



Food quality

Product quality

- The quality of a product depends on different characteristics
 - Vertical differentiation (a good is better than another for all its characteristics)
 - Horizontal differentiation (consumers do not sort the characteristics of two products in the same way)



Food quality

Product quality

- Information asymmetry between producer and consumers
 - «research» goods
 - «experience» goods
 - «trust» goods
- Also applicable to different characteristics of the same food product



Food quality

Food quality

- Intrinsic quality attributes
 - Composition
 - Function (packaging, dimension, style, convenience, ease of preparation, shelf-life)
 - Process (product origin, tracing, production tecnics, environmental impact, safety of workers)
- Extrinsic quality attributes
 - Quality indicators
 - Quality signs



Food quality

Food quality

- Extrinsic quality attributes
 - Quality indicators (quality management systems, product certification, labels, minimum quality standards)
 - Quality signs (price, brand, retailer's brand, packaging, advertising, warranties, reputation, past purchase experiences, country of origin, assortment)
 - Can be object of "research"
 - Quality indicators can transform intrinsic attributes of "trust" in extrinsic attributes of "research"
 - Can facilitate the process of quality verification

Food quality: product (chocolate cream)

Intrinsic quality attributes:

Composition

*% cocoa and nuts
Type of oil (no palm oil?)
Flavour
Level of proteins
Color
Added sugar*

Function

*Dimension / shape of the pack / convenience
Shelf-life
Easy to open/close
Maintenance of physical properties at use*

Process

*Spreading
Origin of the raw materials
Safety - HACCP
Traceability
Organic production of raw materials
Environmental aspects*

Quality indicators:

*Nutrition value (amount of proteins)
Composition
No added sugar
Origin: only Italian nuts
Label (...)
Traceability
PDO
Organic
Rainforest alliance
Water / carbon footprint
ISO certification (quality ISO 9000;
environmental ISO 14000; social aspects SA
8000)*

Quality signs / signals:

*Different colors
Brand (reputation)
Label (graphical aspects)
Price*



Food quality

A definition of quality

- “the totality of characteristics of an entity that bear upon its ability to satisfy stated and implied needs.”
- The term quality is defined in ISO 9001 as the degree to which a set of inherent characteristics of an object fulfils requirements.



Food quality

The quality of a food product

- A higher or a lower degree of quality can be identified in a higher or lower number of attributes that satisfy needs or tastes of the consumer
- If consumers are not able to recognize the quality:
 - They will not pay a higher price for a good of higher quality
 - The quality good disappears from the market



Food quality

Quality perception

- The perceived quality: the perceived capacity of a product of satisfying consumer needs over the other available alternatives.
- There is an information gap between producer and consumer
- The consumer try to perceive the product quality trough quality indicators and quality signs (expected quality)
- The certification allows the “visibility” of quality indicators:
 - It provides a correct information able to protect the consumer
 - It is for the companies a useful instrument of competition.



Quality certification

Quality certification:

- A quality judgement provided by an authoritative agency on the basis of quality criteria, known by who is judged and by the final user
- Verification of compliance of a product or service, of a productive process or company's management system to established technical standards
- Product certification
- Process certification
- Company's system of quality management



