

Food Evaluation Regarding the Safety Market of Dairy Products in Braila County, Romania

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ARTICLE INFO	ABSTRACT
<p><i>Article history:</i> Accepted September 2024 Available online September 2024</p> <p><i>JEL Classification:</i> Q11, Q13</p> <p><i>Keywords:</i> Consumer Protection, dairy products, market safety, food legislation</p>	<p>This assessment focuses on the safety of the dairy products market in Romania, according to data provided by the National Authority for Consumer Protection (ANPC). The review covers a wide range of dairy products, including milk, cheeses, yoghurts and butter, with the aim of identifying potential risks to public health. The study used ANPC data collected from inspections and quality controls. The National Authority for Consumer Protection (ANPC) is focused on a number of specific areas, especially aiming at the continuation and strengthening of the process of European legislative harmonization, cooperation and regulation, information, education and advice of consumers and traders, control and supervision of market, as well as specific activities in the field of precious metals and stones.</p>

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1. Introduction

According to the draft normative act for the Decision on the approval of the Strategy of the National Authority for Consumer Protection in the period 2020-2024, the Consumer Protection Policy for the period 2020-2024 is based on the following general objectives to promote the interests of consumers on the market:

1. transposition and application of legislation in the field of consumer protection;
2. strengthening the information, counseling and education activities of consumers and economic operators;
3. strengthening the role of consumers and improving the protection granted to them.

The strategy aims to achieve a consumer protection in Romania similar to that existing in the member states of the European Union, including security, economic interests, information and education of consumers, as well as the promotion of consumer organizations for the development an active role in implementing the consumer protection policy (Ostrowska-Dankiewicz, 2019; Pappalardo, 2022).

The safety and quality of dairy products are crucial components of public health, particularly in regions where these products are a staple of the local diet. In Brăila County, Romania, dairy products like milk, cheese, and yogurt are integral to the daily consumption patterns of the population. The local market for these products involves a mix of small-scale producers and larger commercial entities, all contributing to the regional food economy (Ispano & Schwardmann, 2023; Lučić et al., 2022).

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Evaluating the safety of dairy products in Brăila County is vital due to several factors. First, dairy products are highly perishable and prone to contamination if not handled properly. The safety of these products is influenced by various stages of the production and supply chain, including animal health, milking practices, storage conditions, transportation, and retail environments. Secondly, the regulatory framework and enforcement of food safety standards play a significant role in ensuring that dairy products reaching consumers are safe and of high quality (Kotsanopoulos & Arvanitoyannis, 2017; Mohammed & Zheng, 2017; Wei et al., 2012).

This evaluation focuses on understanding the current status of dairy product safety in Brăila County by examining existing safety standards, production practices, and consumer awareness. It also seeks to identify potential risks associated with dairy consumption in the region and suggest strategies for improving food safety management in the local dairy market. By providing a comprehensive overview of these elements, this analysis aims to contribute to the overall efforts of enhancing food safety and protecting public health in Brăila County, Romania.

2. Literature review

The objective of the European Union's food safety policy is to protect consumers while guaranteeing the smooth functioning of the single market. Dating back to 2003, the policy focuses on the concept of traceability of both inputs (eg feed) and outputs (eg primary production, processing, storage, transport and retail). There are rigorous checks at every stage and imports (eg meat) from outside the EU must meet the same standards and go through the same checks as food produced in the EU (Jongwanich, 2009; Rao et al., 2021; Trevena et al., 2020).

The safety of dairy products is a critical concern in food markets worldwide due to the high potential for contamination and the essential role these products play in human nutrition. This literature review explores the current state of research on dairy product safety, focusing on factors influencing safety in Brăila County, Romania. It examines studies on microbial contamination, chemical residues, regulatory frameworks, consumer awareness, and quality control practices, providing a comprehensive background for understanding the specific challenges and opportunities within the local dairy market (Reddy et al., 2020; Zhang et al., 2018).

