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EDUCAÇÃO COOPERATIVISTA E TERRITÓRIO: A INDICAÇÃO GEOGRÁFICA DO QUEIJO CANASTRA COMO EIXO DE APRENDIZAGEM E DESENVOLVIMENTO SUSTENTÁVEL

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RESUMO: A Indicação Geográfica (IG) do Queijo Canastra configura-se como um vetor de desenvolvimento territorial, cuja influência ultrapassa o âmbito econômico e se estende às dimensões sociais, culturais e educacionais. Este artigo analisa como a IG pode ser incorporada como instrumento pedagógico e de aprendizagem cooperativa, fortalecendo o sentimento de pertencimento, a transmissão de saberes locais e a valorização do território. A partir de uma abordagem qualitativa e do estudo de caso do Instituto Ellos de Educação, em São Roque de Minas, discute-se a integração entre práticas educacionais contextualizadas e o modelo de educação cooperativista. Os resultados demonstram que a IG, quando associada a processos educativos, potencializa a formação cidadã, contribui para a permanência dos jovens no campo e consolida vínculos entre cultura, economia e sustentabilidade. A experiência canastrense revela o potencial das IGs como eixos de aprendizagem e transformação territorial.

Palavras-chave: Indicação Geográfica, Educação Cooperativista, Desenvolvimento Territorial, Sustentabilidade, Queijo Canastra.

COOPERATIVE EDUCATION AND TERRITORY: THE GEOGRAPHICAL INDICATION OF CANASTRA CHEESE AS AN AXIS OF LEARNING AND SUSTAINABLE DEVELOPMENT

ABSTRACT: The geographical indication (GI) of Canastra Cheese stands out as a vector for territorial development that transcends economic dimensions, influencing social, cultural, and educational spheres. This article examines how GIs can function as pedagogical and cooperative learning tools, strengthening territorial identity and intergenerational knowledge transfer. Through a qualitative approach and a case study of the Ellos Institute of Education in São Roque de Minas, it discusses how contextualized pedagogical practices, inspired by cooperative education, can enhance community engagement and sustainable development. The results indicate that integrating GIs into educational processes fosters citizenship, supports youth retention in rural areas, and strengthens the links between culture, the

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economy, and sustainability. The Canastra experience highlights the transformative potential of GIs as educational and territorial tools.

Keywords: Geographical Indication, Cooperative Education, Territorial Development, Sustainability, Canastra Cheese.

1 INTRODUCTION

Geographical indications (GIs) emerge in the Brazilian scenario as instruments for territorial and cultural valorization that are capable of articulating economic, social, and environmental dimensions within the same field of action. The recognition of products and services associated with territorial origin confers legitimacy to tradition and promotes sustainable local development. In the case of Canastra Cheese, the GI represents not only a quality seal but also an identity symbol that preserves practices, knowledge, and ways of life transmitted between generations (INPI, n.d.).

In this context, education becomes a fundamental vector for the perpetuation of this knowledge, promoting dialog between tradition and innovation. Through contextualized pedagogical practices, teaching can become an instrument of belonging and social transformation. The territory, in turn, ceases to be a mere physical space and assumes the role of a formative agent, where values, identities, and competencies are constructed (UNESCO, 2010).

The objective of this article is to analyze how the geographical indication (GI) of Canastra Cheese acts as a link between education and sustainable development, highlighting the relevance of cooperative education as a model for holistic education. It seeks to understand how educational practices associated with the GI contribute to cultural appreciation, the retention of young people in rural areas, and the strengthening of regional development.

2 MATERIALS AND METHODS

This research adopts a qualitative, interpretive, and descriptive approach, grounded in document analysis and case study, with the aim of understanding the interfaces between education, geographical indications (GIs), and sustainable territorial development. This approach seeks to interpret the meanings, practices, and discourses that emerge from the relationship between educational institutions and certified territories, considering the role of GIs as instruments of cultural and pedagogical valorization.

