.

The information source was Ministry of Agriculture and Rural Development, National Register of traditional products.

Currently, in Romania there are 710 traditionally certified products, of which a number of 127 is the category of dairy products and cheeses, meaning a percentage of 18 of the totals (as of 1.04.2021) (Fig. 1) [8].

For the cheese category, the interpretation of the graph above demonstrates a discrepancy between Braşov County (mountain area) where the maximum share of traditionally certified cheeses is found and other areas of Romania, where the distribution of these products is balanced between counties but obviously much smaller.

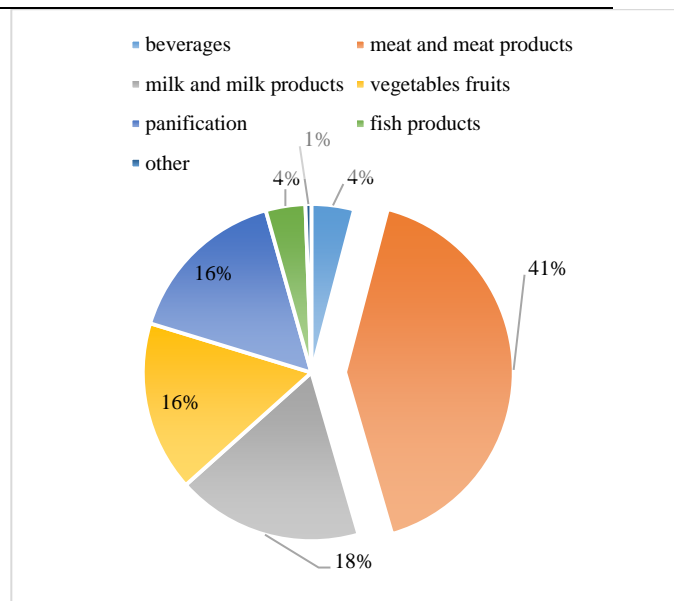


Fig. 1. Share of the number of traditional products certificates depending on the product category

Source: www.madr.ro [8].

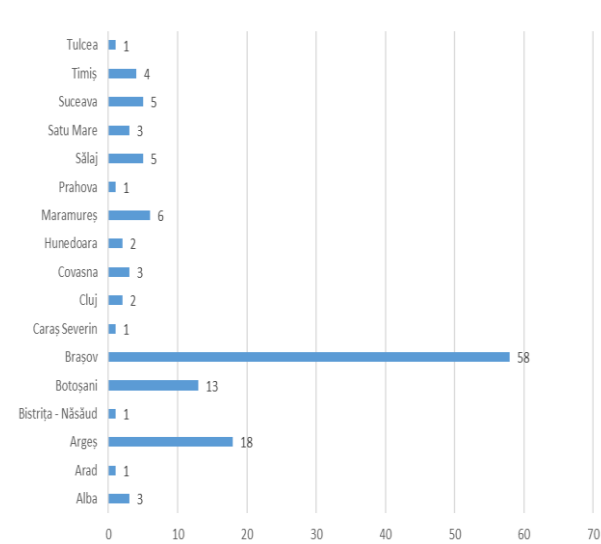


Fig. 2. Situation by counties of traditionally certified dairy products and cheeses

Source: www.madr.ro [8].

Table 2 shows that the percentage of matured products is higher than fresh ones justified by the fact that the shelf life of matured products is longer than that of fresh ones and that their price is higher than the price of fresh dairy products; It should also be noted that consumer demand dictates the direction of producers in forecasting/planning their production.

Table 2. Distribution by county of traditionally certified products in the category of dairy products and cheeses

County	Matured product	Fresh product	total
Alba	3		3
Arad	1		1
Argeş	15	3	18
Bistriţa Năsăud	1		1
Botoşani	10	3	13
Braşov	45	13	58
Caraş Severin	1		1
Cluj	2		2
Covasna	2	1	3
Hunedoara	2		2
Maramureş	3	3	6
Prahova	1		1
Sălaj	4	1	5
Satu Mare	3		3
Suceava	4	1	5
Timiş	3	1	4
Tulcea	1		1
TOTAL	101	26	127

Source: www.madr.ro [8].

