



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 (...)

Intrinsic quality attributes:

Composition

....

Function

....

Process

...

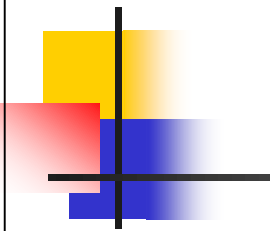
Quality indicators:

...

Quality signs / signals:

...

Intrinsic quality attributes:



Composition
Alcohol degree
Characteristics of water
Hop variety
Variety of barley
Prevention of hearth diseases / health attributes

Function

Dimension of the packaging
Kind of packaging
Shelf-life
Conservation
Easy of use (opening, closing, shelf-life after the opening)
Interface functionality (safety and correct use, product disposal)

Process

Yeast use
Temperature / Time
Maturation
Environmental impact (water consumption / carbon footprint)
Organic raw materials
By-products managemet
Origin of the product
Pastorized - Filtered

Food quality: i.e. beer

Quality indicators:

Label
Organic label
Geographical Indication
Awards
Carbon / Water footprint
Social responsibility
Level of colour
Level of bitterness
Filtered / Not filtered

Quality signs:

Label (style)
Consumption information
History of the brewing company
Price
Locally produced
Point of sale
Occasion of production (St. Patrick...)



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

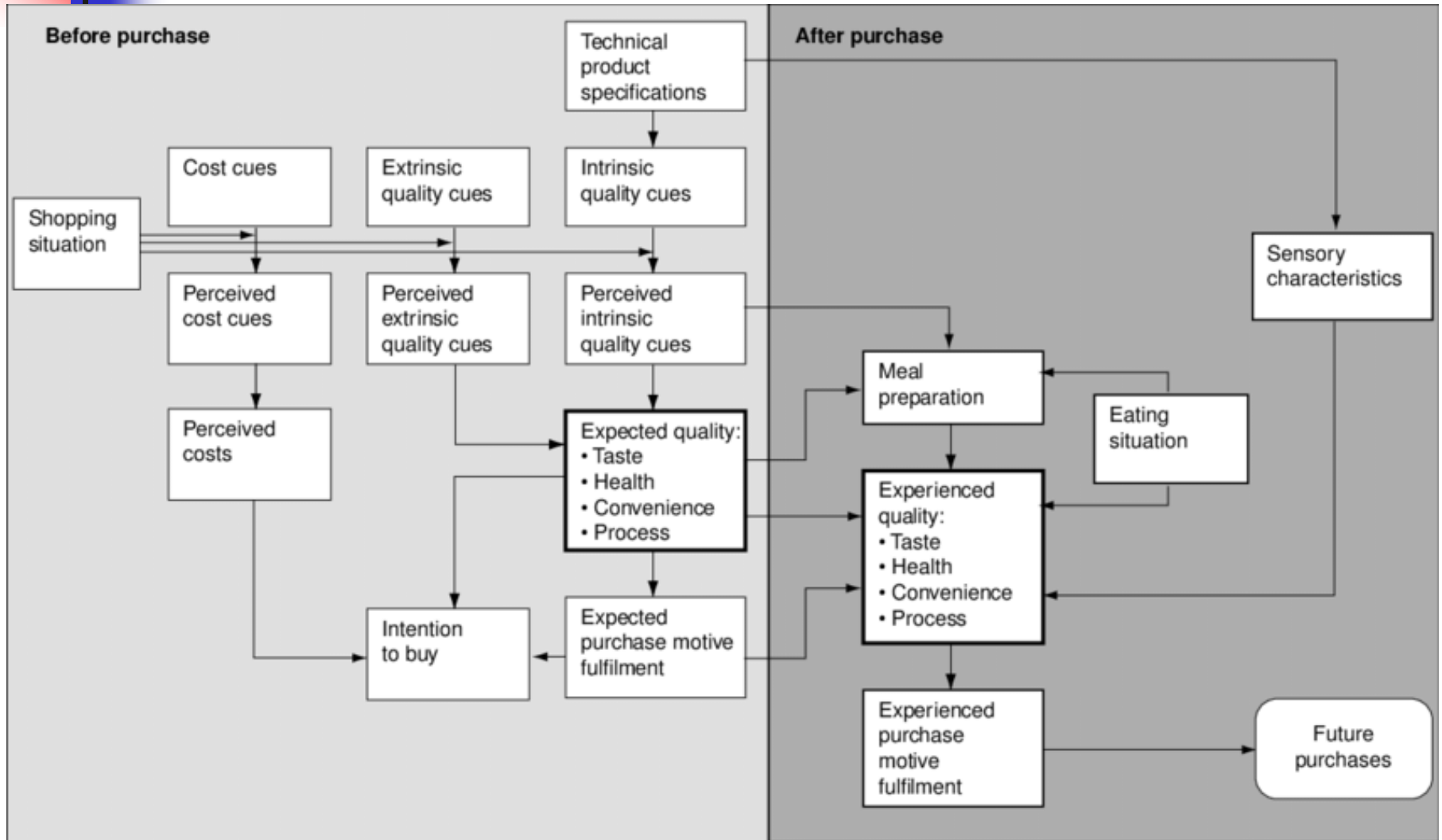
CERTIFICATION



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



Source: Brunsø, Fjord, Grunert (2002), Consumers' food choice and quality perception

Organic label

European Union :

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

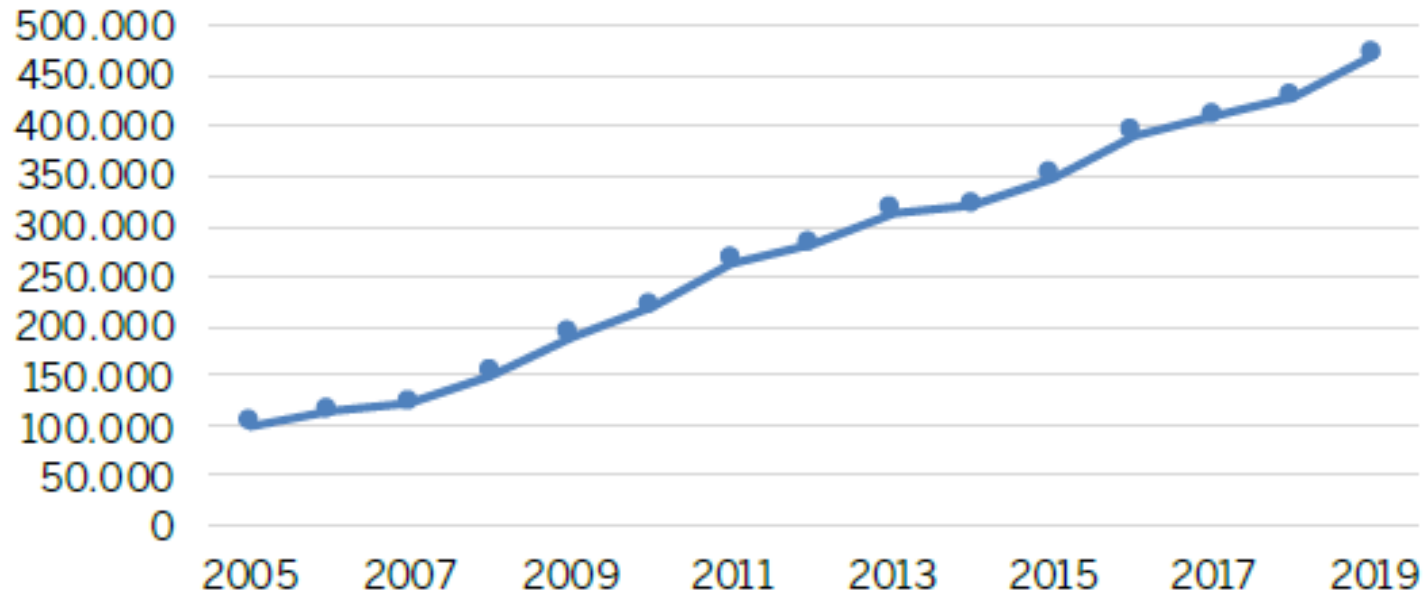
Reg. (EC) 203/2012
Organic wine

Marchi vino biologico

| UE | USA | Sud Africa | Australia |
|--|---|--|--|
|  |  |  |  |
| Nuova Zelanda | Biodinamico | Vegano | |
|  |  |  |  |

Organic production (wine)