The Serra da Canastra, located in the central-west region of Minas Gerais, is an emblematic territory of Brazilian agri-food culture. The region is home to two prominent certifications: the Geographical Indication (GI) for Canastra Cheese and the Protected Designation of Origin (PDO) for Canastra Coffee, both of which are recognized by the National Institute of Industrial Property (INPI).

The Geographical Indication (GI) for Canastra Cheese was granted in 2012 to the Association of Canastra Cheese Producers (Aprocan), recognizing the unique artisanal method of cheese production using raw milk, natural ferment ("pingo"), and specific maturation under environmental conditions typical of the region. The Protected Designation of Origin (PDO) for Canastra Coffee, registered in 2022, reflects the combination of terroir, altitude, soils, and sustainable agricultural practices, giving the product a unique sensory and environmental identity.

These geographical indications (GIs) transcend their market function, constituting intangible assets that integrate science, tradition, and sustainability. In the educational context, they become potential pedagogical tools, allowing for the integration of school curricula and local know-how, strengthening territorial identity and promoting education for sustainable development.

Data collection was carried out predominantly through document analysis and

by consulting secondary and institutional sources.

- Technical Notebooks of the Canastra Geographical Indications (Cheese and Coffee), which detail the criteria for territorial delimitation, production processes, quality control methods and governance mechanisms;
- Official reports and publications from institutions such as the Ministry of Agriculture and Livestock (MAPA), the National Institute of Industrial Property (INPI), and the Brazilian Micro and Small Business Support Service (SEBRAE);
- Scientific publications on cooperative education, territorial management, and the valorization of traditional knowledge;
- Specialized reports and technical dissemination materials published in media outlets such as *MundoCoop* and *Somos Cooperativismo*;
- Institutional and pedagogical documents from the Ellos Institute of Education were selected as the empirical unit of the case study.

The case study was developed in conjunction with the Ellos Institute, which is located in São Roque de Minas, a municipality within the geographical area of the Canastra Geographical Indications. The choice is justified by the institution's work on projects integrating school, community, and productive territory, linking innovative pedagogical practices to local development.

The triangulation between technical documents, scientific literature, and case study data ensured the consistency and interpretative validity of the results, allowing us to understand how the geographical indications (GIs) of Canastra are configured as educational and cultural platforms, integrating formal education, cooperative training, and the valorization of the territory.

3. RESULTS AND DISCUSSION

3.1 Education and geographical indication: conceptual interfaces

Education is a dynamic social process that, throughout history, has consolidated itself as one of the fundamental pillars of human and collective transformation. According to the UNESCO report (Delors et al., 1998), four dimensions guide learning: learning to know, learning to do, learning to live together, and learning to be. Each of these finds a parallel in the practices of communities linked to geographical indications (GIs), where technical knowledge and traditional know-how coexist.

In the case of Canastra Cheese, the geographical indication (GI) not only protects the product but also recognizes an intangible heritage composed of practices, values, and meanings that structure local life. The inclusion of this content in formal education contributes to strengthening territorial identity and promoting the appreciation of productive culture. Thus, the GI acts as an interdisciplinary pedagogical resource, connecting science, history, economics, and ecology.

Furthermore, the educational approach linked to geographical indications (GIs) responds to the contemporary challenge of integrating scientific knowledge and local knowledge, stimulating critical thinking and respect for cultural diversity, which are central principles of SDG 4 of the 2030 Agenda (Brazil, 2025).

3.2 Interdisciplinary potential and pedagogical innovation

Geographical indications (GIs) offer a unique opportunity for interdisciplinary teaching, as they connect multiple fields of knowledge: geography, history, biology, chemistry, economics, and territorial marketing. Through them, it is possible to explore the concepts of production chains, sustainability, and culture in connection with the students' lived reality.

From a methodological standpoint, active learning methodologies and the STEAM model (science, technology, engineering, arts, and mathematics) prove compatible with the approach of geographical indications (GIs). Learning based on local problems, such as milk management, artisanal cheese production, and cooperative management, transforms the student into a protagonist and stimulates curiosity, innovation, and community engagement.

