

Legislative trends in european oenological practices – a mini review

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Abstract

The approval and authorisation of the various treatments applied to wines is a dynamic process undergoing continuous change, but which must strictly observe the legislative framework. In this paper, a brief comparative analysis based on the studied wine legislation was carried out between the oenological practices authorised in the US, EU, but also in the “New World” countries, with special emphasis on the differences. The paper aims to identify the main oenological practices that have a high probability to be imposed in the near future in European wine legislation and implicitly in Romanian wine law, in the context of competition with “New World” wines and pressures from producers and consumers.

Keywords: legislation, oenological practices, wines

1. Introduction

In the field of wine industry, it is mandatory to know and implement in oenological practice the legislative regulations governing the authorised treatments, doses, and techniques for their application.

Globally, the International Organisation of Vine and Wine (O.I.V.) has the role of scientific authority for issuing recommendations for the authorisation of oenological practices. At European level, the European Commission issues European regulations and rules that apply to all Member States of the European Union (EU). Until recently, EC Regulation 1622/2000 [10] was the Community Code of Oenological Practices and Treatments, detailing the application of the practices defined in EC Regulation 1493/1999 [1, 11]. The list of oenological practices and treatments currently authorised in the EU is set out in Delegated Regulation (EU) 2019/934 [12] supplementing Regulation (EU) No. 1308/2013 [13].

In Romania, the implementation of legislative regulations in oenological practice is the responsibility of the Ministry of Agriculture through its competent bodies: the National Office of Vine and Wine Products (O.N.V.V.), the National Office

of Designations of Origin of Wines (O.N.D.O.V.), the State Inspection for the Technical Viticulture and Winemaking Control (I.S.C.T.V.), and also of some national interprofessional bodies: the National Vine and Wine Employers’ Association (P.N.V.V), the National Interprofessional Viticulture and Winemaking Organisation (O.N.I.V.), and the Association of Wine Producers and Exporters (A.P.E.V.) [2].

Through the methodological norms for the application of Law 164/2015 on vine and wine [14], a series of oenological practices and treatments are authorised to ensure a good production of wines.

2. Discussions

Comparative analysis of current viticulture and winemaking legislation

There are a number of differences between the oenological practices accepted by the OIV, the US, and the EU.

For example, the addition of lactic acid, malic acid, and metatartaric acid to wine, a practice allowed by the OIV, is allowed in the US, but not in the EU. On the other hand, OIV-approved treatments, such as electro dialysis and pasteurisation, are allowed in the EU, but not in the US.

There are a number of practices that are not recommended by the OIV, but which are accepted in both the EU, and the US (the addition of potassium caseinate and kaolin for clarification, the addition of thiamine dihydrochloride to promote yeast growth, the addition of natural sweeteners, concentrated grape must, or sucrose for sweetening).

There are also some treatments that are being studied by OIV experts that are allowed in the US, but not in the EU (addition of oak chips, and dimethyl dicarbonate). Non-OIV treatments, such as ultrafiltration, and concentration of slightly volatile compounds, are allowed in the US, but not in the EU.

In the current context of a strong competition between “New World” wines – Australia, South America – with European wines, oenological practices and products allowed outside the EU but contrary to European legislation should be noted: growth factors (inositol, biotin, pantothenic acid, soy flour), antioxidant protection (sodium metabisulphite, dimethyl dicarbonate, sodium thiosulphate, potassium sulphite, benzoic acid), stabilisation (mannoproteins, potassium citrate), enzymatic preparations (amylases, glucosidases, proteases), clarification (clay, milk, blood, iron sulphate), correction of acidity (malic acid, lactic acid, ion exchange resins), enrichment in sugars (fructose, dextrose, invert sugar), improvement of chromatic characteristics (anthocyanins, carotenes, curcumin, iron oxides), sweetening (aspartame, saccharin), aromatisation/deodorisation (oak chips, cork granules, paraffin oil, silver salt), smoothness correction (agar-agar, glycerol).

Certain authorised oenological practices in the EU are prohibited in countries outside the Community: thiamine in South Africa, argon, urea, and calcium phytate in South Africa and Canada, calcium tartrate, perlite, and cellulose in Canada, gum arabic, albumin, fish glue, silica soil, potassium bicarbonate, copper sulphate, and β -glucanase in Argentina, tartaric acid in Japan [3, 4].