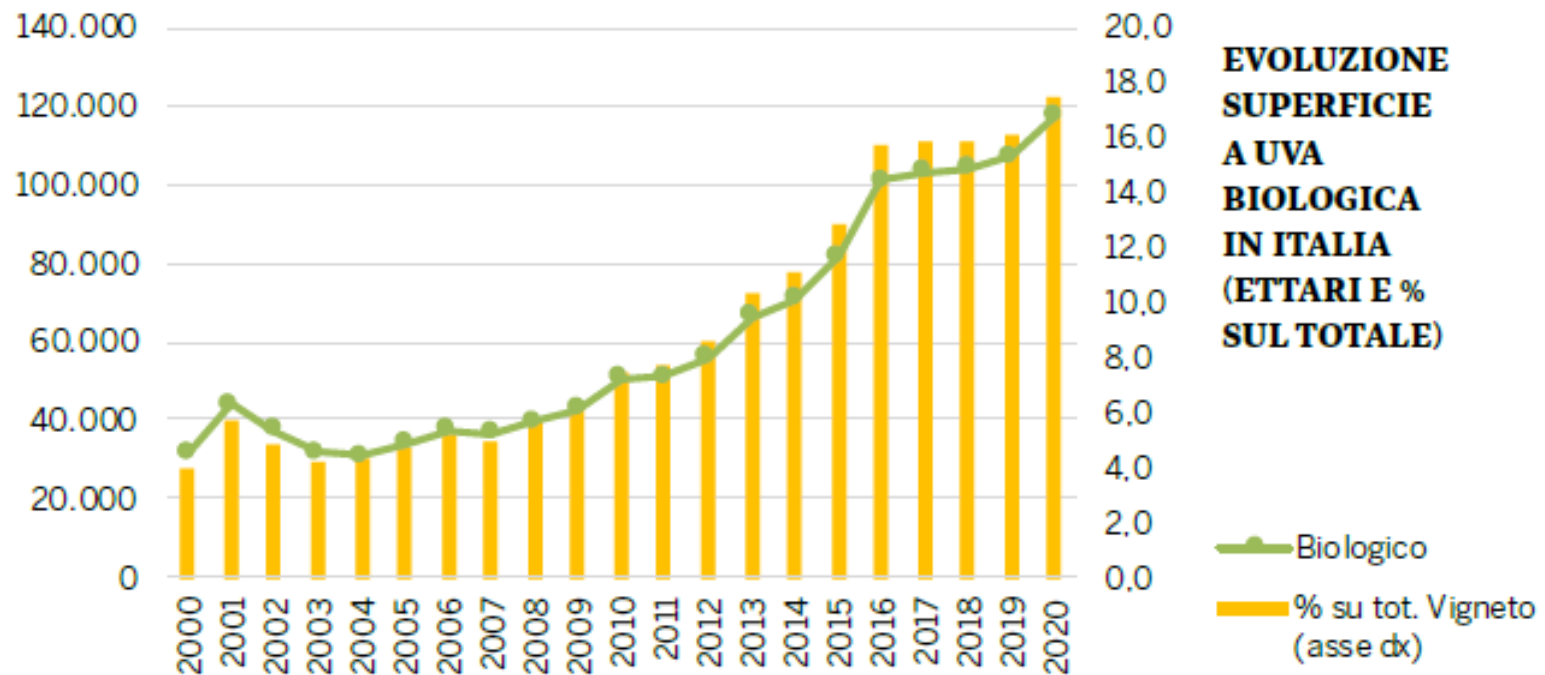
**SUPERFICIE A UVA BIOLOGICA NEL MONDO
(UVE DA TAVOLA COMPRESSE) (ETTARI)**



ORGANIC GRAPE SURFACE IN THE WORLD (Ha)

Source: *Corriere Vinicolo* (2022). *Vino in Cifre* (12° edizione). Anno 95, n. 1

Organic production (wine)



ORGANIC GRAPE SURFACE IN ITALY (Ha and % on the total)

Source: Corriere Vinicolo (2022). *Vino in Cifre* (12° edizione). Anno 95, n. 1 (elaborazioni su dati Sinab e Agea)

Quality certification labels

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

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)



