

An analysis of ingredient and nutritional labeling for wine

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Abstract. Ingredient and nutritional information are currently mandatory in many countries for food labeling. Although wine is generally exempt from this requirement, regulatory changes are being actively considered by authorities across the globe. In this paper, a review of the current international requirements for the presentation of ingredient and nutritional information is undertaken. A literature review of studies into consumer's requirements and understanding of such information is undertaken and the potential costs to producers analysed. The study makes a number of conclusions on whether ingredient and nutritional labeling is appropriate for wine and investigates the effectiveness, usefulness and impact of such a labeling regime.

1. Introduction

The food label is the arena in which many of the most intense disputes over food take place, for the label provides the most public face for controversies over food. It is also one of the most highly valued and competitively sought after communication channels in the market place. As the battle for space on the label has intensified, and the often competing interests of consumers, industry and government come to the fore, food labelling policy has evolved in a sporadic fashion to satisfy a range of interests, including protecting consumers.

A consideration of the policy drivers – consumers' needs for information; industry's need for marketing flexibility and minimal regulatory burdens; and government's objectives in the area of individual and population health – provides a framework for deriving labelling principles.

The latest battleground on food labelling concerns the provision of nutritional information (Nutritional Information Panels- NIP) and ingredient information.

In this paper, a review of the current international requirements for the presentation of ingredient and nutritional information is undertaken. A literature review of studies into consumer's requirements and understanding of such information is undertaken and the potential costs to producers analysed. The study makes a number of conclusions on whether ingredient and nutritional labelling is appropriate for wine and investigates the effectiveness, usefulness and impact of such a labelling regime.

2. Background

2.1. Labelling as a policy measure

Alcohol labelling regulation nationally and internationally is expressed through one or a combination of mechanisms including food standards laws and codes, industry initiatives to promote healthy use of alcohol through labelling or

point-of-sale advertising, or voluntary agreements reached between industry and government in relation to alcohol and labelling.

The role of the labelling in raising awareness lacks strong empirical evidence. For example, both public health and industry key informants report that there is confusion about the potential role of pregnancy health warning labelling of alcohol products in changing the drinking patterns of women who are pregnant or planning to become pregnant [1]. The link between ingredient and/or nutritional labelling to consumers is even more uncertain.

Labels can contribute to awareness, but it is clear that label information on wine that leads to consumption decisions primarily concerns the variety, region and flavour characteristics of wine and not health related information.

Rationale for food labelling

The principal justification for ingredient and nutritional labelling for foods is that it informs consumer choice. See for example, in EU legislation this is clear from Recitals 3 and 4 of Directive 1169/2011, which state:

In order to achieve a high level of health protection for consumers and to guarantee their right to information, it should be ensured that consumers are appropriately informed as regards the food they consume. Consumers' choices can be influenced by, inter alia, health, economic, environmental, social and ethical considerations.

It is a general principle of food law to provide a basis for consumers to make informed choices in relation to food they consume and to prevent any practices that may mislead the consumer.

Trends relating to consumers' changing attitudes to food should also be noted. Numerous "food movements" have evolved in recent years: the slow food movement;

the school canteen reformers; the “locavores” – that is, those committed to eating as much locally produced food as possible (hence the growing popularity of farmers’ markets); the organic food movement; the campaign for animal welfare; the fair trade in food movement; and those opposed to particular technological developments in food production. Consumers involved in each of these trends seek label information that reflects their philosophical positions. However, each group may desire different information, and each piece of regulation adds potential cost to the producer and cost to the consumer [2].

Governments must act to protect and promote public health and food safety, but must also be mindful that regulatory and other government decisions that affect the food industry can have major impacts on the economy. Hence governments aim to achieve effective regulation while enabling industries to remain competitive and containing the costs of ensuring compliance.

Government regulation therefore needs to consider possible impacts on employment levels, regional and rural viability, and the cost of food in low income areas [3].

2.2. Principles of good regulatory practice

Although space does not permit a detailed discussion on the principles that underpin good regulatory practice around labelling, there are a number of principles should be adhered to:

- Regulate as a last resort and not as a first resort.
- Regulate only after all other options have been excluded.
- Be clear about the cost of regulatory proposals.
- Regulate only when the overall benefit outweighs the burden and cost to individuals and businesses.

