# THE CONCEPT OF AGRI-GASTRONOMY

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Abstract. The study brings to the fore a reality expressed by the well-known phrase "From Farm to Fork", describing as a new concept the synergy of scientific, managerial abd operational integration at production and processing level between agriculture (with all its fields) and gastronomy (with all its nuances its). The notion of agri-gastronomy is analyzed, to which, beyond definition, the multi-integrated (integronic) polyvalence of the two fields of activity is complemented. The work highlights the paradigmatic overlap of the two branches: "agriculture", i.e. the production of products of vegetable and animal origin, as raw materials necessary for "gastronomy" in high-quality culinary production. The objective is the awareness necessary to optimize the production, processing and consumption of food products from agriculture, with an emphasis on quality, taste and traditional know-how. The pragmatic solutions generated by this concept aim at qualitative emergence, as well as encouraging collaboration between producers, processors and restaurateurs, in order to offer consumers authentic and tasty culinary experiences, while contributing to the economic and social development of the local community and the territorial area in question.

**Keywords:** agri-gastronomy, quality, emergence, integration, sustainability.

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### 1. Introduction

The study focused on the reference issues of the topic addressed, taking into account the current international context and the situation of the Romanian food system at national and local level [8, 13]. In developing the concept, we started from the aspects of territorial food programs, as the conceptual basis for systematization and generalization of the concept. As a pragmatic aim, the study describes the typology of personal or institutional relationships on the line of food production and processing, culinary preparation and impact on consumers [1, 6, 9, 19].

The supporting reference in our approach is the concept of integrated food policy [12], so that the subject of this study is complementary by deepening the specific and direct relationship between agricultural production and gastronomic preparation. The general framework therefore indicates that food integration is a unified and coherent concept which seeks to ensure that the population has access to safe, healthy, diversified, high-quality and sufficient food produced in conditions that are economically and socially acceptable for all, which promotes

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employment, protects the environment and landscapes and contributes to mitigating the effects of climate change and to adapting to it. Hence the different countries' models for optimising networks achieved by linking food produced by agriculture with gastronomic preparations [7, 15, 27, 26, 28].

It can be seen that food systems as a whole are made up of a multitude of complementary components, i.e. subsystems based on point concepts [4, 8, 9, 18, 20, 25], such as the concept of agri-gastronomy. Of course, all of these can be framed within the general idea of a 'food system'. We specify for clarity the generally accepted definition that "FOOD SYSTEMS encompass the full range of actors and their interconnected value-adding activities involved in the production, aggregation (joining), processing, distribution, consumption and disposal (loss or waste) of food products from agriculture (including livestock), forestry, fisheries and the food industry, together with the broader economic, societal and physical environments in which these activities are embedded" [Nguyen, H., 2018 / FAO, in Sustainable food systems Concept and framework].

AGRI-GASTRONOMY is the axis that *de facto* celebrates the richness and diversity of food heritage, while contributing to the economic and social development of the local community and the territorial area in question [3, 4, 9, 21, 24]. Agri-gastronomy is a nuanced idea along the lines of the well-known "Farm to Fork Strategy".

At the same time, it is well known that tourism without the contribution of food and gastronomic specificity ends up lacking its primordial charm. Food therefore has both a utilitarian and an identity function, and the tourist, who is a human being, obviously eats for nourishment (a physiological necessity), but also seeks the satisfaction of originality. From the above, we find the *bioharmony "food & tourism"* [2, 10, 14, 17].

The objective of the study is to define the concept, to analyse it structurally and functionally, i.e. it aims to contribute through a scientific and managerial approach to current challenges related to food, biodiversity, climate change, etc., based on sustainable, environmentally friendly agriculture, animal welfare and the valorisation of production through quality gastronomic preparations (i.e. agrigastronomic flow). The concept also aims to promote local products and regional specificities (such as traditional, mountain, organic products, etc.), so that the idea of agri-gastronomy is able to encourage collaboration and cooperation between producers, processors and restaurateurs in order to offer consumers authentic, tasty and healthy culinary experiences.

### 2. Materials and Methods

Various concepts complementary to the idea of agri-gastronomy are analysed, using a series of multi-criteria analyses, comparisons and statistical processing. A managerial and legal diagnosis with a focus on the socio-economic aspects of integrated food system components is used. Principles, techniques and regulations specific to sustainable development in relation to food security are considered, compared on multiple levels (local, national, regional, continental, global).