Most EU regulations in oenological practice are strongly inspired by French legislation, which has proved to be the most complex and rigorous. While France was distinguished for its rather restrictive viticulture and winemaking law in the past, the proposals of the Bernand Pomel report [5] for oenological practices pave the way for flexibility in

viticulture and winemaking laws through the following suggested issues:

- shorten the testing period, and ensure a rapid transmission of scientific assessments to the relevant EU fora;
- allow the use of oak chips for all categories of wines, reserving the authorisation of use to interprofessional bodies that will be able to adopt stricter rules;
- allow de-alcoholisation as a result of the change of consumption habits of wine buyers;
- encourage the exclusive use of sugar enrichment (increasing the concentration of sugars), enrichment by concentration or by reverse osmosis;
- open up the range of oenological practices under the responsibility of interprofessional bodies in order to allow better adaptation of supply to demand.

The future of European oenological practices

The oenological practices that are most likely to be imposed in European viticulture and winemaking legislation, given the growing pressure from producers, are [6]:

Acidification

Currently, the EU only allows the use of tartaric acid, while the US allows the use of malic, lactic, and metatartaric acids.

Reduction of volatile acidity

Nanofiltration is permitted in the US for wines with high volatile acidity. In the EU, wines with a volatile acidity above 0.9 g/l are considered unfit for consumption, and are not marketed.

Addition of oak chips

It is an oenological practice applied to most wines produced in the US that has the role of improving wine bouquet. A similar technique applied in the EU is barrique aging applied only to high quality wines.

Addition of dimethyl dicarbonate (DMDC)

Relatively recent studies show that the addition of DMDC can successfully replace the sulphitation of grape musts and less of wines [7]. The use of this product is authorised in the US, is undergoing validation by the OIV, and is very likely to be included in future European regulations.

Other oenological practices

There are several controversial oenological practices with a low probability of being implemented in European viticulture and winemaking law:

Hydration

Addition of water is allowed in some US states up to 35%. In California, where most wines are produced, the allowable hydration level is 7%, with a tolerance of 1.5%.

Aromatisation.

The addition of concentrate of volatile natural fragrant compounds with a fruity-floral character is allowed in “New World” wines. However, the reincorporation of varietal fragrant compounds specific to own composition (which would have been separated by de-alcoholisation, for example) into a wine in concentrations lower than their initial concentration in grapes is limited.

Addition of sugar and sweeteners

Addition of sugar and sweeteners is not allowed in the EU. In our country, according to European legislation, the sweetening of wines can only be done by adding partners with sugar reserves (grape must, preserved grape must, concentrated grape must, rectified concentrated grape must, partially fermented wine) in a total quantity of 35 g/l. For the production of wines with a controlled designation of origin (DOC), the sugar reserve partner must come from the same delimited production area, and the sweetening operation must be carried out within the delimited area [8, 9].

3. Conclusions

The adoption of new oenological practices in European viticulture and winemaking legislation should be based primarily on scientific studies carried out by OIV experts, Codex Alimentarius expert groups, and the European Food Safety Authority, and should be less influenced by increasing pressures from producers or consumers. Certain practices that some producers support, such as the addition of sugar and sweeteners, hydration within certain limits, or aromatisation, are contrary to the definition of wine.

The de-alcoholisation of wines, citing consumers' preference for wines with a lower alcohol content, should not be imposed, but rather consumers should be educated in the spirit of responsible and sound wine consumption.

Wine must remain a drink characterised by authenticity and naturalness that must fully reflect the grape variety/varieties from which it is made, the wine-growing area with full eco-climatic factors, and future oenological practices adopted in viticulture and winemaking legislation must not affect under any circumstances this naturalness.

In conclusion, the international standardisation of oenological practices in order to avoid excessive chemicalisation of wine, and unfair competition can be an unanimously accepted solution by all those involved in wine production.

Compliance with Ethics Requirements. Authors declare that they respect the journal's ethics requirements. Authors declare that they have no conflict of interest and all procedures involving human or animal subjects (if exist) respect the specific regulation and standards.

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11. Regulamentul CE 1622/2000 privind organizarea comună a pieței vitivinicole și de stabilire a unui cod comunitar al practicilor și tratamentelor oenologice.
12. Regulamentul CE 606/2009 de stabilire a anumitor norme de aplicare a Regulamentului (CE) nr. 479/2008 al Consiliului în privința categoriilor de produse viticole, a practicilor oenologice și a restricțiilor care se aplică acestora.
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14. Legea viei și vinului 164/2015 în sistemul organizării comune a pieței vitivinicole.