As a general principle of good governance, it is necessary that the members of the community feel confident that the food regulatory system, which is designed to protect its health and safety and consumer protection, operates effectively. As such, once the case for a labelling standard has been established and becomes part of regulations, it must be monitored and enforced by the jurisdiction/s with as high a priority as any other food standard. Labelling standards should also be written in such a way that they both clearly convey what is required of industry and are capable of being enforced should a prosecution occur [4].

For consumers, the food label is the principal source of information at the point of sale. For example, a 2007 FSANZ survey indicated that 84% of Australians and 81% of New Zealanders cited food labels as their main source of information about the nutritional content of foods [5]. However, it is not the only source of information. For example, for “at-risk” consumers of allergenic material, food labelling remains an important means by which at they are able to identify and avoid allergens of concern. This population is typically more likely than the general population to take an interest in food labelling, more likely to find the information important and useful, and more committed to spending time to read labelling information thoroughly. However, the importance of labelling as the primary source of allergen identification on food products, has also changed, with an Australian study reporting only

29% of the population checking labels upon first purchase of a product and only 16% of the benchmark; fewer report always reading food labels carefully (85% v 90%) and not as many profess an interest in food label information (69% v 75%) [6].

Government plays its optimum role in food labelling by ensuring labelling to guarantee food safety; by working with industry to use labelling to encourage healthy eating and population health; by taking a prudent approach to the labelling of foods and ingredients produced or processed by new technologies; and by acting to ensure that industry self-regulation in the field of consumer values provides consistent and accurate labelling to enable consumers to make informed choices [7].

2.3. International obligations

National food labelling laws exist within a complex network of international conventions and agreements that impose obligations on the countries that have signed up to them. The most important instruments in this international framework are firstly those presided over by the World Trade Organization (WTO) – namely the General Agreement on Tariffs and Trade (GATT) and a series of more specific follow-up agreements. Secondly, a number of international standards with relevance to food labelling are set by bodies outside the WTO, the most important of which is the Codex Alimentarius Commission (the Codex Commission). Finally, there is the World Health Organization (WHO) Global Strategy on Diet, Physical Activity and Health (the WHO Global Strategy) [8].

The Codex Alimentarius (the Codex) is supervised by the Codex Commission, which is responsible to the WHO and the Food and Agriculture Organization (FAO). The Codex Commission’s primary purposes are to protect the health of consumers, ensure fair trading practices in the food trade and promote the coordination of international food standards. The Codex has become a highly significant influence on global food law and is also important in settlement of WTO disputes (domestic standards which comply with the Codex are more likely to comply with WTO expectations).

This complex of international standards and obligations permits national flexibility, provided that any national regulations that might impact on international trade are applied uniformly to local and imported products alike, are based on legitimate reasons drawn from the various international treaties and are justifiable and proportionate to the compliance burden they impose.

In addition, there is a growing acceptance of the key role that governments play in positively influencing consumers’ dietary choices using a range of preventative health approaches, including food labels where appropriate. However, it is recognised that food labelling should not be used in isolation to provide consumers with information to promote healthy eating choices. Where the use of food labelling is appropriate, it should be part of a broader public health strategy for healthy weight and improved nutrition across the population [9].

In recent months and years, there has been a growing interest in applying ingredient listing and nutrition labeling to wine (from which it has generally been exempted

historically by virtue of its characteristics as a single ingredient food).

3. Issues

Wine is a unique product, crafted from highly variable raw materials. It is not, and cannot be, made to a recipe and the final composition and characteristics of the wine cannot be fully anticipated at the time the grapes are harvested. The need for winemakers to intervene in order to produce wine with acceptable sensory characteristics from such highly variable raw materials has been recognized for centuries. For example, cooler climate producers generally have more than enough acidity in their grapes, but will often need to add sugar to obtain an appropriate final alcohol content and a sensory balance between the sugar and acid in the finished wine. Warmer climate producers, in contrast, seldom have problems getting sufficient sugar in their grapes for fermentation purposes, but their grapes can lack acidity, which will often need to be augmented through an acid adjustment. In both these cases, the aim is to arrive at a finished product with a balance between sugar and acidity that will be acceptable to consumers and have an appropriate shelf-life.

