

## PGI WINE - ALGORITHM FOR BUSINESS THROUGH THE AFFINITY OF THE REGION OF MOLDOVA

### VINUL IGP – UN ALGORITM ÎN AFACERE PRIN AFINITATEA PLAIULUI ÎN MOLDOVA

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**Abstract.** *The publications from Moldova, in XVII-XIX centuries, truly reflect the wine-growing micro zones around the rivers Siret, Prut, Raut, Nistru and Bug, with favorable ecoclimatic conditions for wineproduction. The North Pontus and the viticulture of the Geto-Dacians represent the old tradition of the Tyras settlements of the Thracian tribes. The wine trade expanded to Greece, Venice and Russia. The wines from monasteries with local varieties (e.g., Feteasca, Francusa, Galbena, Mustoasa, Coarna, Rara neagra, Grasa) stood out for their quality. Today, the National Office of Vine and Wine has unique requirements for PGI and DOC wines, which is an ambition to revive the famous names of the vineyard of another time (e.g., Ciumai, Cricova, Copciac, Purcari, Romanesti, Truseni), some already having a great number of medals in the international wine competitions. With the creation of the Cadastre of Vineyards in Moldova, the task is to attract as many producers with geographical name, with their own original style and image for the internal and external consumer.*

**Key words:** grapes, PGI wine, factors, quality, trends, priorities, attractiveness

**Rezumat.** *Publicațiile din Moldova, sec.XVII-XIX, reflectă veridic microzonele vitivinicole din preajma râurilor: Siret, Prut, Răut, Nistru până la Bug cu condiții eco-climatice favorabile pentru producția de vinuri, mai ales în preajma limanului la Cetatea Albă. Nord-Pontul și viticultură geto-dacilor reprezintă vechea tradiție din așezările tiras a triburilor tracice. Comerțul cu vin s-a extins în spațiu spre Elada, Veneția și Rusia. S-au evidențiat prin calitate vinurile de la mănăstiri cu soiuri locale: Feteasca, Francușa, Galbena, Mustoasa, Coarna, Raraneagră, Grasa. Astăzi Oficiul Național al Viei și Vinului înaintea cerințe unice față de vinurile IGP și DOC, este o ambiție de a reanima numelere anumitor podgorii de altădată: Ciumai, Cricova, Copciac, Purcari, Romanesti, Trușeni, unele vând în palmares deja numeroase medalii la concursurile internaționale de vinuri. Odată cu crearea Cadastrului viilor în Moldova, se pune sarcina de a atrage cât mai mulți producători cu denumire geografică, cu stil și imagine original proprie pentru consumatorul intern și extern.*

**Cuvinte cheie:** struguri, vin IGP, factori, calitate, tendințe, priorități, atractivitate

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**INTRODUCTION**

Linguistically, “terroir” means a certain terrain area or a small area, where pedoclimatic conditions have a defining impact on the taste qualities of foodstuffs associated, in particular, with wine production. This physical, geographical relationship leaves distinctive marks in the finished product and reflects the definition - Geographical indication, regulated for the first time in Article 22.1 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (Vacarciuc and Prida, 2013). Pursuant to Art.22.1, GI identifies a regional product with a high reputation and unique characteristics. To impose the quality standard, emphasis on the essence of an area - the notion of “protected”, interconnected to intellectual property, was added.

In the context of wines, the concept of PGI is regulated internationally and locally by strict standards. As they cannot completely cover the specifications of the local production process, in the Republic of Moldova the category of producers, the types of wines, their specific qualities that shall be highlighted in the geographical area were taken into account (Indicatii GP, 2016). PGI is only one step towards the highest level of reputation - Protected Designation of Origin (- PDO) which protects the rights to the name, composition and reputation of the product. The legislative framework comes with the objective of protecting producers, a certain official status by which each private entity wishing to use the notion of PGI shall voluntarily adhere to this concept, respect a certain set of rules, it shall be protected against unfair competition, and the quality shall correspond, in the dynamics to Standards (Promov, http).