### 3. Results and Discussions

Starting from the structural components of the food system, i.e. "production", "processing", "marketing" and "consumers" [12], we can also highlight the specific elements of the idea of integration along the lines of agro-gastronomy through a specific theoretical and practical axis (Table 1).

Table 1. Theoretical and applied axis in the concept of agri-gastronomy

Axis	Name	Specification
I	The place of	➤ International opinions
	agri-food in the world	Optimising feed efficiency and combating feed wastage
II	Principles of the scientific basis	Multidisciplinarity about food and kitchens
III	Structural and development elements	<ul> <li>➢ Pillars of the concept by theoretical basis, adaptation, mode of application:</li> <li>-Pillar 1 - original concepts on agri-food and societal line directed on urban-rural convergence development;</li> <li>-Pillar 2 - Romanian agri-food specificity and psychological specificity and prejudices related to food;</li> <li>-Pillar 3 - models of application of the agro-gastronomic concept and the focus of the applied actions</li> </ul>
IV	Strategic model of the concept	➤ Online platform for agri-food at European and national level

The ideational complexity described by Table 1 makes it possible to define the concept.

AGRI-GASTRONOMY is an integrative concept encompassing the production, processing and consumption of food products from agriculture, with a focus on quality, taste and traditional know-how and specifically aimed at encouraging collaboration between producers, processors and restaurateurs to provide consumers with authentic and tasty culinary experiences.

#### 3.1. Structural and content elements

The concern for the optimisation of agri-gastronomic networks can be found in various forms and nuances, leading to the "crystallisation" of the concept. Among these we exemplify with a few opinions [29]: "Agri-gastronomy is the future of our economy because it combines traditional know-how with technological innovations to create agri-food products with high added value" (*Jean-Pierre Delacroix*) / "Our French culinary heritage can be enriched thanks to agrigastronomy, which makes it possible to highlight the quality and uniqueness of our local products" (*Marie-Claude Dubois*) / "Through agri-gastronomy, we have the opportunity to revive ancestral recipes while responding to the demands of a globalised market in search of authentic and refined flavours" (*Philippe Lefèvre*).

Together with other ideas, mechanisms and actions, the concept of agrigastronomy contributes to increasing the efficiency of the food flow by optimising the relationships between suppliers, processors, traders and, above all, public food establishments (restaurants, canteens, etc.) [5, 11, 16]. The problem is a serious one, as stated in FAO reports (e.g. 2011), because what we waste at local or national level means that 32% of the world's food or 24% of the total energy supplied by food is lost each year [22, 23].

The concept is scientifically sound because it synergistically combines interdisciplinary information, methodologies and technologies. Thus, gastronomy is practically the scientific and technical corollary of many activities on the farm-to-fork axis of agro-food complexity and biodiversity, which highlights the idea that culinary production must be about multidisciplinarity, about food and kitchens..., i.e. more than just culinary art, as it is currently labelled. These issues are summarised in Table 2.

**Table 2.** Structural and development pillars of the agri-gastronomy concept

	Tuble 21 Structural and development plinars of the agrif gastronomy concept			
Crt. no.	Pillar typlogy	Specification		
1	AGRICULTURAL	Production of agricultural products from nature-friendly farms with a		
	PRODUCERS	wide variety (diversification as agricultural raw materials with		
		Quality Validated by specific analyses);		
2	FOOD PROCESSORS	➤ Realisation of food products through minimal and/or		
		technologically optimised processing (non-destructive		
		and/or traditional processing);		
3	TRADES	Respectable traceability, transparency and ethics in terms of quality-		
		price and catering, retail or institutional food;		
4	RESTORERS (restaurant	> Scientific level gastronomy in the restaurant industry		
	owners or managers)	(engineering and management), cuisine of excellence,		
		personalised gastronomy;		
5	CONSUMERS	Adaptation of culinary dishes according to the requirements of the		
		public, in relation to consumer typology (marketing), e.g. tourist		
		segments, age groups, work intensity, etc.		

The structural pillars of the agri-gastronomic concept have a specific character in each country. For example, Romania has good potential for an *agri-gastronomic project* with concrete action plans to achieve an agri-environment policy: setting the number of 'organic' operators per year of development; the area of organic farming (in ha); the market for organic agri-food products (in billions of euros); broadening the target of 'responsible' consumers (reconciling healthy eating with respect for the environment). But the potential is only modestly exploited (with bureaucratic, financial and political-administrative limiting factors).