Such production needs for wine are acknowledged in the EU wine regulations, which allow additions of sugar (in various forms) and acids, and makes allowances for extra additions in years of exceptional climatic conditions. Throughout the winemaking process, right up to the point just before bottling, the winemaker may make blends of separate wines that have each had their own series of adjustments, and may make further enhancements to the final blend until it is ready for bottling. Each intervention could affect aspects of the information that is contained in a nutrition labelling panel.

What this means in practice is that every batch of wine may be different from the preceding one of the same wine made in the same winery. Thus to produce accurate ingredient, compositional or nutrition labels, every single batch would need to be subjected to extensive analysis to obtain the necessary data for the label.

In labelling regulations, single-ingredient foods, such as wine, are exempted from ingredient and/or nutrition labelling in many jurisdictions. See for example, in the European Union, under Regulation 1169/2011 on the Provision of Food Information to Consumers (the “Food Information Regulations” or FIR) alcohol beverages were exempted from both types of labeling while the matter was reviewed. Similar products such as fermented vinegars are also not required to bear a nutrition label. The unique properties of wine as a single ingredient food have often led to its exemption from nutrition and ingredient labeling in most markets up to the present time. Some countries already do require forms of ingredient labeling but there is presently a growing interest in other markets to see ingredients listed and nutrition labeling introduced.

Trade related issues arising from international introduction of ingredient and nutrition labeling are:

The terms that are commonly used in ingredient listing and nutrition labeling differ between markets. If the understanding of what constitutes an ingredient is different

from one market to another, the list of ingredients that would have to appear on the wine would be different for exactly the same wine. Some markets may continue to regard wine as a single ingredient food, for which such labeling is unnecessary. Some may regard raw materials (yeast, grapes) as ingredients, others may determine that these are completely degraded in the production processes, are not present as such in wine (a single ingredient food) and therefore do not need to appear on the label.

Other terms that might vary in their meaning from market to market are “additive” and “processing aid”. Some markets may decide that certain substances used in winemaking are processing aids (not needing to be indicated in an ingredients list) whereas others may determine that the same substances are additives, which should be indicated. It is not always simple to decide if they are additives (needing to appear in a list of ingredients) or processing aids (not needing to be listed).

Some administrations may decide that, since most substances used in winemaking are grape-derived, and are added only to adjust the levels of the same substances naturally present in the wine, these are not truly ingredients and do not need to be labeled as such. Indeed, the consumer can be seriously misled by the declaration of acid and/or sugar additions, thinking (wrongly) that they will be able to obtain a more or less acidic wine, or a more or less sweet wine, by working on the basis of the presence or absence of acids and sugars in an ingredient list.

Under the current international system there is unlikely to be a single ingredients list for a given wine that would be accepted in all the destination markets where it may be shipped.

The likelihood of encountering problems of definition is not less in the area of nutrition labeling. One might assume, for example, that there is a general understanding of what is meant by “carbohydrate”, but this is not the case. For example, in Australia, the carbohydrates in wine are taken to be simply the sugars that are present. In the United States, however, carbohydrates are taken to be whatever is left once the contents of water, alcohol, fat, protein and minerals in wine are accounted for. In the US, then, tartaric acid, glycerol and other substances that might not immediately be thought of as carbohydrates would be counted as such, and the carbohydrate content declared for a wine in the US could easily be twice the level that would be declared for the same wine in Australia.

Another complicating issue is that some wine treatment materials are not infrequently known by different chemical names in different parts of the world. For example, copper sulphate is called copper sulfate in the USA, and in other parts of the world may be known as cupric sulphate.

Another area of difficulty may arise if the declarations are determined by analysis with one set of methods in the country of production, but are then checked in the country of sale using different methods that may or may not give the same result. For example, methods for alcohol can be somewhat variable in the results obtained, and methods for carbohydrate analysis may not all include the same wine components in the determination (see the example above comparing the situation in Australia and the USA).

So if nutrition labeling were required, it may be necessary to conduct different analyses for carbohydrates and print separate labels declaring different numbers for the same wine, depending on whether it is to be sold (for example) in the USA or in Australia. This is only one illustration of the potential problems caused by differing definitions and methods of analysis.