Although used since ancient times, the concept of PGI begins to be regulated in 1992 with the submission of a set of rules to the EU with regulations on protection and promotion of authentic rural production at competitive prices to avoid misleading consumers. At its 5th session in Geneva (11-15 September 2000), the Standing Committee created the standard SCT/6/3, Revised at the 7th session and approved at the Session no. 8 (27-31 May 2002), referred to as SCT/8/4.

The standard (29 p) defines the need, the terminology and the basic notions, the type of rights, the system of protection extended on the territory of other countries. According to the standard, we have: “*Source indication*”, a phrase of the Madrid Agreement which contains the clear indication – “Made in Moldova” and “*Mention of origin*”, a term based on the Lisbon Agreement of 1958 for the Protection of Appellations of Origin. But the protection of rights in PGI applies to Member States that have ratified the “*Agreement on Trade-Related Aspects of Intellectual Property Rights*”. Each state, in turn, can expand the concepts and define its own PGI protection and regulation procedures (<http://www.researchgate.net>).

The definition “Wine - product obtained exclusively from the total or partial alcoholic fermentation of fresh grapes, whether or not crushed, or of grape must”, together with the laws governing the trademarks “Quality wine”, “Table wine”,

“Special wine”, also regulates the imitations accompanied by terms such as “typekahor” (kagor type, as it was), standard 110/2008). In this regard, bilateral agreements have been signed between the EU and Australia (1994), with Chile (2002), and Canada (2003). The common factor remains the definition of PGI in the foreground with the “Reputation” of the product corresponding to the specific area, with a distinctive European Logo and a single database, which documents all PGI producers (World Intellectual Property, vol.4).

The first mentions or attempts to connect local legislation to international standards began in 2012, followed by the creation of the first 4 PGI regions and the launch in 2015 of PGI production originating in the Republic of Moldova. On the grounds of the Law on Vine and wine No.57 of 10.03.2006 (Legea V and V, 2006). The most important law on PGI, however, remains the Law No.66 of 27.03.2008 on the Protection of Geographical Indications, Appellations of Origin and Traditional Specialties Guaranteed, protection of the producer and the consumer from counterfeiting, by protecting and regulating labels and products themselves, creating what is the foundation of PGI products -the notion of *reputation*.

Government Decision No. 356 of 11.06.2015, approving the Regulation on “Organization of the wine market”, establishes the general rules on the organization of the wine market, rules on production potential, specific requirements for obtaining wine products, stages of organization of manufacture and marketing of wine products with protected name of origin (PDO) and with protected geographical indication (PGI), the method of elaboration and certification of the specifications, the specific norms regarding the production of ecological wine products (H.G. no.356, 2015). This document transposes the articles of the Regulation No. 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organization of the markets in agricultural products. This is about connecting local legislation to European Union law. Decision No.317 of 23.05.2012 approves the Requirements on the definition, description, presentation and labeling of alcoholic beverages in order to prevent counterfeiting. Also at the legislative level is the Decision No.810 of 29.10.2015 for the approval of the Regulation on the evaluation of the organoleptic characteristics of wine products by sensory analysis with applicability in the context of PGI (web ONVV).

## **MATERIAL AND METHOD**

In the Republic of Moldova it is approved (Ord.12, 2016) the delimitation of geographical areas (GA) as follows: Codru; - ValulluiTraian; - Stefan Voda; - Divin. For each of them, a specification and action plan was created for the implementation and development of the PGI concept at National level. GA PGI is an Association of wine producers with full legal power, potential members - individuals or legal entities, located in the geographically delimited area and meeting the accession requirements, according to the specifications. The specifications were approved (in 2012) at the general meetings and registered with the Ministry of Agriculture,

Regional Development and Environment according to Law No.66-XVI of 27 March 2008 and Regulation on "Organization of the wine market", of 11 June 2015.