Sustainability strategies in the wine sector

<https://www.donnafugata.it/it/sostenibilita/>

<https://firriato.it/firriato-tra-le-prime-cantine-al-mondo-carbon-neutral/>

<https://www.salcheto.it>

<https://www.google.it/amp/s/cantinadelmorellino.it/sostenibilita/carbon-footprint-del-morellino-di-scansano-docg/amp/>

<http://www.sanmarcofrascati.it>

<https://www.mezzacorona.it/it/sostenibilita>

<http://www.lecarline.com/certificazioni/>

<https://www.lacantinapizzolato.com/en/certifications/>

<https://www.lacasadibricciano.it>

<https://www.giolitalia.com/it/>

Environmental certification labels



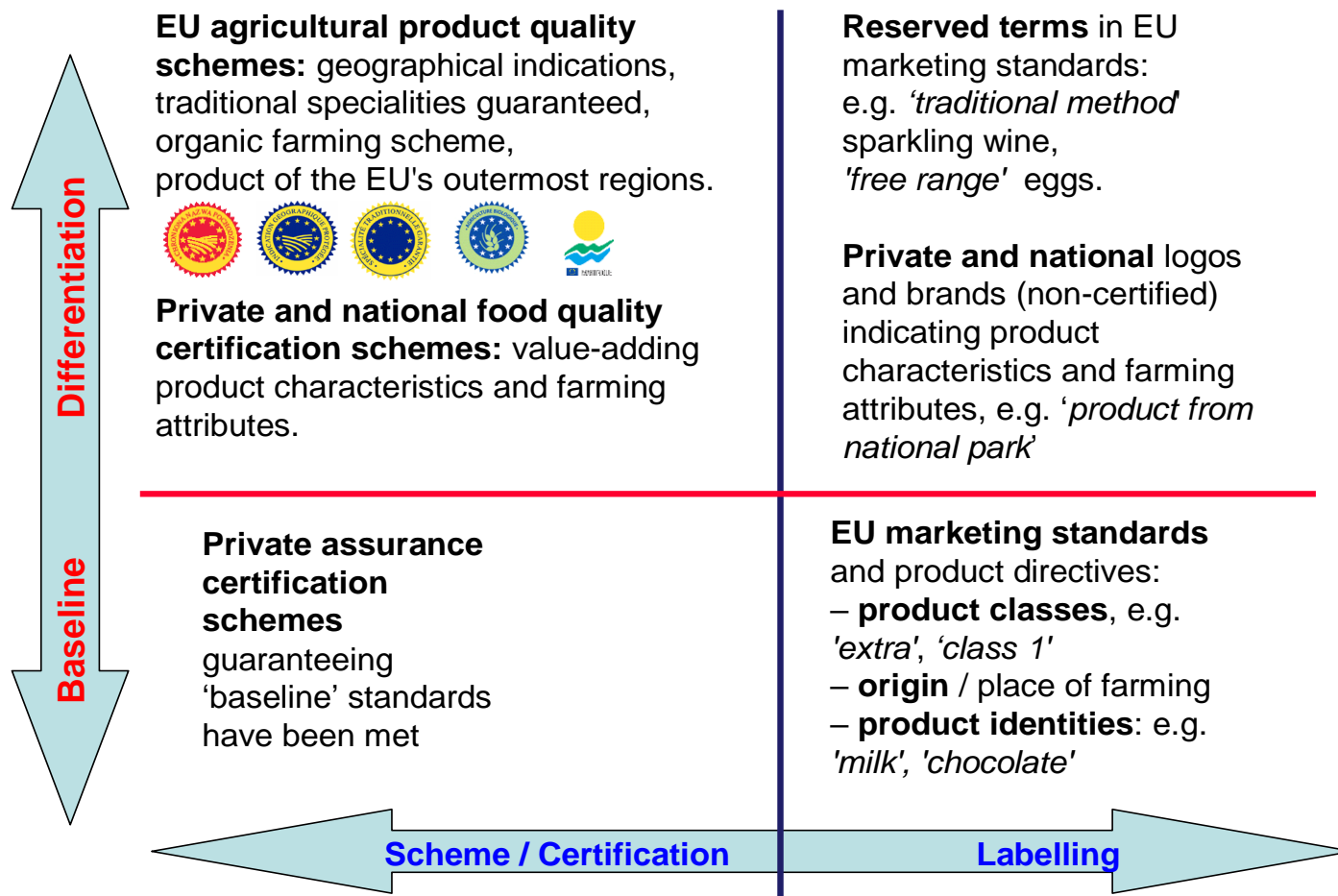
SISTEMA DI QUALITÀ NAZIONALE
PRODUZIONE INTEGRATA