Research indicates that microbial contamination is a leading concern for dairy product safety globally, including in Romania. Studies such as those by Pintilie et al. (2015) have documented the prevalence of pathogens like *Listeria monocytogenes*, *Escherichia coli*, and *Salmonella spp.* in dairy products, especially in environments where hygiene practices are not rigorously enforced. In Brăila County, similar risks are present due to a combination of small-scale production practices and varying levels of regulatory compliance among producers (Pintilie et al., 2007). Research by Popescu et al. (2019) highlighted that local dairy producers often lack access to advanced sanitation technologies, leading to higher rates of contamination (Popescu et al., 2022).

Another significant safety concern in the dairy market is the presence of chemical residues, including antibiotics, pesticides, and hormones. These substances can enter the milk supply through contaminated feed, water, or veterinary treatments administered to dairy cattle. Călinoiu and Vodnar (2018) provided insights into the detection of chemical residues in Romanian dairy products, emphasizing that while national regulations exist, enforcement and routine monitoring are inconsistent

across different regions, including Brăila County (Cioablă et al., 2017). This inconsistency raises concerns about the effectiveness of current safety measures in protecting consumers from harmful exposures.

The regulatory framework governing dairy product safety in Romania is designed to align with European Union standards, which include directives on hygiene, traceability, and contamination control. However, Marcu et al. (2020) found that the application of these regulations at the local level, such as in Brăila County, often encounters challenges due to limited resources, insufficient training, and variability in enforcement. The literature suggests that enhancing the regulatory compliance mechanisms and providing adequate support to local producers could improve the safety of dairy products in this region (Marcu, Alberola, et al., 2019; Marcu, Elkerbout, et al., 2019).

Consumer knowledge and attitudes towards food safety significantly influence the dairy market dynamics. Research by Banu et al. (2017) demonstrated that Romanian consumers are increasingly concerned about food safety, particularly regarding dairy products. However, there is often a gap between awareness and practice, with many consumers lacking the necessary information to make informed decisions. In Brăila County, targeted education campaigns could enhance consumer awareness about the importance of purchasing dairy products from reputable sources and recognizing signs of spoilage or contamination (Mărgăoan et al., 2019).

Effective quality control systems are essential to maintaining dairy product safety throughout the supply chain, from production to retail. Studies by Gheorghe et al. (2021) have emphasized the need for comprehensive quality management systems that incorporate both preventive measures and rapid response protocols in case of contamination. In Brăila County, improvements in cold chain logistics, routine testing for contaminants, and the adoption of international best practices in dairy farming and processing could significantly enhance product safety (Beleiu et al., 2018; Văidianu et al., 2014).

In regions like Brăila County, where small-scale dairy farming is prevalent, the safety of dairy products can be particularly challenging to manage. Lungu et al. (2019) noted that small producers often face difficulties in adhering to stringent safety standards due to limited access to resources and technology. However, these producers also play a vital role in the local economy and cultural traditions. Thus, supporting small-scale farmers with training, resources, and technology could help improve safety standards without undermining their economic viability (Herencia & Mamani-Mango, 2022).

Emerging technologies, such as rapid detection methods for pathogens and contaminants, offer new opportunities for enhancing dairy safety. Research by Iancu et al. (2022) has highlighted the potential of adopting innovative solutions such as real-time monitoring systems, blockchain for traceability, and automated quality control processes in improving the safety and transparency of the dairy supply chain in Romania. Implementing such technologies in Brăila County could help bridge the gap between current practices and optimal safety standards (A. V. Iancu et al., 2023; D. A. Iancu et al., 2021).

The literature on dairy product safety in Brăila County, Romania, reveals a complex landscape influenced by microbial and chemical contamination risks, regulatory challenges, consumer behaviors, and the role of small-scale producers. While there are robust frameworks and regulations in place, their effectiveness is often compromised by local-level challenges. Enhancing food safety in the region requires a multifaceted approach that includes stricter regulatory enforcement, better consumer education, support for small-scale producers, and the adoption of innovative technologies. This review

underscores the need for ongoing research and targeted interventions to ensure the safety and quality of dairy products in Brăila County.