The pedagogical use of geographical indications (GIs) also contributes to combating the fragmentation of education, favoring territorialized learning. By understanding the value of local products, students begin to recognize their role in the environmental and cultural conservation of the territory.

3.3 Cooperative education as a transformative foundation

Educational cooperativism emerges as a central tool for integrating learning, solidarity, and local development. From the origins of the cooperative movement with the Rochdale Pioneers in 1844 to contemporary Brazilian experiences, the principles of education and information are essential for strengthening communities (Ferreira; Sousa, 2018).

Brazilian legislation, especially Law No. 5,764/71 and Complementary Law No. 196/2022, establishes cooperative education as a right and a duty of cooperatives, promoting the technical and social training of their members. This educational approach is similar to the proposal of geographical indications (GIs) in seeking the autonomy and protagonism of individuals, encouraging coresponsibility and endogenous development.

According to Schneider and Hendges (2006), cooperative education fosters participatory management and a sense of community, aspects that are also reflected in the governance of geographical indications (GI). Both structures value cooperation, ethics, and solidarity as foundations for sustainable growth.

3.4 Case Study: Ellos Institute of Education

Located in São Roque de Minas, a municipality within the geographical area of the Canastra Cheese Geographical Indication (GI), the Ellos Institute of Education represents unique experience in integrating education, cooperativism, and territorial development. Originating from the Sarom Educational Cooperative (CES), founded in 1999, the Institute emerged from a community movement seeking to offer alternatives to youth dropout and rural exodus, which were recurring phenomena until the 1990s. The creation of the cooperative resulted from the engagement of local families, with the support of Sicoob Sarom, a credit cooperative that played a central role in the economic and social development of the region.

The genesis of the Ellos Institute illustrates the transformative potential of cooperative educational initiatives. Since its founding, the institution has trained hundreds of students, most of whom have remained active in their own communities, contributing to the strengthening of human capital and the generation of new local leaders. This experience embodies one of the fundamental principles of cooperativism—the training of leaders committed to community development—and translates, in practice, the social function of the school as an agent of territorial transformation.

The educational project of the Ellos Institute is underpinned by the values synthesized in the acronym “ELLOS”: Ethics, Freedom, Leadership, Organization, and Solidarity. These principles guide an educational model based on active and contextualized learning, in which the territory is conceived as an educational space. The subjects of agroeconomics, financial education, and territorial management explore the functioning of local production chains—especially Canastra cheese, honey, and coffee—allowing students to understand aspects of costs, commercialization, territorial marketing, and economic sustainability.

Beyond technical training, the Institute emphasizes the socioeducational and cultural dimension of learning. Projects such as *"Pride of My Roots"* and *"Riches of Canastra"* promote intergenerational dialog between young people, producers, and families, valuing traditional know-how and empirical knowledge accumulated over generations. From this perspective, grandparents and local producers assume the role of informal educators, contributing to the transmission of cultural values, productive practices, and territorial identities.

The work of the Ellos Institute is directly linked to the CoopEducação Movement, a program implemented in 2013 by Sicoob Sarom, which aims to foster a cooperative, entrepreneurial, and financial culture in public and private schools. The program has expanded throughout Minas Gerais, reaching more than 30,000 young people and children in 16 municipalities and strengthening the connection between education, citizenship, and sustainable development (Oliveira; Oliveira, 2024). According to the authors, the implementation of cooperative educational programs is aligned with the Law of Guidelines and Bases of National Education (LDB 9.394/96), which advocates the formation of autonomous and critical individuals capable of developing skills and values through pedagogical practices integrated into the territory.

CoopEducação Movement is coordinated with partner institutions, such as the OCB System, the Central Bank of Brazil, and SEBRAE, which collaborate in structuring methodologies focused on cooperativism, financial education, and entrepreneurship, respectively. These partnerships enhance the adoption of active methodologies, such as *project-based learning* and *gamification*, in line with the National Common Curriculum Base (BNCC), promoting innovative and socially relevant educational experiences.