Where markets have requirements concerning the languages in which information must be presented on a label, the implementation of nutrition labeling and/or ingredient labeling for wine will cause significant difficulties and added costs to producers. It will often be necessary to print a completely different label for each destination market. In addition, it will be hard to transship wine from one market to another without reworking in market with stickers, if this is permitted by the importing market. I would note that many markets do not permit overstickering of labels and even some that do, place restrictions on where and when such stickering can occur. All these restrictions add cost to consumers and producers. It is estimated that the same information would have to appear on a label in about 15 different languages for that label to be accepted in all the 28 Member States of the EU. The space available on wine labels simply doesn't allow for this option, even if a producer wanted to use this approach.

It has already been pointed out that many of the additions made in the course of winemaking are of grape-derived substances, used in order to adjust the levels of the exact same substances that are already naturally present in the wine. As such, there is no chemical test that can determine whether these additions have been made or not, and the only way to know is to conduct a detailed audit at the production facility. However, it is not usual for the authorities in an importing country to have the jurisdiction to perform such an audit on premises in the exporting country. Such audits are in any case undesirable.

The enforcement agency resources required to audit a producer and check every addition made to every blending leg that contributed to a single finished wine, and then to determine the amounts so that both the presence of treatment substances and their correct order of appearance (in descending order by quantity) in an ingredients list could be verified, would be truly staggering.

This might therefore put domestic producers at a disadvantage in the market compared with the producers of imported product (who may decide to take the risk of not labeling for ingredient usage, given that no test will be able to discover it and no inspection is likely). Furthermore, within a given market, there would be a disadvantage to honest producers who took the time and effort to try to make an accurate disclosure compared with those willing to take the chance and not label.

In addition to the problems outlined above, there are some additional matters that could lead to differences of approach between markets in relation to ingredient and nutrition labeling, resulting in barriers to the international trade in wine:

- Some markets may decide that fat and protein, whose presence in wine is negligible, would not need to appear on the label, since it is not helpful to inform

consumers of their inevitable absence (and indeed may stimulate misleading claims). Other markets may not be prepared to make such an exemption and may mandate full nutrition labeling for wine, as for other foods.

- Some markets may require energy (calorie) declarations but the calculations by which they are obtained may be different from market to market.
- Confusingly, 1000 calories is 1 kilocalorie, which is the same as 1 Calorie (with a capital C). Some markets (e.g. the EU) may require labeling in kcals and some in Calories, meaning a different label to express the same value in different units. Some markets may even resort to labeling energy in kilojoules.
- Some markets may require precise numbers to be declared on the nutrition labeling panel of each batch of wine, requiring a complete analysis to be performed at significant expense. Other markets may be content for typical (or average) values to be indicated.
- Some markets may require specific nutrients (e.g. sodium) to be declared in addition to carbohydrates, fat, protein and energy. Others may not.

In order to reduce the operational difficulties imposed by nutrition labelling in the light of the inherent variability of wine, winemakers may reduce or eliminate treatments they would otherwise have conducted to optimize the wine for consumer tastes. Producers may also decide against developing additional markets for their products because of the need to create separate labels for each one. Thus consumers will receive a sub-optimal product so that the winemaker can avoid the costs and logistical issues of frequent analysis and label-printing, and fewer products are likely to find their way into multiple markets, so that for a consumer choice is restricted.

In consequence, it is argued that mandatory nutrition labelling for wine has negative consequences for the consumer in terms of potentially misleading information, lowering product quality and reducing the range of products in the market.

Furthermore, it is economically impractical and operationally infeasible for producers. Furthermore, such a requirement would contradict many of the principles of "Better Regulation" and "Smart Regulation" that have been adopted within the European Union and other countries.

Unintended consequences

The review of food labelling law and policy undertaken by the Council of Australian Governments (COAG) and the Australia and New Zealand Food Regulation Ministerial Council (Ministerial Council) in 2011 considered the introduction of Nutrition Information Panel on alcoholic beverages [10].

It was considered that this could have potential unintended health consequences. For example, alcohol is low in certain nutrients of public health concern, like salt and fat, and therefore may be perceived by some consumers as a healthier choice when compared with other foods and beverages that are higher in these nutrients. It could also see beverage manufacturers develop

a wider range of lower sugar products, resulting in alcohol products being marketed in a more positive nutritional light. This option was not pursued in Australia because there were perceived to be only minor consumer benefits outweighed by potential problems [11].