Analyzing the situation presented in Table 3, it follows that the share of raw materials used in the preparation of dairy products and cheeses is milk from cow species, followed in a decreasing trend by sheep's milk, mixed milk (cow + sheep), and goat's milk.

Table 3. Distribution by county of traditionally certified products in the category of dairy products and cheeses according to the species of animal from which derives the raw material

County	Goat's milk	Mixed milk	Sheep's milk	Cow milk	Total
Alba		1	1	1	3
Arad		1			1
Argeş		3	6	9	18
Bistriţa Năsăud				1	1
Botoşani				13	13
Braşov		22	27	9	58
Caraş Severin	1				1
Cluj				2	2
Covasna				3	3
Hunedoara			1	1	2
Maramureş		4		2	6
Prahova				1	1
Sălaj	5				5
Satu Mare	2		1		3
Suceava		2		3	5
Timiş			1	3	4
Tulcea	1				1
Total	9	33	37	48	127

Source: www.madr.ro [8].

The analysis of the two graphs Fig. 3 and Fig. 4 below shows that the largest number of bovine animals is found on individual farms, compared to the number of bovine animals providing raw material for the private sector, which indicates that the raw material is not capitalized sufficiently (it is not transformed into value-added products).

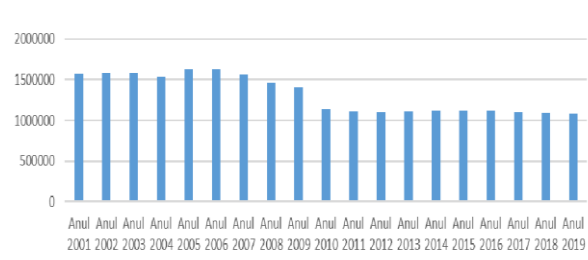


Fig. 3. Herds of animals/cows at national level, in the form of property of individual agricultural holdings Source: <http://statistici.insse.ro/> [9].

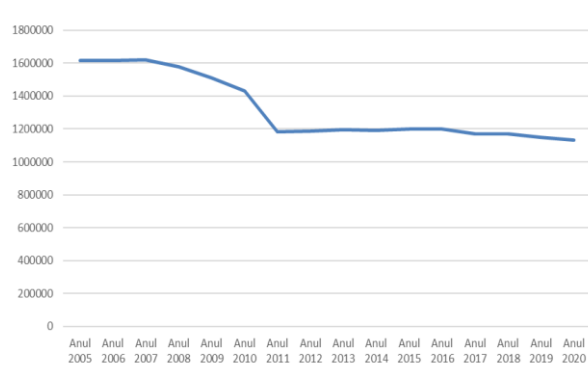


Fig. 4. Evolution of cattle (dairy cows) between 2005-2020 Source: <http://statistici.insse.ro/>[9].

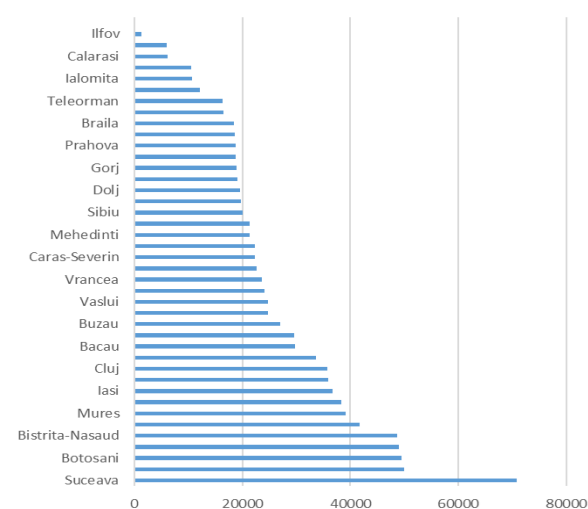


Fig. 5. Distribution of cows by counties in individual farms, in 2019 Source: <http://statistici.insse.ro/> [9].

Thus, it is necessary for public policies to ensure producers' awareness of the need and benefits provided by, on the one hand, the processing and, on the other hand, the registration of products on the quality scheme "traditional product".