Quality certification

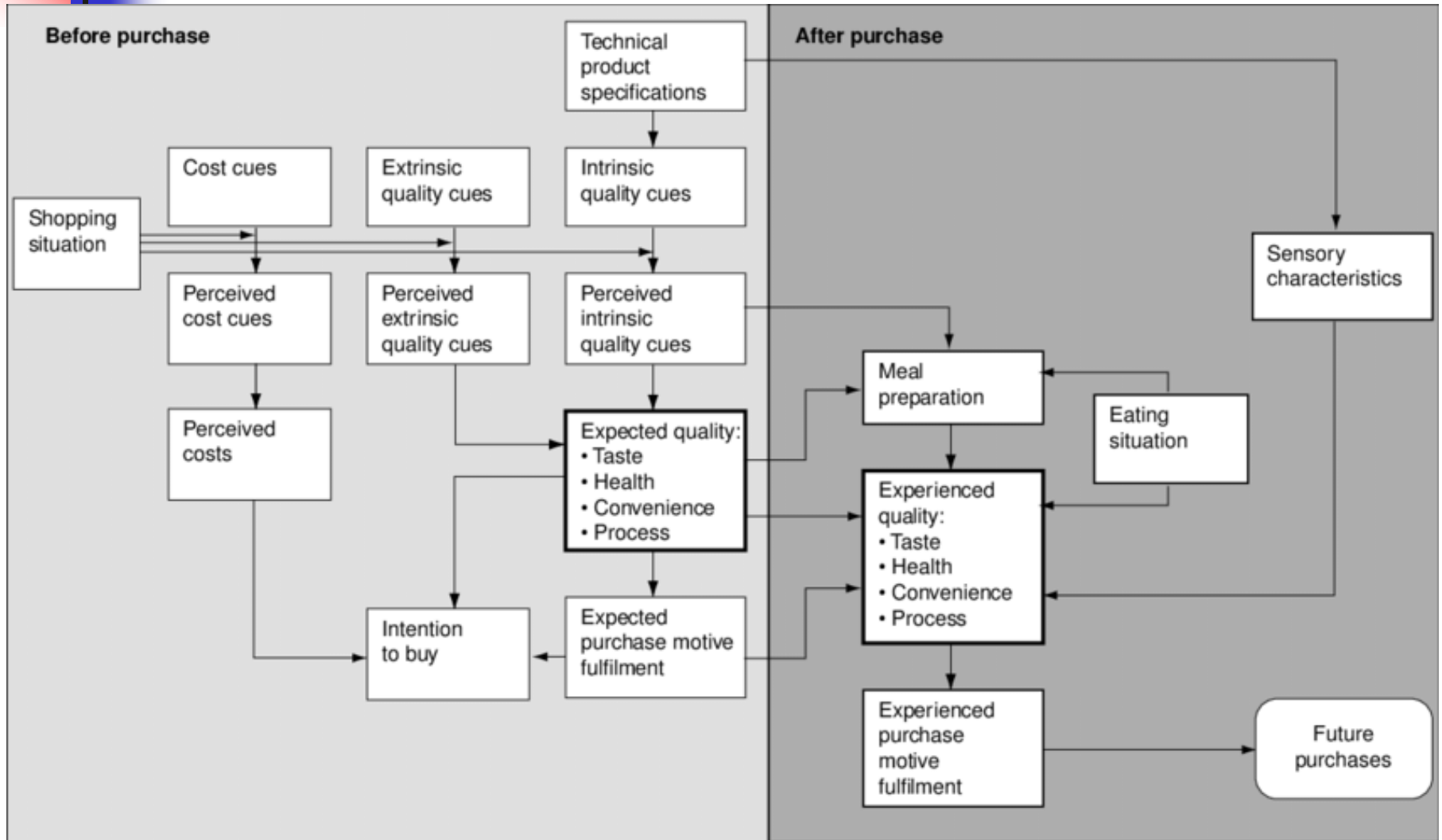
CERTIFICATION



QUALITY BRAND

- Because a quality brand should exist it is needed:
 - A set of rules or criteria
 - A subject (independent) that expresses a judgment on the basis of criteria and verification of compliance with the standards (CERTIFICATION BODY)
 - Criteria: public / operate as discriminatory standards / all those entitled can be able to join
 - QUALITY BRAND is different than BRAND NAME
 - ACCREDIA (National Accreditation Body)

The Total Food Quality model



Organic label

European Union :

Reg. (EU) 848/2018
on organic
production and
labelling of organic
products and
repealing Council
Regulation (EC) No
834/2007