3. Material and methods

Within the strategy for the period 2020-2024, the National Authority for Consumer Protection envisages the development of a systematic, rigorous and well-organized prevention consumer protection policy, a quick reaction through the presence of its representatives throughout the country and an efficient activity, including cooperation with other competent state bodies, at national and local level. In addition, strengthening the partnership with civil society, in general, and with business circles, in particular, will lead to a better knowledge and understanding of consumer problems and, implicitly, to achieving a better protection of them.

When a product is deemed hazardous, market surveillance authorities have the authority to implement necessary actions based on the urgency and severity of the issue. This may include halting sales or removing the dairy product from the market entirely. The responsibility for defective dairy products lies with the manufacturer, importer, or occasionally the supplier. The general safety requirement aimed at preventing the marketing of dangerous products is achieved through the legislation on the general safety of dairy products. The general framework in which the safety requirements for different types of dairy products are established and provides consumers with all information on potential risks is created by legislation. Producers have the obligation to put on the market only dairy products that are safe for consumption and that do not present any risk to consumers. In line with the regulations outlined in Law no. 544/2001 regarding free access to information of public interest and Government Decision no. 478/2016 for the modification and completion of the Methodological Norms for the application of Law no. 544/2001 regarding free access to information of public interest, approved by Government Decision no. 123/2002, the National Authority for Consumer Protection ensured the right of citizens to obtain information of public interest. The National Authority for Consumer Protection (ANPC) in Romania is a public institution and functions as a specialized body of the central public administration, subordinate to the Government. The authority oversees and enforces the Government's strategy and policies on consumer protection, working to prevent and address practices that threaten consumer health, safety, and economic well-being.

The activity of the County Commissariat for Consumer Protection Brăila in Romania was carried out in accordance with the Control Program of the National Authority for Consumer Protection Bucharest and with the own Program of the Regional Commissariat for Consumer Protection South East Galati Region and followed:

- ◆ detecting and, as the case may be, withdrawing products from the market or from consumers
- ◆ food that poses a risk to consumers' health;
- ◆ verification of product compliance with the requirements declared or imposed by legal regulations;
- ◆ verification of compliance with the legislation regarding correct, complete and precise information a
- ◆ consumers by labeling their products, so that they have the opportunity to make a rational choice, in accordance with their interests;

- ◆ informing and advising consumers on the rights they have and, on the aspects, found during the control actions, as well as economic operators on the legal provisions in the field of consumer protection.

4. Result

Indicators regarding the activity carried out by the National Authority for Consumer Protection, respectively the activity carried out by the Brăila County Commissariat for Consumer Protection for the year 2019 on the territory of Brăila county, Romania.

Indicators resulting from the activity of CJPC Brăila in 2019:

- ◆ number of control actions carried out – 427
- ◆ the value of controlled non-compliant products and services, definitively stopped from marketing – 4,500 lei, of which non-EU goods worth 799 lei
- ◆ total number of concluded PVCCs – 122
- ◆ number of PVCCs through which contravention fines were applied – 77;
- ◆ total number of notifications and registered complaints – 401.

In 2019, the commissioners of the Brăila County Commissionerate for Consumer Protection in Romania carried out controls to verify compliance with the legal provisions on consumer protection in the marketing, compliance, labeling, presentation and advertising of drinking milk, dairy products, canned milk, partially or fully dehydrated, milk for coffee, within the national and regional control themes, in the marketing network of Brăila county.

As part of these control actions, 6 economic operators who sold such products were checked, and deviations were found in one of them, for a small amount of products (3 kg).

Thus, at a mixed store in the countryside, Brăila county, 3 kg of sheep's curd with organoleptic changes - color changes, non-specific smell - were found on sale, in addition to other products with quality deviations. The economic operator was fined 20,000 lei for this violation, the non-compliant products being withdrawn from the market immediately.