The Ellos Institute therefore demonstrates that the geographical indication of Canastra Cheese goes beyond the productive and commercial dimension, also configuring itself as an instrument of learning and territorial strengthening. The school acts as a link between civic education, economic sustainability and cultural appreciation, demonstrating that cooperative education can constitute an effective strategy for social rooting, pedagogical innovation and sustainable rural development (Haddara; Skanes, 2007; Xue; Li; Li, 2021).

3.5 Public policies, universities and territorial development

Geographical indications in Brazil are still in the process of consolidation, facing challenges ranging from institutional strengthening to the dissemination of knowledge among producers and consumers. However, the growing number of registrations and interest from new regions demonstrate the strategic potential of GIs for sustainable development and the enhancement of territories (MAPA, 2024).

For this expansion to occur in a structured manner, public policies for education and innovation are essential. Institutions such as INPI (National Institute of Industrial Property), MAPA (Ministry of Agriculture, Livestock and Supply), and EMBRAPA (Brazilian Agricultural Research Corporation) play central roles in legitimizing and providing technical support to geographical indications (GIs), but their action can be enhanced through collaboration with universities and basic education networks. The integration between the fields of education, research, and extension becomes fundamental to consolidating technical and cultural knowledge about GIs, promoting the transfer of knowledge between academia and the community.

In higher education, public universities, such as ESALQ/USP, have contributed to the consolidation of participatory methodologies for territorial evaluation and management, fostering the training of professionals capable of working in an interdisciplinary manner. The university's three-pronged approach—teaching, research, and outreach—constitutes the axis that connects scientific knowledge to social practice, allowing projects on geographical indications (GIs) to be

used both as instruments of learning and social transformation.

University extension programs, in particular, play a decisive role in the dissemination of geographical indications (GIs). Through workshops, seminars, field days, and environmental education programs, they act as a bridge between scientific knowledge and popular wisdom, allowing producers and students to develop joint solutions. This feedback process broadens the social legitimacy of GIs and strengthens community cohesion, one of the principles of sustainable territorial development (Brazil, 2025).

Furthermore, there is fertile ground for the creation of interinstitutional programs that integrate cooperative education, educational tourism, and territorial identity. Educational tourism associated with geographical indications (GIs), such as the Canastra Cheese routes, allows students to experience productive, cultural, and environmental practices firsthand, developing socioemotional skills and a sense of belonging. Countries such as France and Italy have been exploring this integration for decades, demonstrating its replicable potential in the Brazilian context.

Therefore, public policies focused on education and territorial development should consider geographical indications (GIs) as strategic instruments for contextualized education, social innovation, and cultural preservation. By incorporating GIs into the formal curriculum, a link is created between technical knowledge and traditional wisdom, promoting human development, sustainability, and the strengthening of local communities.

3.6 Designation of the Origin of Canastra Coffee and its Integrated Educational Potential

The Designation of Origin (DO) of Canastra Coffee, recognized for its significant territorial representation, also constitutes a powerful pedagogical and cultural instrument. The set of practices described in the Technical Specifications Booklet (INPI, n.d.), which encompasses everything from geographical delimitation and soil management to harvesting, postharvesting, processing, and roasting, reflects a complex articulation between science, tradition, and sustainability. This structure, when transposed to the educational field, enables the development of formative actions that value the territory, agricultural know-how, and the principles of environmental conservation, which are fundamental to the 2030 Agenda and SDG 4, focused on quality and contextualized education (UNESCO, 2017).

The Protected Designation of Origin (PDO) territory encompasses ten municipalities—Medeiros, Bambuí, Doresópolis, Pimenta, Piumhi, Capitólio, São João Batista do Glória, Vargem Bonita, São Roque de Minas, and Delfinópolis—which together form a diverse landscape with altitudes ranging from 602 to 1,502 meters and varied soils (Latossols, Argisols, and Cambisols, among others). This natural and cultural heterogeneity can be explored as a pedagogical axis, allowing the inclusion of coffee as an integrating theme in multiple stages of school education. The PDO is not limited to quality certification but expresses a productive and environmental identity that can be appropriated as interdisciplinary content, connecting scientific, environmental, and territorial education.