Reg. (EC) 203/2012
Organic wine



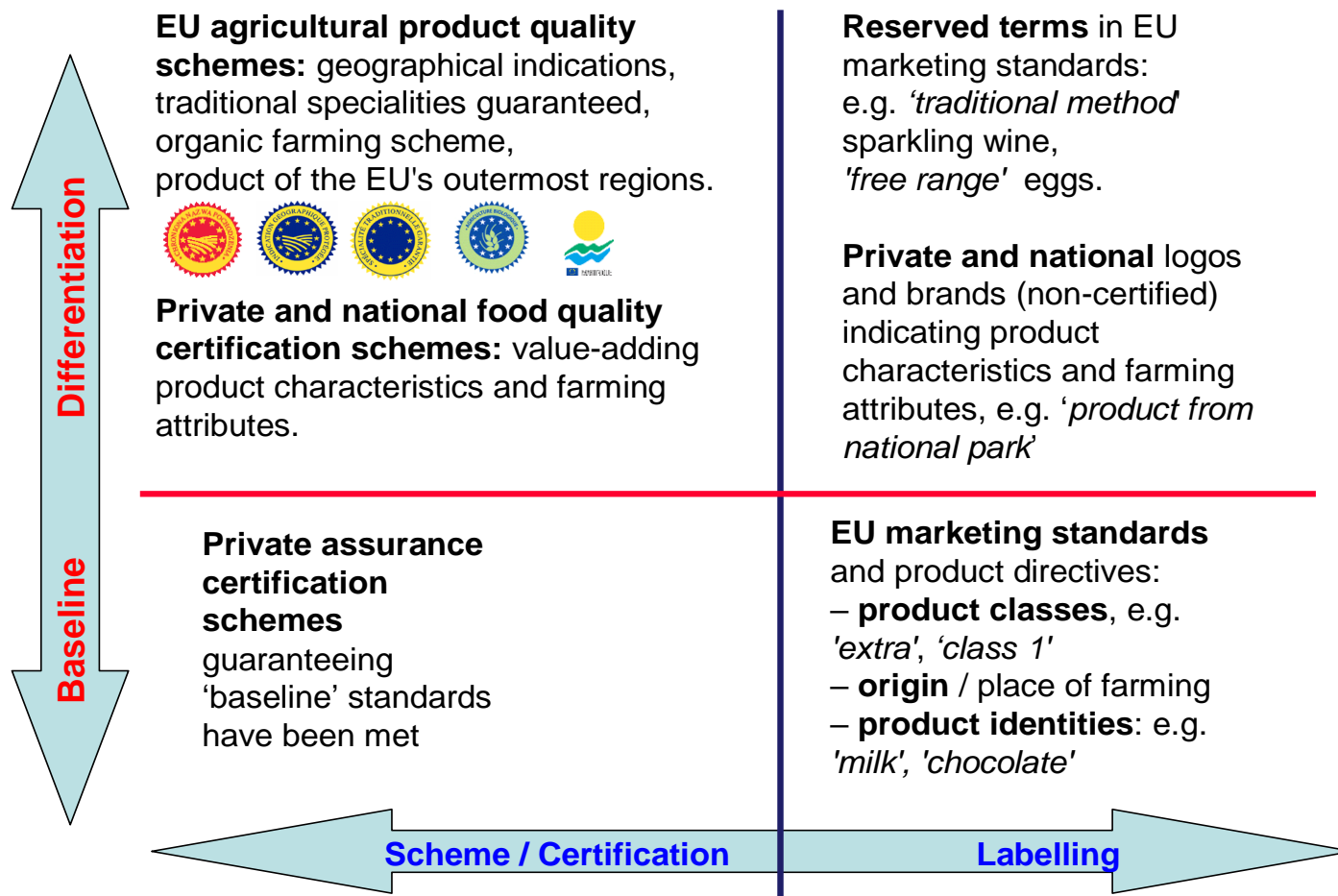
Marchi vino biologico

UE	USA	Sud Africa	Australia
Nuova Zelanda	Biodinamico	Vegano	

Quality certification labels

ISO	SA 8000	Biodiversity friend	Impronta carbonica
			
FSC packaging	BRC, standard globale sicurezza alimenti	Commercio equo e solidale	Vino kosher
			