The elements that justify the connection between quality and geographical environment include: the reputation and distinctive organoleptic characteristics of wines; soil, relief and vineyard characteristics; specific climatic characteristics; the characteristics of the vineyards and the quality of the grapes, the availability of labor; vine cultivation technology; grape varieties intended for the production of PGI wine; maximum productivity per ha; requirements for grapes at harvest; processing technology scheme; storage conditions, winemaking; special conditions for labeling and production; name and addresses of producers - founding members; the name and address of the bodies responsible for verifying compliance with the specifications; rules, categories and indicators for internal control plans on compliance with the Specifications.

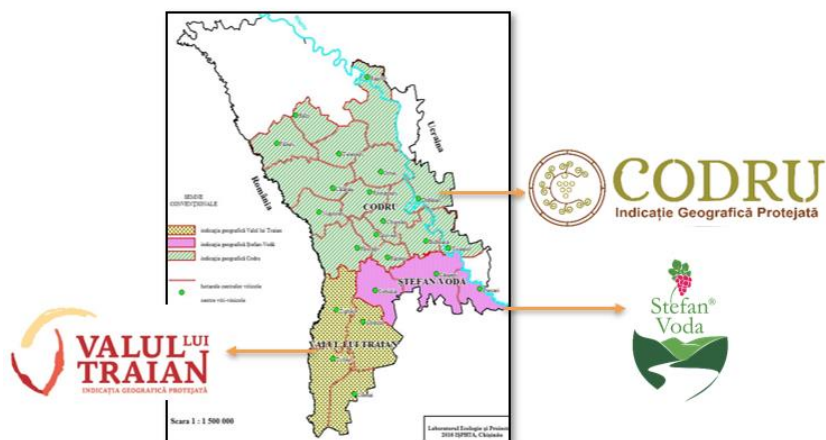
The registration as belonging to a certain PGI area for wine production is made on the basis of a request submitted to the Public Institution National Office of Vine and Wine. The following are attached to the request: PGI area with assignment of the producer; owned vineyards; varieties and their surface with annexes - topographic map with the delimitation of vineyard plots; copy of the documents certifying the right of ownership or lease of the vineyard; record of the vineyard (plot); excerpt from the project for the establishment of the vineyard. The verification and evaluation of the compliance with the requirements of the specifications, as well as the dynamic observance of the compliance with the specifications is done in accordance with the Order No. 05 of 21 December 2015 of the National Office of Vine and Wine and, once the application is approved, the information is registered in the single register of producers of wine products with PGI.

Verification of compliance with the provisions of the specifications is performed by a third party body, independent, impartial and transparent, which is appointed by the Ministry of Agriculture, Regional Development and Environment of the Republic of Moldova. Thus, in 2016, the State Enterprise "National Center for Quality Verification of Alcohol Production" (CNVCPA), was designated as a private body responsible for conducting annual external inspections of producers of wine products with PGI, recorded by the Public Institution National Office of Vine and Wine (ONVV). In 2018, CNVCPA was included in the National Agency for Food Safety which verifies the stages: the condition of the vineyards with GI; technological production process (with GI); traceability of wine products with GI; physico-chemical and organoleptic certification of GI production. Organoleptic evaluation of PGI products through the automated information system with rotation of commission members developed by ONVV, processing the data obtained at the wine tasting, as well as issuing the minutes automatically, ensures the impartiality and transparency of the sensory analysis process.

Wine products with PGI / PDO are subject to strict registration under the responsibility of ONVV. The wine producers with PGI, the plantations that correspond to the provisions of the specifications are kept in record. The lots of declared, certified, downgraded wines, as well as the stocks of wine products with PGI are taken in record. ONVV is at the stage of implementing the downstream monitoring project (on the merchant market) of the quality of wine products with PGI, an innovative mechanism for the wine sector, thus ensuring full statistics of product quality in the wine sector, a strategic one for the country.

## RESULTS AND DISCUSSIONS

The regions of the wine sector are managed by the Association of wine producers with PGI, they being protected both in the Republic of Moldova (since 2012) and at the level of the European Union (2016). In figure 1 we have the geographical representation of the PGI Areas on the territory of the Republic of Moldova and their logo.