3.6.1 Early Childhood Education and Elementary Education: the territory as a space for discovery

In early childhood education and the initial years of elementary school, Canastra coffee can be introduced as a theme for heritage and environmental education, stimulating the perception of the territory and the relationships between nature and culture. By observing the landscape, recognizing plants, soils, and rainfall cycles becomes a resource for playful and investigative activities, such as experimental gardens, storytelling about work in the field, and guided visits to small farms.

These actions foster the development of

scientific curiosity and environmental awareness, bringing students closer to local realities. The study of coffee cultivation can also be associated with values such as solidarity, cooperation, and respect for rural work, promoting a critical view of the importance of family farming and responsible consumption.

3.6.2 Middle School and high school: curricular integration and active methodologies

At subsequent levels, the educational potential of IGs expands by enabling interdisciplinarity among science, geography, history, and economics and exploring DO as a real-world case of territorial governance and social innovation.

Activities such as STEAM projects (science, technology, engineering, and arts) and mathematics programs can cover everything from the physical–chemical analysis of soil and water to studies of territorial marketing and sustainable production chains. The cultivation process, which involves practices for conserving water sources, soil management, and organic fertilization, can be used in practical classes and experiments in school laboratories, promoting problem-based learning (PBL). Programs such as "Coffee and the Landscape of Canastra" could integrate scientific drawing workshops, experimentation with plants, and debates on the local economy and sustainability, bringing young people closer to the agri-food heritage and professions in the field.

3.6.3 Technical Education and Vocational Training: Applied Science and Rural Innovation

Within the context of technical and vocational education, Café da Canastra presents itself as a living laboratory of agro-industrial innovation. The practices described in the technical manual—such as humidity control, pest management, sensory evaluation, and processing—constitute essential formative content in courses in agriculture, agro-industry, agronomy, environmental management, and food analysis.

The creation of technical modules integrated into the OD may involve the following:

- Training in good agricultural and postharvest practices;
- Roasting and sensory analysis workshops, in partnership with cooperatives and the Regulatory Council (Acanastra);
- Training in traceability and origin certification;
- Courses on entrepreneurship and the creative economy in rural areas.

These initiatives, coordinated with Acanastra and institutions such as SENAR and the Federal Institutes, strengthen the link between technical knowledge and traditional wisdom, expanding employability and family succession on rural properties.

3.6.4 Higher Education and University Extension: applied research and territorial development

In universities, Canastra Coffee represents a platform for interdisciplinary teaching, research, and outreach, where the fields of agronomy, food engineering, economics, administration, education, and social sciences can converge.

Applied research projects can investigate the microclimatic effects of altitude on the sensory quality of coffee, the socioeconomic impact of the protected design of origin (PDO) on producing communities, or even the efficiency of agroecological practices and sustainable management.

University extension programs can contribute to the dissemination of scientific and technological knowledge through workshops, seminars, and field days, fostering closer ties between academia and the producing community. Short courses, lectures, and technical visits can strengthen knowledge transfer and empower farmers in the territorial

management of protected designation of origin (PDO).

Furthermore, the production of interactive educational resources—videos, podcasts, booklets, and digital platforms—can democratize access to knowledge, valuing the cultural identity of Canastra and stimulating educational tourism linked to coffee farming.

3.6.5 Continuing education, culture and belonging

The Canastra Coffee Designation of Origin (DO) also offers fertile ground for continuing education and civic training programs aimed at both rural youth and local teachers and leaders. The creation of territorial education centers could articulate academic and community knowledge, promoting intergenerational exchanges and the construction of a collective memory about coffee and the territory. Events such as the "Canastra Coffee Week" or the "Festival of Knowledge and Flavor" can integrate lectures, tastings, exhibitions, and cultural workshops, stimulating a sense of belonging and recognition of the DO as intangible heritage and an instrument of sustainable development. The Canastra Coffee Designation of Origin transcends the economic function of quality certification and assumes educational and social relevance. Its pedagogical application at different educational levels promotes the appreciation of the territory, scientific dissemination, and cultural and environmental sustainability, consolidating a model of integrated territorial education.