EU Quality and assurance certification schemes and marketing standards





EU Quality and assurance certification schemes and marketing standards

- Marketing standards and product directives
 - Minimum standards (hygiene and product safety, product identity and composition, environmental protection, animal welfare)
 - Marketing standards (labelling) – Reserved terms

1. RESERVED TERMS:	Examples: 'free range' poultry meat; 'barn' eggs, 'cold extraction' extra virgin and virgin olive oil, 'traditional method' sparkling wine
2. PRODUCT CLASSIFICATION:	Examples: fruit: extra, class 1, class 2 eggs: large, medium, small
3. PRODUCT IDENTITY:	Examples: definitions of butter, fruit juice, chocolate, wine, extra virgin olive oil
4. ORIGIN or PLACE OF FARMING LABELLING:	Examples: fruit and vegetables: place of harvest olive oil: place of harvest and of pressing; beef; honey



EU Quality and assurance certification schemes and marketing standards

- EU agricultural products quality schemes (Reg. 2024/1143)
 - Geographical indications (PDO and PGI)
 - Traditional speciality guaranteed (TSG)
 - Optional reserved terms:
 - Mountain product
 - Product of island farming
 - Organic agriculture (Reg. EU 848/2018 and EU 203/2012)

- Voluntary certification schemes
 - EU best practice guidelines for voluntary certification schemes for agricultural products and foodstuffs (Comunicazione della Commissione 2010/C 341/04)

https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/quality-schemes-explained_en

Voluntary private certification schemes

Private standards: quality standards usually imposed by large distribution to its suppliers:

- Minimum Quality Standards (standards common to various groups of the modern distribution)
- Promotional use towards consumers
- Competitive use towards suppliers
- Substitution of public with private standards



GlobalGAP,
BRC,
IFS,
Ifis (IFSA Feed
Ingredient Standard)



International standard system

ISO: International Organization for Standardization (<https://www.iso.org/standards-catalogue/browse-by-ics.html>) - ISO is an independent, non-governmental organization made up of members from the national standards bodies of 175 countries.

UNI: Ente Italiano di Normazione (<https://www.uni.com/index.php>)

ACCREDIA: Ente Italiano di Accreditamento (<https://www.accredia.it/>)

Examples of Private standards:

IFS: International Featured Standards
(<https://www.ifs-certification.com/index.php/it/>)

IFIS: IFSA Feed Ingredients Standard (<https://www.fefac.eu/our-publications/good-practices/263/>)