Checks were also carried out on various types of cheeses, drinking milk, etc., no deviations were found.

Indicators regarding the activity carried out by the National Authority for Consumer Protection, respectively the activity carried out by the Brăila County Commissariat for Consumer Protection for the year 2020 on the territory of Brăila County, Romania.

Indicators resulting from the activity of CJPC Brăila in 2020:

- ◆ number of control actions carried out – 446
- ◆ the value of controlled non-compliant products and services, definitively stopped from marketing – 20,952 lei, of which non-EU goods worth 2,564 lei
- ◆ total number of concluded PVCCs – 169
- ◆ number of PVCCs through which contravention fines were applied – 74;
- ◆ total number of notifications and registered complaints – 424.

In 2020, the commissioners of the Brăila County Commissionerate for Consumer Protection in Romania carried out controls to verify compliance with the legal provisions regarding consumer protection in the marketing, compliance, labeling, presentation and advertising of drinking milk, dairy products, canned milk, partially or fully dehydrated, milk for coffee, within the national and regional control themes, in the marketing network of Brăila County, Romania.

As part of these control actions, 9 economic operators who sold such products were checked, and deviations were found in 7 of them.

From the quantity of 650 kg of dairy products controlled, deviations were found in 14 kg of products, and 10 contraventional sanctions were applied, respectively 5 warnings and 5 fines, totaling 23,000 lei. It was decided to permanently stop the sale of 14 kg of dairy products, worth 275 lei.

Deviations:

- ◆ the sale of milk and dairy products with an expired consumption limit date;
- ◆ sheep's cheese for which the use-by date cannot be established (products without any label);
- ◆ erroneous information on the shelf about the nature of the product (e.g. fresh cheese preparations with additions are called sour cream on the shelf);
- ◆ non-compliance with the storage conditions in the display case of dairy products, overcrowded display case;
- ◆ failure to display sales prices in a visible place;
- ◆ incorrect display of the sales price, inconsistency between the price on the shelf and the price at the cash register;
- ◆ the use of an unverified metrological scale.

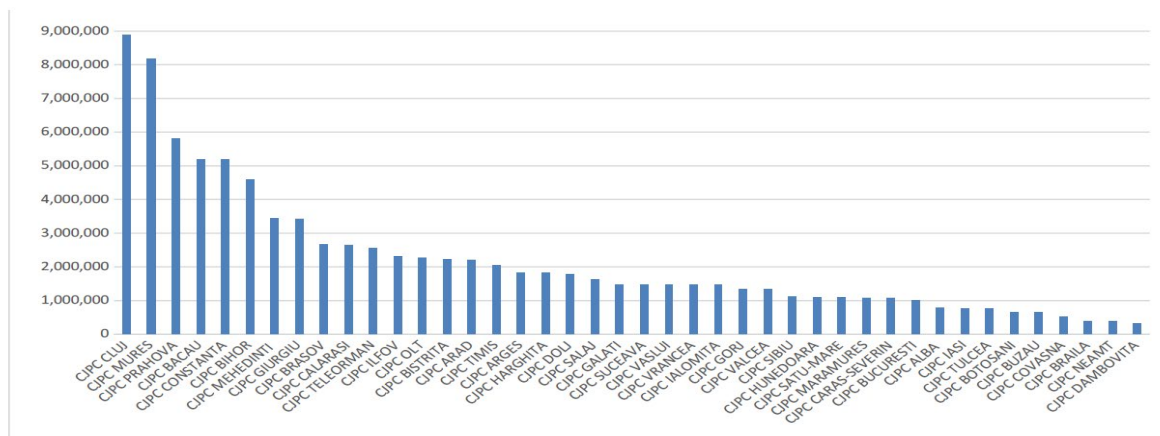


Figure 1. Total value of fines applied in 2020

Source: National Authority for Consumer Protection (ANPC) from Romania

Indicators regarding the activity carried out by the National Authority for Consumer Protection, respectively the activity carried out by the Brăila County Commissariat for Consumer Protection for the year 2021 on the territory of Brăila county, Romania.