\* PGI Divin – Valabil pe întregul teritoriu al R. Moldova

Fig. 1 Geographical representation of PGI areas in the Republic of Moldova

**PGI “Codru”** is the wine-growing region in the center of the Republic of Moldova, the largest protected geographical area on an area of about 60,000 hectares (4% of the total area of the region), and located on the Codrilor Plateau (40% of the region), Northern Plains, the terraces of the Middle Dniester and the Rezina Hills and includes the wine-growing centers: Hincesti, Razeni, Ialoveni, Bulboaca, Cricova, Romanesti, Nisporeni, Calarasi, Orhei, Telenesti, Dubasari, Falesti, Balti, Rascov. The mention “CODRU” can be attributed to the categories of wines: wine, liqueur wine, quality sparkling wine, quality aromatic sparkling wine, semi-sparkling wine, aerated semi-sparkling wine, wine from raisined grapes and wine from overripe grapes, obtained from grapes at least 85%, exclusive of the vineyards of the geographical area Codru. The soil structure is predominantly carbonate chernozem, about 62% of the territory. Brown and gray soils occupy about 14%, most of which are under forest vegetation. Exhibitions predominate here: southwest (about 16%) and east (about 16%), western (about 14%), southern (about 12%) and southeast (about 10%) at altitudes up to 400 m.

*The climate* in the region is temperate continental, the winter being mild and short, but the summer warm and long, with a relatively small amount of atmospheric precipitation. The average annual temperature is 9.0 °C, and the sum

of active temperatures is 3000-3200 °C. The climate and soil composition have created excellent conditions for the production of high quality white wines, as well as exceptional sparkling wines.

The grapes of the white varieties are cultivated on the slopes of the region, constituting about 63% of the total area taken into account; the others have the black grapes - 37%. The predominant varieties are: Aligote, Sauvignon Blanc, Muscat Otonel, Feteasca Alba, Chardonnay, Riesling de Rhein, Cabernet-Sauvignon, Merlot, Viorica, Riton, and Alb de Onitcani.

**“Stefan Voda” PGI region** is located in the southeast of the Republic of Moldova which has distinguished itself over time with a national and international reputation in the production of quality wine. The delimited area for wine production, Stefan Voda PGI, includes the following natural areas: Botna River Meadow, Terraces of Dniester and the Plain of Southern Moldova and widens its viticultural horizon on an area of about 10,000 hectares. The cross border river Dniester and the inland rivers such as Botna and Cogalnic flow on the territory of the region and include 4 administrative-territorial districts, such as: Stefan Voda, Causeni, Cimislia and Basarabeasca. The territory is medium fragmented, with the relief of different degree of inclination, the slopes with average length (200-400 m) and the inclination angle of 3-5 ° predominate. About 35% of the territory is part of the upper Sarmatian Meotian subfloor, represented by clays with layers of sand, formed in the Quaternary and Tertiary period, they are represented by sediments from the Miocene Era, conditioning the quality of wines considering the tertiary red rocks coming to the surface, rich in microelements the iron group in the Purcarimicrozone.

*The climate* is included in pedoclimatic zone III with insufficient humidity, the amount of precipitation varies 450... 550 mm, the average annual atmospheric air temperature for zone III is 10.0 °C, the sum of active temperatures is 3200... 3450 °C. The duration of the vegetation period is 182 days, and the sunny days 310-320 per year. Dniester water basin with lakes and estuaries, attenuated heat and loam and clay granulometric soils - in 71% of the total area. Black grapes constitute about 57% of the total area recorded for production with PGI, white grapes - 43%, with predominant varieties: Cabernet Sauvignon, Rară Neagră, Pinot franc, Merlot, Saperavi and Pinot gris, of which red wines with flavors of pomegranate, in the bouquet predominate the flavors of fruits and berries, currants, spices, flavors of oak in aroma and taste so that the particularities of the variety do not prevail. Rose wines are characterized by a wide range of color - from pale pink to raspberry color, the bouquet is distinguished by aromas of fresh fruits and berries (apricots, raspberries), the taste is soft, fruity, refreshing, with a lot of freshness.