Fig. 5 shows that, although there are counties/ areas with important potential (of which Suceava is in the first place) in terms of raw materials, they are insignificantly represented in the National Register of Traditional Products.

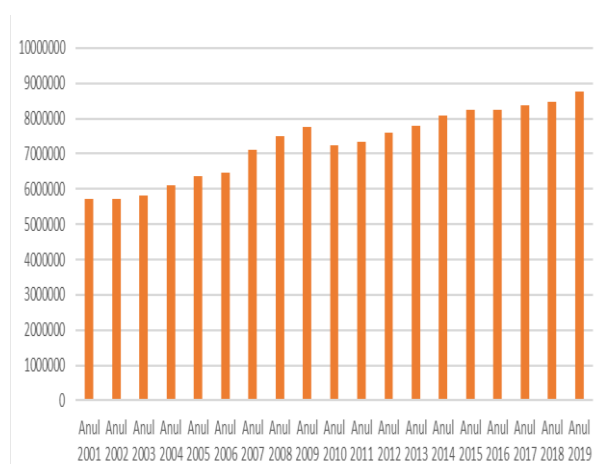


Fig. 6. Herds of animals/sheep species at national level, in the form of property of individual agricultural holdings

Source: <http://statistici.insse.ro/> [9].

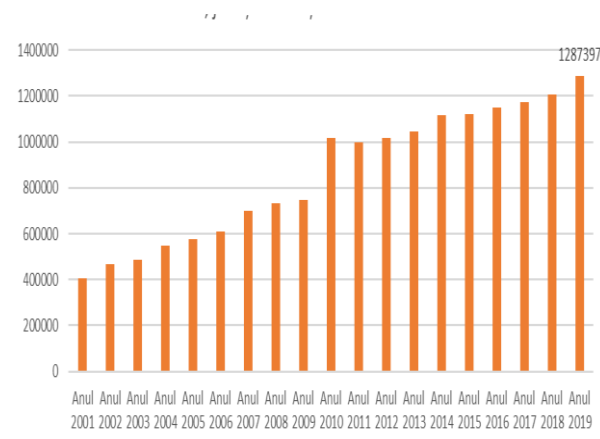


Fig. 7. Herds of animals/goat species at national level, in the form of property of individual agricultural holdings

Source: <http://statistici.insse.ro/> [9].

The analysis of the graphs on the distribution of sheep and goat herds provides the same conclusions as for cattle herds. It should be noted that Sibiu County has the most livestock of sheep and superior value of milk from this species, Telemeaua de Sibiu (Cottage cheese of Sibiu) representing a brand for Romania, being registered at European level, since 2019, as a Protected Geographical Indication.

RESULTS AND DISCUSSIONS

Currently, according to statistical data from the National Register of Traditional Products (RNPT), in Romania there are 43 economic operators whose object of activity is the manufacture of dairy products and cheeses, whose distribution is shown in the map in Fig. 8 below.



Fig. 8. Identification of producers whose activity is from the category of dairy products and cheeses in Romania

Source: www.madr.ro [8].

In Table 4 the organoleptic and physical-chemical properties are presented for the representative products in the category of matured cheeses, attested at national level [10].

The values of the organoleptic and physical-chemical parameters found in Table 5 were extracted from analysis bulletins/test reports performed by specialized laboratories, authorized and accredited in accordance with the national legislation in force.

Table 4. Organoleptic properties of dairy products and cheeses registered as a traditional product