Carbon Footprint



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. 1151/2012)
 - 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>)

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/>)



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

J. CHRISTOPHER ——— Producer name

WILLAMETTE VALLEY ——— Region (AVA)

2010 ——— Vintage

PINOT NOIR ——— Grape Variety

UNFILTERED

PRODUCED & BOTTLED BY LOOSEN CHRISTOPHER WINES
NEWBERG, OREGON USA * ALC. 13.0% BY VOL. * 750 ML ——— Bottle volume
Alcohol content

wine-searcher.com™


(AVA = American Viticultural Area)

Geographical indications

wine-searcher.com™

LAYER CAKE

Wine name



One Hundred Percent Pure

SHIRAZ

Grape Variety

VINTAGE 2008

Vintage

South Australia

Region (GI)



Producer

ALC. 14.9% BY VOL.

750ML

Alcohol content
Volume



Geographical indications

- 4 European Regulations:

- Reg. (EU) 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) - modified by Reg. (EU) No 2117/2021, December 2, 2021
- Reg. (EC) No 110/2008 GI – Geographical Indication (spirit drinks)
- Reg. (EU) No 251/2014 GI – Geographical Indication (aromatised wines)

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. 1151/2012 (510/2006; 2081/92)

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. 1151/2012 (510/2006; 2081/92)





Wines designation of origin (Art. 93 Reg. 1308/2013)

- "a designation of origin" means the name of a region, a specific place or, in exceptional and duly justifiable cases, a country used to describe a product referred to in Article 92(1) fulfilling the following requirements:
 - (i) the quality and characteristics of the product are essentially or exclusively due to a particular geographical environment with its inherent natural and human factors;
 - (ii) the grapes from which the product is produced come exclusively from that geographical area;
 - (iii) the production takes place in that geographical area; and
 - (iv) the product is obtained from vine varieties belonging to *Vitis vinifera*;



Wines geographical indication (Art. 93 Reg. 1308/2013)

- "a geographical indication" means an indication referring to a region, a specific place or, in exceptional and duly justifiable cases, a country, used to describe a product referred to in Article 92(1) fulfilling the following requirements:
 - (i) it possesses a specific quality, reputation or other characteristics attributable to that geographical origin;
 - (ii) at least 85 % of the grapes used for its production come exclusively from that geographical area;
 - (iii) its production takes place in that geographical area; and
 - (iv) it 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. 7 Reg. 1151/2012)

- (a) the name to be protected as a designation of origin or geographical indication, as it is used, whether in trade or in common language, and only in the languages which are or were historically used to describe the specific product in the defined geographical area;
- (b) a description of the product, including the raw materials, if appropriate, 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. 7 Reg. 1151/2012)

- 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) the link between the quality or characteristics of the product and the geographical environment referred to in Article 5(1); or
 - (ii) where appropriate, the link between a given quality, the reputation or other characteristic of the product and the geographical origin referred to in Article 5(2);
- (g) the name and address of the authorities or, if available, the name and address of bodies verifying compliance with the provisions of the product specification;
- (h) any specific labelling rule for the product in question.



Geographical indications (food products)

Content of application for registration (art. 8 Reg. 1151/2012)

- (a) the name and address of the applicant group and of the authorities or, if available, bodies verifying compliance with the provisions of the product specification;
- (b) the product specification provided for in Article 7;
- (c) a single document setting out the following:
 - (i) the main points of the product specification: the name, a description of the product, including, where appropriate, specific rules concerning packaging and labelling, and a concise definition of the geographical area;
 - (ii) a description of the link between the product and the geographical environment or geographical origin referred to in Article 5(1) or (2), as the case may be, including, where appropriate, the specific elements of the product description or production method justifying the link.



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



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. 1151/2012 (*509/2006; 2082/92*)

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 1151/2012 and Reg. delegate EU 665/2014
- 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>