In principle, therefore, Romania can develop collective food projects in good conditions, especially through the *restaurant industry*, with plans aimed at equal access to healthy, quality food for tourists, for the citizens of local areas and with major marketing potential at national and international level. However, greater awareness is needed, which shows the importance of conceptualising various food systems, such as the agri-gastronomic concept.

It should be noted that what seems to be more pronounced in Romanians is the psychological specificity and ancestral prejudices in terms of food, for example regarding the diversity of foods. The issue is quite subjective, but if the explanations related to the communist syncopation are valid (you could only find staple foods and those with high weight), for the more than three decades after the revolution, when gradually access to food and diversification has been increasing, it becomes clear that consumers are hamstrung by prejudice and culinary conservatism. Romanians typically eat for lunch mostly a "soup" (broth, soups, creams), a main course with "a meat" and garnish (usually potatoes) and homemade "a sweet" / breakfast and dinner are relatively frugal (based on a relatively small number of vegetables).

This results in a series of prejudices formed over time: pork and beef are accepted, but the diversification of animal protein is very reluctant or even refused (sheep meat, fish, seafood, sown cheeses, rodents, broilers, insects, etc.), as well as a number of vegetables, certain vegetables or fruit (e.g. Mediterranean or exotic ones that have recently entered the Romanian trade).

A first conclusion shows that the agri-gastronomic axis will have to be **adapted** to the possible outbreak of a food crisis due to climate change and to the increasing demand for proteins (especially of animal origin), which requires *EDUCATION IN GASTRONOMIC CULTURE* in order to avoid prejudices and diversify the diet and implicitly agricultural production, food processing and culinary preparation.

There are two distinct levels in the application of the agri-gastronomic concept: at European and national level.

- The concept of agri-gastronomy at European level, being a holistic approach of a technical, managerial and legal nature, in pragmatic expression of

reality and concrete situations, requires in principle that the population should have access to healthy, diversified, good quality food, produced in economically and socially optimised conditions, along the entire axis from agricultural production to culinary preparation, especially in the restaurant industry.

- At the local level of the national area, the focus of the implementation strategy will be on promoting employment, protecting the environment and landscapes and emphasising the specificity of local cuisine in the geo-historical regions of Romania (Fig.1).

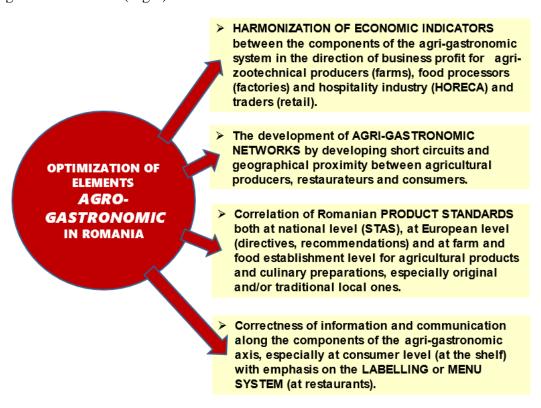


Fig.1. Axis of pragmatic actions of the agri-gastronomy concept in Romania

# 3.2. Online agri-gastronomy platform

In general, the implementation of the agri-gastronomic concept requires the complementarity of agricultural, food and nutrition policy, based on the convergence of programmes and projects contained in a coherent strategy adapted to the territorial area in question.

A first step would be to set up a **smart agri-gastronomic specialisation platform** at national level and integrated at European level.

The purpose and usefulness of the platform at European level becomes necessary to be set up at EU level to accelerate and develop joint investment projects, by encouraging and supporting interregional cooperation in thematic areas based on the smart specialisation priorities defined by the regional and national government of the area concerned, specifically linked to the convergence between agriculture and gastronomy.

Through the **Agri-Gastronomic Platform**, EU regions and Member States could implement their smart specialisation strategies more effectively and regional stakeholders could benefit from new opportunities for cooperation with partners in other regions (building consortia on compatible profiles). The Platform by way of implementation could focus on priority areas related to agriculture and food proposed by regions or areas wishing to act as "coordinating/leading region(s)".