Organoleptic properties for products in the category of cheese with scalded paste (cheese) registered as a traditional product			
aspect	Color	Taste and smell	consistency
Pressed Cheese from Botoșani County Obtained by: from whole cow's milk, unpasteurized, coagulated with natural curd. Belongs to the category of scalded cheeses			
Exterior: smooth surface, clean, without wrinkles, without stains or cracks.	White-yellow color, even	pleasant uniform, slightly salty, characteristic of scalded cheeses..	clean, compact, homogeneous paste with a fine, creamy, slightly elastic consistency, which breaks into strips when torn
Pressed Cheese from Argeș County Obtained by: from raw cow's milk, fresh, coagulated with natural curd, and the obtained curd is scalded in brine			
The external appearance is in the form of wheels and parallelepiped bars of different uniform sizes, without shell with a uniform whole appearance and without cracks.	the color of the product is light yellow, uniform throughout the table keeping the same color both on the outside and inside	Characteristic of scalded and matured cheeses made from cow's milk, without foreign smell and taste	Unctuous fine paste, homogeneous, compact without traces of mold, slightly elastic, when torn breaks into strips
Pressed Cheese from Maramureș County Obtained by: from raw, fresh, unsweetened cow's milk, curd with natural curd, and the curd obtained is scalded in brine, without the addition of preservatives or food additives			
The external appearance of the semitic paste	the color of the product is white-yellow, with a pleasant taste and the characteristic aroma imprinted by the flora of the pasture in the production area	Characteristic of scalded and matured cheeses made from cow's milk, without foreign smell and taste	Slightly elastic fine consistency, when broken it breaks into strips, glossy on the surface, with a thin shell
Pressed Cheese from Suceava County Obtained by: from raw cow's milk, fresh, coagulated with natural curd, and the curd obtained is scalded in brine and whey			
Uniform appearance, peel without spots or cracks	the color of the product is white-yellow to yellow	The taste is pleasant, slightly salty with the aroma specific to fresh milk; pleasant smell specific to scalded cheeses	Semi-hard, slightly elastic, when broken it breaks into strips
Pressed Cheese from Brașov County Obtained by: made of raw, fresh cow's milk, coagulated with natural curd			
Uniform appearance, peel without spots or cracks	the color of the product is white-yellow to yellow	Taste and pleasant smell, specific to scalded cheeses	Paste with very rare fermentation mesh, with small mesh formation
Pressed Cheese from Botoșani County Obtained by: of raw cow's milk, fresh, coagulated with natural curd, and the curd is scalded in wicker baskets			
Uniform appearance, peel without spots or cracks	the color of the product is white with yellowish hues	Taste and pleasant smell, specific to scalded cheeses	Hard, slightly elastic, rough, floury paste is not allowed
Pressed Cheese from Prahova County Obtained by: from raw, fresh cow's milk, coagulated with natural curd, and the curd obtained is scalded in mineral-rich brine from underground sources. The product can also be cold smoked			
Uniform appearance, peel without spots or cracks	the color of the product is white with yellowish hues	Taste and pleasant smell, specific to scalded cheeses	Hard, slightly elastic, rough, floury paste is not allowed

Source: Own determination.

Table 5. Physical-chemical characteristics of dairy products and cheeses, registered as a traditional product

Physical-chemical characteristics				
Product	Fat reported to SU, % (min)	Humidity, % (max)	SU % (min)	NaCl % (max)
Cheese from Botoșani	40	45	50	3
Cheese from Argeș	40	48	40	3,5
Cheese from Maramureș	44	43	56	2
Cheese from Suceava	44	45	56	2
Cheese from Brașov	42	50	50	3
Cheese from Botoșani	45	43	56	3
Cheese from Prahova	45	43	55	3

Source: Own determination.

CONCLUSIONS

In the context in which sustainable development has long been a concern and a desire for the European Union and taking into account the particularities and specificities of each Member State, it is necessary for Member States to identify ways and levers to contribute to achieving this goal.

By subscribing to the European social model, it is vital to pursue the key objectives of promoting a sustainable economy, on the one hand, by raising awareness of the models offered by sustainability in the agri-food sector, in order to ensure the transition to a sustainable economy. circular, characterized by low carbon emissions, resilience to climate change and efficient use of natural resources, as well as the creation of new jobs to stop the migration of the population from the village to the city.

The concern for the promotion of agri-food products on quality schemes is to make it mandatory for Member States to allocate 30% of Pillar I payments to ensure additional payments for four schemes that would be voluntary for farmers (organic farming, permanent grasslands, facing areas). with natural constraints and linear landscape elements), with the aim of sustainably

managing natural resources and combating climate change, and

Although the competent institutions at both European and national level have regulated a specific legislative framework that provides opportunities/support measures to stimulate agri-food producers to access quality schemes, Romania's important agri-food potential is not sufficiently exploited in this sense.

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