**PGI “Valul lui Traian”** is located in the south of Moldova with a PGI area of about 43,000 ha (7.5% of the total area of the region), located between the “bottom” and “top” branch of Valul lui Traian, lying on the Plain of Southern Moldova (90%) and the Tigheci Hills (10%). The region includes the following

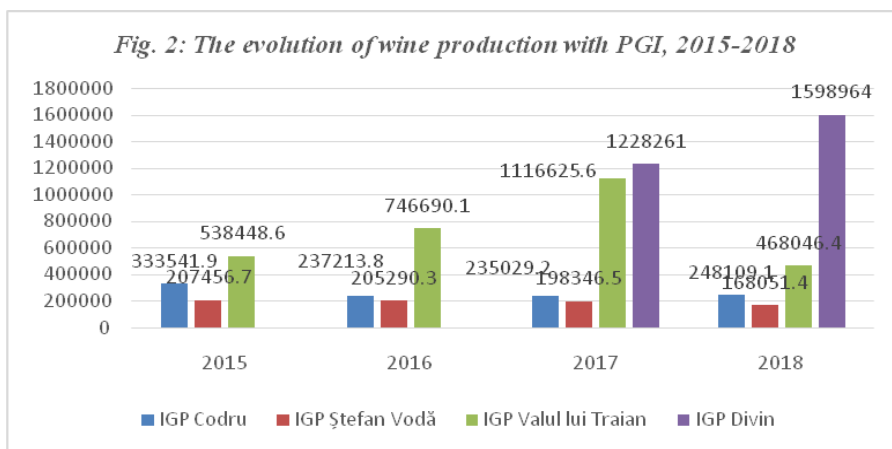
districts: Leova, Cantemir, Cahul, Comrat, Ceadir Lunga, Taraclia and Vulcanesti. The relief of the region is characterized by increased fragmentation of hills, deep valleys and slopes with varying degrees of inclination through which flows the transboundary river Prut and the inland rivers Ialpuș and Cahul with their tributaries, a series of lakes and river Lower Danube. The quality of the wines is conditioned by the surface tertiary red deposits, rich in microelements; clay-loam texture predominates by 47%. The wine-growing region includes 3 subregions with specific terroir: Bugeac Plain, “Codrii Tigheciului” forest and Prut Terraces. Silvestro region - Tigheciului hills (11%) is presented by leached chernozems and gray soils.

*The climate* of the wine-growing region Valul lui Traian is temperate-continental with influences from the Black Sea. Due to the geographical location, the territory of the PGI “Valul lui Traian” is massively included in the pedoclimatic zone III with insufficient humidity. According to statistical data, the amount of precipitation varies from 450 mm to 550 mm, the average annual atmospheric air temperature for zone II is 9.5 - 10.0° C; the sum of temperatures above 10°C is 3200 - 3450°C; the duration of the vegetation period with temperatures higher than 10°C is 179 - 187 days. Sunny days are recorded in number of 310-320 per year. The specific climate around the Black Sea and the Tigheci forests is favorable for the cultivation of black grape varieties: Cabernet Sauvignon, Merlot, Saperavi, Rara neagra, Pinot farn and Feteasca neagra and are planted in proportion of 60%. Among white grapes, the Sauvignon Blanc, Chardonnay and Muscat Ottonel varieties predominate. The red wines from here have a more intense color than in other areas, ranging from pomegranate red to ruby; fruity aromas and a rich taste due to the increased extractivity.

PGI areas have been regulated in Moldova since 2008, marketing started in 2016, and however, currently we do not have encouraging figures in winemaking. The low degree of adoption is caused by a number of objective and subjective factors. Among the objective factors are the mode of ownership and the increased degree of dispersion of areas cultivated with vine, and the owners that do not have sufficient resources to set up new PGI plantations. According to the GI activity report 2018, the situation at the GI level is with some mistrust, as a result, disinterest in PGI products and unpaid dues that generate a vicious circle, in which the association does not work because members are not active and members are not active because the association does not work. According to statistics from the Ministry of Agriculture and Regional Development, at the end of 2017, only 8.6% of the area with vines was part of the PGI.