Indicators resulting from the activity of CJPC Brăila in 2021:

- ◆ number of control actions carried out – 393
- ◆ the value of controlled non-compliant products and services, definitively stopped from marketing – 30,432 lei, of which non-EU goods worth 4,842 lei
- ◆ total number of concluded PVCCs – 150
- ◆ number of PVCCs through which contravention fines were applied – 103;
- ◆ total number of notifications and registered complaints – 441.

In 2021, the Brăila County Commissionerate for Consumer Protection in Romania carried out controls to verify compliance with the legal provisions regarding consumer protection in the marketing, compliance, labeling, presentation and advertising of drinking milk, dairy products, canned milk, partially or fully dehydrated, milk for coffee, within the national and regional control themes, in the marketing network of Brăila county. As part of these control actions, 5 economic operators who sold such products were checked, and deviations were found in 3 of them. From the quantity of 2800 kg of dairy products controlled, deviations were found for 26 kg of products, and 3 contravention fines were applied, totaling 25,000 lei. The temporary stoppage of the sale of 26 kg of dairy products, worth 817 lei, was ordered.

Deviations:

- ◆ the sale of various types of cheese without the translation of the information into Romanian or with the erroneous translation of the information on the packaging;
- ◆ displaying mixed food preparations (based on milk and vegetable fats) in the same display window with dairy products, side by side, through the way of presentation and display consumers may be misled about the nature of the products;
- ◆ the erroneous display of the sales price, suggesting a price reduction, which does not exist in reality.

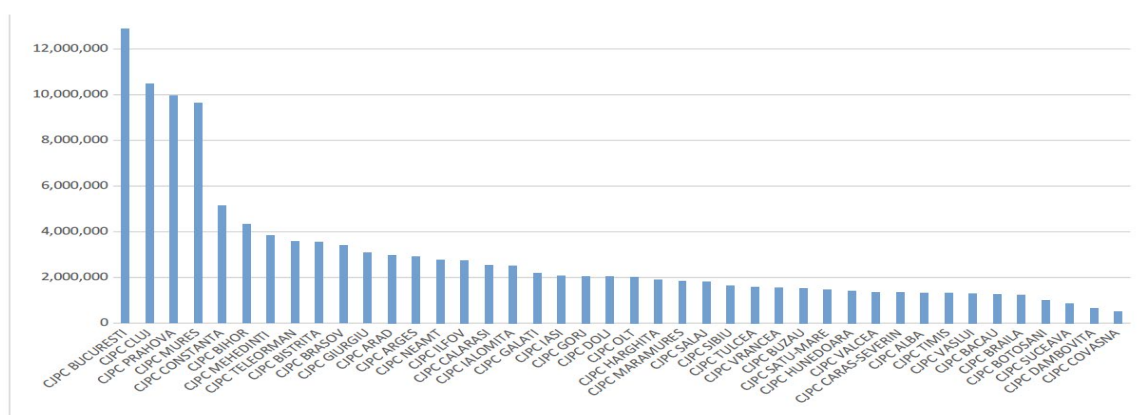


Figure 2. Total value of fines applied in 2021

Source: National Authority for Consumer Protection (ANPC) from Romania

4. Conclusions

The National Authority for Consumer Protection (ANPC) in Romania continued the work of creating a national legislative framework in the field of consumer protection, compatible with that of the European Union. Apart from the controls carried out by the public authorities in each country, consumer vigilance is very important, which is the best tool for current risk prevention. Consumers must know the following: the list of ingredients, additives, how to use the product, the expiration date of prepackaged food.

Food legislation pursues one or more general objectives regarding a high level of protection of human life and health, of consumer interests, including fair practices in the food trade, taking into account, when appropriate, the protection of animal health and welfare, of plant health and the environment.

Legislation in the field of food aims to achieve the free circulation of food manufactured or placed on the market in accordance with the principles and legislative requirements.

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