GLOBAL G.A.P.: Good Agricultural Practices https://www.globalgap.org/uk_en/

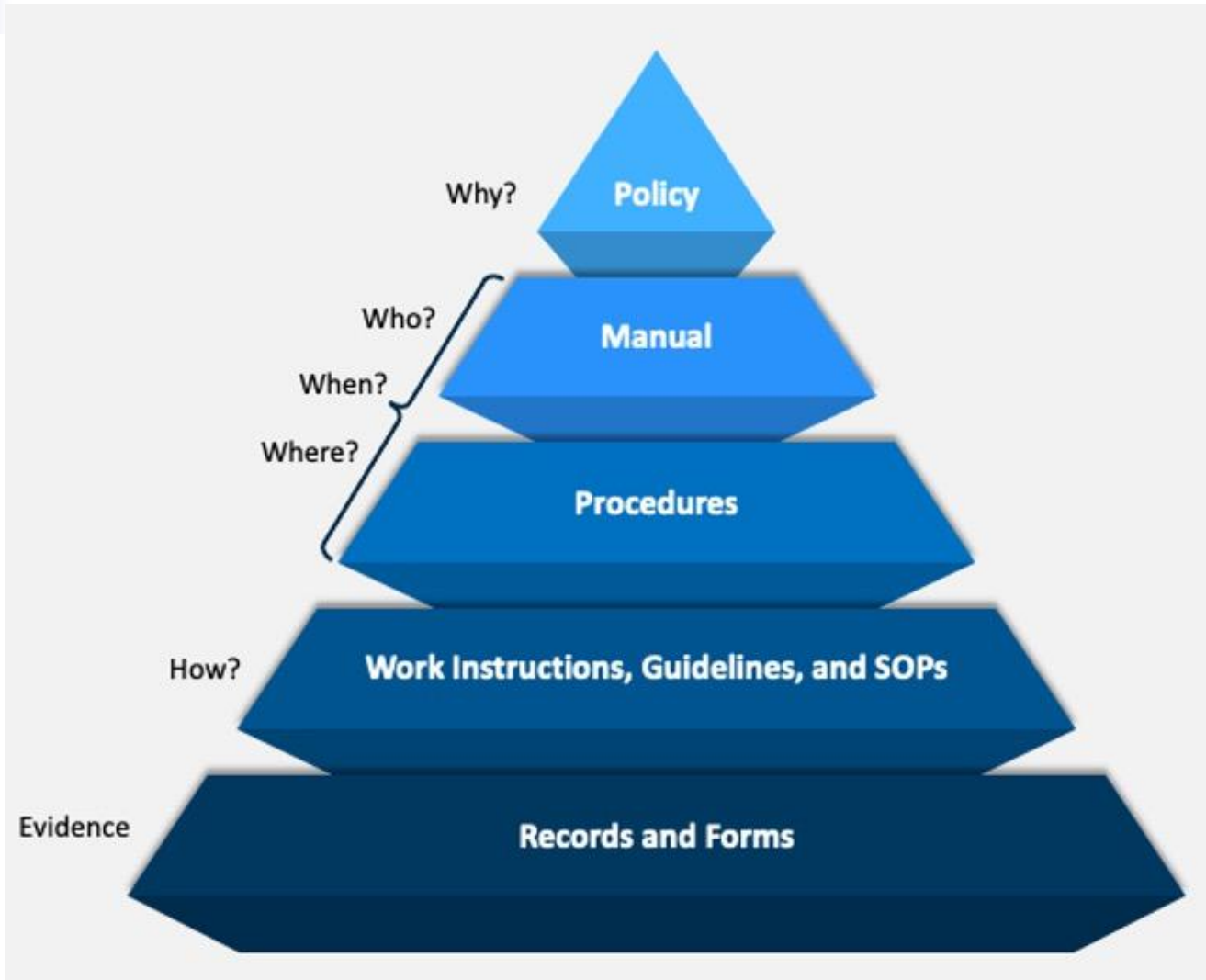
BRC: British Retail Consortium (<https://www.brcgs.com/>)



ISO 9001 - Quality Management Systems

- The ISO 9001 certification is aimed at any type of public or private organization
- To demonstrate the ability of organizations to regularly provide their customers with products and services that meet their requirements and needs
- The standard consists of 10 chapters, among which, the sequence of chapters 4 to 10 (those containing the requirements) is based on the Deming cycle (Plan-Do-Check-Act).
- Quality management is based in particular on seven principles:
 - Customer focus
 - Leadership
 - Active participation of people
 - Process approach
 - Improvement
 - Evidence based decision-making
 - Relationship Management

ISO 9001 - Quality Management Systems





ISO 14001:2015

Environmental management systems

- Standard for certifying the Environmental Management System of organisations of all sizes.
- Based on the “Plan-Do-Check-Act” method, it provides a systematic framework for integrating practices designed to protect the environment by preventing pollution and reducing waste and the consumption of energy and materials.
- The requirements of ISO 14001 are an integral part of the Eco-Management and Audit Scheme (EMAS)
- Environmental Management System (EMS) manual: a document that outlines an organization's policies and procedures for managing its environmental impacts
- Continuous improvement of environmental performances.