By combining science and tradition, education based on the practices of the protected designation of origin (PDO) enhances the formation of critical citizens who are capable of understanding and preserving Brazilian agri-food heritage. This integration between education and geographical indication reinforces the perspective of endogenous development, which is sustained by local knowledge, social innovation, and collective responsibility for the conservation of Canastra.

3.7 The Geographical Indication of Canastra Cheese and its Integration with Education

The geographical indication (GI) for Canastra Cheese (INPI, n.d.) represents a milestone in valuing traditional knowledge, agri-food practices, and the territorial identity of the Serra da Canastra region. More than just being a seal of origin, the GI symbolizes a synthesis between empirical knowledge and applied science, expressing the historical relationship between the environment, the way of life of rural families, and regional food culture. By defining rigorous parameters regarding the territory, herd management, artisanal manufacturing process, and quality control standards, the Technical Specifications Booklet for the Canastra GI also provides fertile ground for scientific and civic education linked to sustainable territorial development.

The IP territory encompasses the municipalities of São Roque de Minas, Vargem Bonita, Medeiros, Bambuí, Delfinópolis, Piumhi, Tapiraí, and São João Batista do Glória, characterized by a tropical highland climate, altitudes between 637 and 1,485 meters, and cerrado soils. This natural and cultural configuration, associated with the artisanal production of raw cheese, creates unique conditions for contextualized education, one that links teaching to the territory and local heritage (Brandão, 2002; Caldart, 2004). The production process, described in detail in the technical manual, can be transformed into an interdisciplinary teaching resource that connects science, history, geography, biology, chemistry, economics, and culture, reinforcing the protagonism of the communities and the recognition of traditional know-how as a legitimate form of knowledge.

3.7.1 Early Childhood and Elementary Education: Heritage as a Sensory Experience

In the early stages of education, Canastra cheese can be incorporated as a cross-curricular theme in heritage and food education projects,

promoting the appreciation of local traditions and an understanding of the relationships between people, animals, and the environment. Activities involving landscape observation, recognition of cows and forage plants, storytelling about milk production and the cheese-making cycle are strategies that stimulate curiosity, empathy, and respect for rural practices.

Artisanal production can be explored through playful experiments, such as simulations of the milk coagulation process and sensory tasting workshops, which combine play and learning. These experiences help develop early territorial awareness, where food is understood not only as a consumer product but also as an expression of culture, biodiversity, and collective work.

3.7.2 Middle School and High School: Interdisciplinarity and Everyday Science

At subsequent levels, the Canastra IP offers a privileged interdisciplinary field for the development of scientific and socioenvironmental skills. The composition of the cheese (raw milk, natural ferment "pingo", rennet, and salt) can be explored in science and chemistry classes, addressing topics such as lactic fermentation, food microbiology, and food safety.

The herd management practices and preservation of natural pastures, described in the technical booklet, allow for the study of the ecology of the Cerrado biome and agricultural sustainability, connecting curricular content to local practices. In geography and history, the theme makes it possible to discuss the processes of territorialization and the cultural formation of Minas Gerais, integrating teaching in a contextualized way.

Active methodologies, such as project-based learning (PBL) and STEAM education, can be applied to projects such as "The Know-How of Canastra Cheese," which involve scientific experimentation, interviews with producers, audiovisual recordings, and school exhibitions. These processes stimulate critical thinking, autonomy, and respect for traditional practices.

3.7.3 Technical and Professional Education: know-how as a social technology

Within the context of technical education, Canastra cheese is an exemplary tool for teaching the agro-industry, animal husbandry, and rural management, combining technical knowledge with traditional values. The stages of the process described in the technical manual, from obtaining the raw material to maturation and cleaning, can form part of practical curricular units on hygiene, microbiology, quality control, and food traceability.