Practical actions to strengthen and expand PGI associations are to widely propagate the associations, as we see the Wine Openings, organized regularly, active participation in associations to benefit from a Logo, so it is the first clear and explicit practical action. Popularization through seminars, working with members of the association and training of producers, analysis of statistical data of outstanding results obtained by PGI producers can bear fruit. However, we

notice a declining trend for PGI Valul lui Traian, which, in 2018, massively reduced grape production, due to a number of factors.



**Fig. 2** The evolution of wine production with PGI between 2015-201

Another trend of recent years is the increase in the number of micro-enterprises, such as family businesses, with small areas (of the order of several tens of hectares), but which place a special emphasis on quality. Given these figures and the fact that at present, registered in the PGI associations are only 9.2% of grape producers, on the market there is the possibility to increase this number to at least 68%, by assimilating large and medium-sized companies.

Large companies, which already have a name and the reputation guaranteed by the PGI not of major importance, should become part of the PGI associations in order to be able, first of all, to ensure competitive capacity in the European market, where special emphasis is placed on PGI and where, for the time being, the presence of Moldovan products has yet to increase. On the segment of small producers - 38% - are included small family-type producers. For them, preferential conditions should be created in the PGI, or, by definition, the notion of PGI was created specifically to promote and protect the authentic producer. The trend of recent years is the increase in the percentage ratio of plantations for PGI wines in Moldova local and international varieties - 1 : 1.

The current assortment of PGI wines by regions in the Republic of Moldova consists of 78 wine producers currently registered in the register. According to the statistical data, the PGI region Valul lui Traian is the largest producer of wine products with PGI - 46% registered, followed by the PGI region Codru - 35% and PGI Ștefan Voda - 15% and PGI Divin - 4%. In the reference period (2015 - 2019) the surface of the plantations taken into account by ONVV is 6521 ha. Of the varieties registered for each region, the top 10 can be presented as follows:



Analyzing the structure of the regions: of a total of 2081 ha registered at PGI “Codru”, the white varieties constitute 63%, the red varieties 37%. Respectively, for PGI wines the region “Stefan Voda” on a limited area of 981 ha, uses white varieties 40%, red varieties 60%, and in the largest region “Valul lui Traian” with 2882 ha massive PGI, the ratio between varieties of white grapes and those with red grapes is almost equal. It is gratifying that in all 3 regions, the local varieties are found in the top of the varieties from which is produced with wine PGI, which means that they become important in identifying the typification of geographical regions delimited for wine production with PGI and PDO.

In 2019, 26 wine tasting sessions with PGI were organized, in which 164 samples were evaluated. Thanks to the automated information system, developed and implemented by ONVV, non-compliant samples (3 in number) - rejected, subsequently downgraded. This ensures the presentation on the market of wines with PGI without defects and with high quality. A total of 164 wine samples were tasted (144 samples with PGI, 16 international samples, 1 Wine of Moldova sample from 28 wine units, of which 20 national and 8 international. According to the tasting sheets regarding the quality ratings, the PGI wines obtained: PGI “Stefan Voda” - 83.78%, PGI “Valul lui Traian” - 82.98%, PGI “Codru” - 82.86% and international wines – 83.34%.

## CONCLUSIONS

1. Wine producers make a considerable effort to have Worldwide Wines, which corresponds to the development strategy submitted by the National Office of Vine and Wine, supported by various forms of collaboration, especially, strengthening efforts to promote and diversify exports with the brand: *Wine of Moldova. A living legend.*

2. In the last two years, as a result of the recorded record harvests, the supply-demand ratio of wine has practically reached the indicators of 2013 (after the embargo), the average of the last 7 years shows that the Republic of Moldova has produced 4 times more wine than the export markets could absorb, given that 85% of Moldovan wine is traded abroad. Most countries face such a phenomenon, given the fact that there is overproduction worldwide.

3. In these conditions, small and large producers shall associate more energetic, to expand the areas with local and exotic grape varieties, to attract intensely tourism to our homeland, to continue working on the quality of production, designed through terroir affinity, which is a good business algorithm.

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