VIVA Sustainable Wine



- Ministero dell'Ambiente
- Disciplinary for measuring sustainability performances of the vine-wine chain.
- 4 technical documents for the analysis of 4 indicators – AIR, WATER, TERRITORY AND VINEYARD
- Accredited certification bodies
- 44 certified companies

<http://www.viticulturasostenibile.org>

Carbon Footprint



- greenhouse gas emissions (GHG) generated for the production of a product unit
- Kg di CO2 equivalent
- It is based on LCA methodology: product Life Cycle Assessment
- ISO standards
 - (ISO 14064 - Carbon Footprint)
 - (UNI EN ISO 14040 e 14044 - LCA)

Environmental certification labels



SISTEMA DI QUALITÀ NAZIONALE
PRODUZIONE INTEGRATA





Marks

- Trademarks

- Can not contain geographical names, individual property, can be sold or transferred, expire if not used
- Instruments of private law

- Geographical indications

- Collective ownership (can be used by all the producers of an area, can not be sold or transferred, don't have limits of validity)
- Intellectual property right for the protected geographical indication

- Certification marks

- Are not used by the owners; can be used by all the subjects which comply with the standard

Marks: examples



Producer's trademark

Product brand

Geographical Indication:
Colli Pesaresi Rosso DOC
(PDO wine)

Certification mark:
Organic wine (Reg. EU
203/2012)



Geographical indications

- Indication of origin
 - Guarantees only the origin (*made in Italy, in EU*)

- Geographical indications:
 - Indication that protects the name of a product originating in a country, region or locality where the product's particular quality, reputation or other characteristic are essentially attributable to its geographical origin.
 - They guarantee also the product quality

- Protection of competition policies
 - Protection of investments in reputation

- Consumer protection policies
 - Guarantee of a correct information

Indications of origin





Geographical indications

- 4 European Regulations:

- Reg. (EU) No 2024/1143 (No 1151/2012) PDO – Protected Designation of Origin and PGI – Protected Geographical Indication (food)
- Reg. (EU) No 1308/2013 PDO – Protected Designation of Origin and PGI – Protected Geographical Indication (wine)
- Reg. (EU) No 251/2014 aromatised wines: *modified by Reg. (EU) No 2117/2021, December 2, 2021*
- Reg. (EC) No 110/2008 GI – Geographical Indication (spirit drinks)

Geographical indications (food products)

PDO (Protected Designation of Origin)

'Designation of origin' is a name which identifies a product:

- (a) originating in a specific place, region or, in exceptional cases, a country;
- (b) whose quality or characteristics are essentially or exclusively due to a particular geographical environment with its inherent natural and human factors; and
- (c) the production steps of which all take place in the defined geographical area.



Reg. 2024/1143 (510/2006; 2081/92; 1151/2012)

Geographical indications (food products)

PGI (Protected Geographical Indication)

'Geographical indication' is a name which identifies a product:

- (a) originating in a specific place, region or country;
- (b) whose given quality, reputation or other characteristic is essentially attributable to its geographical origin; and
- (c) at least one of the production steps of which take place in the defined geographical area.

Reg. 2024/1143 (510/2006; 2081/92; 1151/2012)





Wines designation of origin (Art. 93 Reg. 1308/2013 amended by Reg. 2117/2021)

- “designation of origin” means a name, including a traditionally used name, of a wine:
- (i) whose quality or characteristics are essentially or exclusively due to a particular geographical environment with its inherent natural and human factors;
- (ii) as originating in a specific place, region or, in exceptional cases, country;
- (iii) produced from grapes which originate exclusively from that geographical area;
- (iv) the production of which takes place in that geographical area; and
- (v) which is obtained from vine varieties belonging to *Vitis vinifera* or a cross between the *Vitis vinifera* species and other species of the genus *Vitis*.



Wines geographical indication (Art. 93 Reg. 1308/2013 amended by Reg. 2117/2021)

- “geographical indication” means a name, including a traditionally used name, which identifies a wine:
- (i) whose specific quality, reputation or other characteristics are attributable to its geographical origin;
- (ii) as originating in a specific place, region or, in exceptional cases, country;
- (iii) as having at least 85 % of the grapes used for its production come exclusively from that geographical area;
- (iv) the production of which takes place in that geographical area; and
- (v) which is obtained from vine varieties belonging to *Vitis vinifera* or a cross between the *Vitis vinifera* species and other species of the genus *Vitis*.