Institutions such as SENAR, Federal Institutes, and agricultural schools can develop short courses and workshops to improve skills in the following ways:

- Good milking practices and artisanal cheese making;
- Management of family-run cheese dairies and marketing with IP certification;
- Technological innovation in maturation and storage;
- Rural tourism and territorial marketing linked to Canastra.

Furthermore, integration with the APROCAN Regulatory Council can enable technical certification programs and continuing education for producers, transforming the production space into a teaching and extension laboratory. This collaboration contributes to strengthening rural youth and encouraging family succession and the continuity of agri-food heritage.

3.7.4 Higher Education and University Extension: applied research and territorial education

In universities, the Canastra Indigenous Property (IP) consolidates itself as an object of interdisciplinary study, connecting scientific research to the cultural and economic

valorization of the territory. The meticulous description of the production process in the technical manual offers an empirical basis for research in microbiology, food engineering, sustainability, regional economics, and the anthropology of food.

University extension, according to the formative principle of the teaching-research-extension tripod, can be operationalized through integrated projects involving technical workshops, scientific events, and itinerant rural education laboratories. Extension programs can support the development of multimedia teaching materials—videos, podcasts, booklets, and digital platforms—regarding the cheese production cycle, sustainable management, and the cultural identity of Canastra.

The creation of educational routes for Canastra Cheese, with guided visits to property and maturation centers, can integrate educational tourism with higher education and teacher training, consolidating a model of experiential and territorialized education.

3.7.5 Continuing education and cultural appreciation

Education linked to the Canastra Protected Geographical Indication (PGI) is not limited to formal training. It can expand into continuing and popular education programs aimed at farmers, young people, and rural women. Intergenerational workshops, such as the "Knowledge and Flavors of Canastra" project, can record and disseminate traditional knowledge, linking it to contemporary science and good sanitary practices. In this sense, the promotion of educational festivals, quality competitions, and knowledge fairs strengthens the sense of belonging and self-esteem of the producing communities while promoting social learning and valuing the territory as a space for culture and innovation.

The Protected Geographical Indication (PGI) for Canastra Cheese transcends its certifying function and becomes a pedagogical, scientific, and cultural instrument. Its integration into different levels of education reinforces the link between education, identity, and sustainability, transforming the territory into a living learning space. By incorporating artisanal know-how into school and university curricula, the Canastra PGI promotes an education that recognizes the value of work, tradition, and science applied to daily rural life. This synergy contributes to endogenous territorial development, where learning not only transmits knowledge but also preserves and recreates local culture, strengthening the agrofood and human heritage of Canastra.

4 CONCLUSIONS

An analysis of the Canastra Cheese Geographical Indication experience reveals that recognizing a product's origin can transcend its economic dimension, becoming an educational, social, and cultural project. On the basis of the case study of the Ellos Institute of Education, the integration of cooperative education and territorial identity constitutes an effective path to sustainable development and combating rural exodus.

Pedagogical practices based on local reality, intergenerational dialog, and the link between school and community foster the integration of young people into the countryside, strengthening their sense of belonging and collective self-esteem. In this sense, IGs (integrated geosciences) act as instruments for meaningful learning, connecting formal knowledge to empirical and productive experiences.

Beyond its educational implications, the Canastra Geographical Indication has the potential to inspire intersectoral public policies that unite culture, the economy, the environment, and education. The cooperative education model applied to the territory shows that civic education and the appreciation of local culture can go hand in hand, resulting in more resilient, creative, and supportive communities.

It can be concluded that geographical indication can be understood as a pedagogy of the territory that is capable of integrating teaching, practice, and identity. By recognizing

and valuing traditional know-how, a virtuous cycle of learning and sustainability is promoted, in which the territory educates and is educated, reaffirming the role of education as a pillar of rural development and cultural preservation.

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