Of the "key" objectives of the Agri-Gastronomic Platform, two would be as benchmarks:

- to orchestrate and support the efforts of regions so diverse across the EU, but committed to working together to develop a range of investment projects related to specific thematic areas of the smart specialisation priorities, through integrated interregional cooperation along agri-gastronomic lines (e.g. the FOODCLIC project underway in 25 organisations in 9 European countries, including Romania through the Brasov area).
- the platform can be co-developed and jointly led by the regions themselves, ensuring active participation and integrated engagement of the agri-food and restaurant industry as business organisations, as well as research institutions, academia and civil society.

Without going into details, in principle, the *Platform* could focus on certain **codifiable agri-gastronomic priorities**: - Partnerships / - Consumer involvement in the agri-gastronomic sector / - Sustainable agriculture (*eco-bio-geo*) / - Circular ingredients for a circular economy / - Applied artificial intelligence for agrigastronomy / - Traceability and Big Data in agri-gastronomy (i.e. lots of data to process, or the "3 Vs" = volume, velocity, variety).

The expected impact of the Platform is the investment opportunities generated by the Platform, which will contribute to: - more competitive and sustainable food supply chains; - more consolidated, diversified and original agri-gastronomy systems; - more efficient targeting of EU regional funds for growth and jobs, in particular through the many SMEs and micro-enterprises that make up this chain. The Platform will also be able to effectively promote the complementarity of funding instruments in support of an integrated agri-gastronomic investment project.

#### **Conclusions**

- (1). Agri-gastronomy is the scientific and technical corollary of many 'farm to fork' activities on agro-food complexity and biodiversity, which highlights the idea that agricultural and culinary production must be about multidisciplinarity, with the capacity for economic and social development of local communities and the territorial area in question.
- (2). The concept of agri-gastronomy combines traditional know-how with technological innovation to create agri-food and culinary products with high added value, i.e. to make it possible to highlight the quality and uniqueness of local products (traditional, mountain, etc.).
- (3). The agri-gastronomy concept is based on the following 5 groups of people and complementary integrated activities: agricultural producers, food processors, traders, restaurateurs and consumers, making it possible to optimise the following agri-gastronomic elements: the realisation of agri-gastronomic networks; the harmonisation of economic indicators on the farm-to-fork axis; the standardisation of products along the whole axis; communication through appropriate labelling and ethical menu writing.
- (4). The agri-gastronomy axis will have to be adapted to the possible onset of a food crisis due to climate change and the growing demographic demand for food, particularly protein (especially of animal origin), which requires avoiding prejudices and diversifying diets and technologies, including agricultural production, food processing and cooking.
- (5). The application of the agri-food concept is based on the idea of complementarity of agricultural, food and nutrition policy based on the convergence of programmes and projects, contained in a coherent strategy specific to the territorial area in question, with a first strategic step being to create a *Platform for intelligent agri-gastonomic specialisation* at national level and integrated at European level.

## REFERENCES

- [1] Berbel-Pineda, J.M., Palacios-Florencio, B., Ramírez-Hurtado, J., Santos-Roldán, L. Gastronomic experience as a factor of motivation in the tourist movements. Int J Gastron Food Sci. 2019;18:100171 (2019)
- [2]Bertella G. Re-thinking sustainability and food in tourism. Ann Tour Res. 2020;84:103005.(2020)
- [3] Blay-Palmer A, Santini G, Dubbeling M, Renting H, Taguchi M, Giordano T. Validating the city region food system approach: enacting inclusive, transformational city region food systems. Sustainability. 2018;10(5):1680. (2018).