Geographical indications (food products)

Product specification (art. 49 Reg. 2024/1143)

- (a) the name to be registered as a designation of origin or geographical indication, as it is used in trade or in common language to describe the specific product in the defined geographical area;
- (b) a description of the product, including, where relevant, the raw materials, plant varieties and animal breeds concerned, including the commercial designation of the species and its scientific name, as well as the principal physical, chemical, microbiological or organoleptic characteristics of the product;
- (c) the definition of the geographical area delimited
- (d) evidence that the product originates in the defined geographical area;



Geographical indications (food products)

Product specification (art. 49 Reg. 2024/1143)

- e) a description of the method of obtaining the product and, where appropriate, the authentic and unvarying local methods as well as information concerning packaging, if the applicant group so determines and gives sufficient product-specific justification as to why the packaging must take place in the defined geographical area to safeguard quality, to ensure the origin or to ensure control, taking into account Union law, in particular that on the free movement of goods and the free provision of services;
- (f) details establishing the following:
 - (i) as regards a protected designation of origin, the link between the quality or characteristics of the product and the geographical environment. The details concerning human factors of that geographical environment may, where relevant, be limited to a description of the soil and landscape management, cultivation practices or any other relevant human contribution to the maintenance of the natural factors of the geographical environment referred to in that provision;
 - (ii) as regards a protected geographical indication, the link between a given quality, the reputation or other characteristic of the product and the geographical origin.



Geographical indications (food products)

Registration procedure

- Presence of an applicant group ('group' means any association, irrespective of its legal form, mainly composed of producers or processors working with the same product);
- Product specification
- Member State procedure
- Presentation to the European Commission
- Grounds for opposition
- Registration in the: Register of protected designations of origin and protected geographical indications

<https://ec.europa.eu/agriculture/eambrosia/geographical-indications-register/>



Protection of DOs e GIs

- Registered names shall be protected against:
 - (a) any direct or indirect commercial use of a registered name in respect of products not covered by the registration
 - where those products are comparable to the products registered under that name or
 - where using the name exploits the reputation of the protected name, including when those products are used as an ingredient;
 - (b) any misuse, imitation or evocation, even if the true origin of the products or services is indicated or if the protected name is
 - translated or
 - accompanied by an expression such as 'style', 'type', 'method', 'as produced in', 'imitation' or similar, including when those products are used as an ingredient;
 - (c) any other false or misleading indication as to the provenance, origin, nature or essential qualities of the product that is used on the inner or outer packaging, advertising material or documents relating to the product concerned, and the packing of the product in a container liable to convey a false impression as to its origin;
 - (d) any other practice liable to mislead the consumer as to the true origin of the product.



Protection of DOs e GIs

- Protected designations of origin and protected geographical indications shall not become generic.
- Can be protected designations of origin and geographical indications of third countries that meet the corresponding criteria and that are protected in their country of origin.
- Can be used by any operator in compliance with the product specification

Traditional speciality guaranteed (TSG)

A name shall be eligible for registration as a traditional speciality guaranteed where it describes a specific product or foodstuff that:

- (a) results from a mode of production, processing or composition corresponding to traditional practice for that product or foodstuff; or
 - (b) is produced from raw materials or ingredients that are those traditionally used.
- For a name to be registered as a traditional speciality guaranteed, it shall:
 - (a) have been traditionally used to refer to the specific product; or
 - (b) identify the traditional character or specific character of the product.



Reg. 2024/1143 (509/2006; 2082/92; 1151/2012)

Traditional speciality guaranteed (TSG)

Product specification

- (a) the name proposed for registration, in the appropriate language versions;
- (b) a description of the product including its main physical, chemical, microbiological or organoleptic characteristics, showing the product's specific character;
- (c) a description of the production method that the producers must follow, including, where appropriate, the nature and characteristics of the raw materials or ingredients used, and the method by which the product is prepared; and
- (d) the key elements establishing the product's traditional character.



Producers can be located in any location of the European Union



Mountain product

- Reg. EU 2024/1143
- Italian Ministerial Decree:
<https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/11687>
- Municipality totally or partially mountainous (RDP programs)
- Production and processing in mountain areas
 - Transhumance and/or mountain breeding
 - Provenience of the feeding stuffs
 - Beekeeping
 - Specific rules for: slaughtering / cheese making / olives milling (...)
- Traceability system as a guarantee of the origin of products and raw materials.
- In Abruzzo region: 62 companies at 30/06/2021





The geographical indications system

- Geographical indications as COLLECTIVE BRANDS
- Brand equity:
 - Continuous production of products characterised by coherence between intrinsic quality and quality signs and a unique and well defined style
 - Product knowledge (by consumers)
- Credibility: the perceived quality is in line with the reputation
- Coherence between designation and level of product quality
- Identity of the products (in sensory style and recognition)



Collective brands (geographical)

- Guarantee the nature, the quality or the origin of a product / service
- Ownership: companies' association / public bodies
- Are apt to distinguish the products / services of the associated from those of other companies
- Requirements:
 - Registration of the brand (national or European level)
 - Presence of a Regulation defining the rules of use, the controls system, the sanctions
 - Open associative structure
 - Sectorial / multi-sectorial brand => territory (geographical level)



Certify the biodiversity

- Anagrafe nazionale della biodiversità di interesse agricolo e alimentare (National Registry of agrobiodiversity)
- www.reterurale.it; www.politicheagricole.it
- Traditional agri-food products (Elenco nazionale dei prodotti agroalimentari tradizionali) recognised by regional authorities
- Biodiversity Friend ® <https://biodiversityassociation.org/>
 - Is a private brand used as a certification mark (accredited certification bodies)
 - Registered at the World Intellectual Property Organization of Madrid, at the United States Patent and Trademark Office and in China
 - Patronage of the Italian Ministry (Ministero delle Politiche Agricole Alimentari e Forestali)
 - 29 companies certified in Italy; «Centro Casario e Agrituristico dell'Altopiano Tambre-Spert-Cansiglio» products from animals living in meadows and pastures with high levels of biodiversity
- Biodiversity Alliance (Soil Biological Quality)
- Global Standard IUCN for Nature-based Solutions
<http://www.iucn.it/dettaglio.php?id=66195>



Certify the landscape

Historic Rural Landscape conservation

- DM n. 17070 19 February 2012 MIPAAF:
 - National Observatory of Rural Landscape, Farming Practices and Traditional Knowledge (ONPR)
 - Register of National Historic Rural Landscapes, farming practices and traditional knowledge: www.reterurale.it/registropaesaggi
- “Linee guida per il dossier definitivo di candidatura all'Osservatorio nazionale del paesaggio rurale”
(https://www.reterurale.it/downloads/4.2_linee_guida_candidatura_DEFINITIVA_10_04.pdf)
- Monitoring and valorisation of historic rural landscapes (2020):
<https://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/22404>
- Open issue: a **quality brand** aimed at increasing the market power of the agri-food products linked to the traditional landscape.



Certify the landscape

Historic Rural Landscape conservation

- **FAO: GIAHS Globally Important Agricultural Heritage System**
 - <http://www.fao.org/giahs/en/>
 - Italia: Olive Groves of the Slopes between Assisi and Spoleto (2018); Soave Traditional Vineyards (2018)
 - Also in the National Register: Colline vitate del Soave, Fascia pedemontana olivata Assisi – Spoleto
- **UNESCO World Heritage List:**
 - Colline del Prosecco di Conegliano e Valdobbiadene (Also in the National Register)
 - Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato; Val d'Orcia
 - **Intangible cultural heritage:** Vite ad alberello di Pantelleria (Paesaggio della Pietra a Secco dell'Isola di Pantelleria); Muretti a secco; Transumanza