- [4] CEGET-CNRS, MSA-ORSTOM, Terres, comptoirs et silos, des systemes de production aux politiques alimentaires, Paris, ORSTOM (colloques et seminaires), 263 p. (voir notamment : Courade pp. 33-74, Labonne pp. 137-149 et Kennel-Torres pp. 235-256) (1987).
- [5] Charvet, J.P., **Le** désordre alimentaire mondial, surplus et pénuries : le scandale, Paris, Hatier, 265 p. (1987).
- [6] Derek Byerlee, T.S. Jayne, Robert J. Myers, « Managing food price risks and instability in a liberalizing market environment: Overview and policy options », Food Policy, Vol. 31, no 4, 2006, p. 275-287 (DOI 10.1016/j.foodpol.2006.02.002 (2006)
- [7] Fischer, G., Frohberg, K., Keyzer, M.A., Parikh, K.S., Linked National Models: A Tool for International Policy Analysis, The Netherlands, Kluwer Academic Publishers (1988).
- [8] Gruia, R., Bazele stiintei managementului in ingineria alimentară, Ed. Universitatii Transilvania Brasov (The fundamentals of the management science in food industry, Transilvania University Publishing House), 187 p. (2003).
- [9] Gruia, R., Evoluția științifică a gastronomiei în cadrul actului alimentar, Editura Clarion Brașov (The scientific evolution of gastronomy within the food act, Clarion Publishing House, Brasov), 163 p.(2018a).
- [10] Gruia, R., Gastronomia și principiile biologiei alimentației, Editura Clarion Brașov (Gastronomy and the priciples of nutrition biology, Clarion Publishing House, Brasov, 187 p (2018b).
- [11] Gruia, R. et al., Reducing Environmental Risk by Applying a Polyvalent Model of Waste Management in the Restaurant Industry, Sustainability 2021, Volume 13, Issue 11, 5852. (2021).
- [12] Gruia, R., Gaceu, L., The Concept of Integrated Food Policy, Annals of the Academy of Romanian Scientists Series Agriculture, Silviculture and Veterinary Medicine Sciences, Vol.11, no.2, pp.105-119 (2022).
- [13] Gruia, R, Ţuluca, Elisa, Munteanu, I. Study on interface environment-food, with change of paradigm towards health generating gastronomy, Environmental Engineering and Management Journal, Gheorghe Asachi Technical University Iasi, Vol.17, no.11, 2018, pp.2703-2709 (2018).
- [14] Hall, C.M. Improving the recipe for culinary and food tourism? The need for a new menu. Tour Recreat Res. 2020;45(2):284–7(2020)
- [15] Hall, M, Sharples L. The consumption experiences or the experience of consumption: an introduction to the tourism of taste. In: Hall CM, Sharples L, Mitchell R, Macionis N, Cambourne B, editors. Food tourism around the world: development, management and markets. Oxford: Butterworth-Heinemann; p. 1–24 (2003).
- [16] Jones, K. E., Patel, N. G., Levy, M. A., Storeygard A., Balk, D., et al. Global trends in emerging infectious diseases. Nature 451:990-993. doi: 10.1038/nature06536.9. (2008)
- [17] Kivela, J., Crotts, J. Tourism and gastronomy: gastronomy's influence on how tourists experience a destination. J Hosp Tour Res. 3:354–77 (2006).
- [18] Kroll, J.C., Politique agricole et relations internationales : **les** enjeux en France et dans la C.E.E., Paris, Syros, 239 p. (1987).
- [19] Lillywhite, J.M., Simonsen, J.E. Consumer preferences for locally produced food ingredient sourcing in restaurants. J Food Prod Mark. 20(3):303–24 (2014).
- [20] Malassis, L. Economie agro-alimentaire, Toom I, : Economie de l'alimentation et de la concommation, Paris, Cujas, 438 p. (1979).
- [21] Malassis, L. Nourrir les hommes un exposé pour comprendre, un essai pour réfléchir, Flammarion, 126 p., (1994).
- [22] Maxwell, S. Food Policy Old and New, Development Policy Review, Vol. 21, nos 5-

- 6, pp. 531–553 (DOI 10.1111/j.1467-8659.2003.00222.x, lire en ligne [archive] (2003).
- [23] Rastoin, J-L., Ghersi, G. Le système alimentaire Mondial Concepts et méthodes, analyses et dynamiques Collection : Synthèses, Éditeur : Éditions Quæ, 584 p. (2010).
- [24] Roy, H., Hall, C.M., Ballantine, P.W. Trust in local food networks: the role of trust among tourism stakeholders and their impacts in purchasing decisions. J Destin Mark Manag. 6:309–17 (2017).
- [25] Sharma, A., Moon, J., Strohbehn, C. Restaurant's decision to purchase local foods: influence of value chain activities. Int J Hosp Manag. 39:130–43. (2014).
- [26] Timmer, P. C., Falcon, Walter P., Pearson Scott R., Analyse de la politique alimentaire, Pais, Eeonomica, 364 p. (1986).
- [27] Wilde, P., Food Policy in the United States: An Introduction, London and New York, Routledge Taylor & Francis Group (2013).
- [28] \*\*\* Sustainable food systems Concept and framework, Food and Agriculture Organization of United Nations (https://www.fao.org/3/ca2079en/CA2079EN.pdf, (2014) Accessed on December 10, 2022.
- [29] \*\*\* Dictionnaire, www.lalanguefrancaise.com/dictionnaire/definition/agrogastronomie, Accessed on May5, 2023.