Different complexities of winemaking operations add cost

Although “wine” is tightly defined in law, and the processes permitted for its elaboration are well-described and strictly regulated, it is nevertheless a product that may be produced in a wide array of production facilities.

The production flows in smaller facilities are generally much simpler. There may be less blending involved and the lots will tend to be much smaller. In such circumstances, it is relatively simple to know what adjustments have been made to each lot of wine as it is produced, and so the task of creating an accurate nutritional panel may be more straightforward. However, there are fewer available resources to conduct all the administrative requirements for the facility, so the additional effort inherent in accurate nutritional labelling is significant and not without added cost implications.

Larger facilities, while they tend to have more resources available to them, also are of necessity much more complex in terms of the operations conducted prior to bottling. A single finished wine may be blended from many component wines, each with its own unique history in terms of winemaking practices and adjustments. All of these adjustments would need to be known so that they could be included on the nutritional panel for the finished product. As the size and complexity of the winemaking operation increases, this clearly becomes more and more of a challenge.

Wine is stored in tanks in preparation for bottling. The decision to use certain interventions (e.g. metatartaric acid, gum arabic, ascorbic acid) is only made just before packaging, and so an accurate nutrition panel cannot be produced until it is known what substances have been used, and whether they affect the declaration of the nutritional components in the wine. Further, a new wine might be introduced to complete a blend just prior to bottling, whose nutritional composition changes the information that would need to appear in the nutrition labelling panel. Some wine businesses may have sufficient time to produce new labels (e.g. this may be more possible if the wine is being produced to a specification and imported by sea from another continent, though even these wines may need to be adjusted by the addition of substances on arrival). Others, however, will not, and storage in tanks for longer than the typical 2 days before bottling will be needed while new labels are printed. Given that it takes at least 14 days to print new labels, significant additional storage capacity will be needed in order to produce labels with an accurate nutrition panel. The quality of the wine will also be endangered by this extra storage time and the additional pumping and other processes entailed.

The cost of all this additional storage with the inherent costs of land, new buildings, logistics, maintenance and staff would be very high indeed for the industry overall. There is also the additional cost of only ordering labels

in small quantities, which is a lot more expensive than ordering labels in large quantities. The overall total cost of this approach would be prohibitively high for most businesses, and in practice would not be feasible.

A regulation requiring nutrition labelling for wine would clearly cause severe logistical impacts in production facilities of all shapes and sizes. All producers would find it practically impossible to label wines with a completely accurate nutritional panels, but the considerations noted above suggest that any requirement that was introduced would run a significant risk of discriminating against some producers of certain sizes or who make wines of certain types and styles with inherently more complicated procedures.

Label production

It may theoretically be possible to install labelling equipment that would print the nutritional panel on the label just before it is applied to the packaging. However, not all labelling equipment will be able to accommodate this additional equipment, and the only solution in such cases would be to install a new system at significant cost. In addition, the wide variety of containers in which wine is packaged today includes multiple bottle sizes, shapes, plastics, bag in box, pouches and Tetrapaks. Trying to print nutritional panels at the time of packaging in such circumstances (if it could be done at all) would add a huge additional level of complexity and economic impact to producers, as well as significant loss of production efficiencies and the potential for mislabelling ingredients.

Finally, this concept would only work in cases where the nutritional panel would be presented in dark coloured ink on a light coloured label. Printing at the time of bottling onto a dark-coloured label would be essentially impossible.

For all these reasons, there is currently no realistic way in which labels could be printed in real-time as the wine is being packaged.

Costs of labelling

The industry survey of the costs of the voluntary initiative to place pregnancy health warnings on alcohol products found that the main cost items included: 1) redesign and approval of artwork; 2) production of new print plates; and 3) administration costs associated with those changes. The opportunity cost of the package space that a pregnancy health warning label occupies as well as the potential benefit from improving a company's reputation (from including a pregnancy health warning label on their products) were identified as potential key indirect costs and benefits, especially for smaller packages (e.g. 50 ml) [12].

The estimated average cost to include a pregnancy health warning label per stock keeping unit (SKU) was \$1,686.25. The total cost to industry for labelling the SKUs available for sale in April 2014 was estimated to be \$5,408,188. A sensitivity analysis, using the proportion of SKUs that carry a pregnancy health warning label (59.8%) from those products that comprise the top 75% of market leading products (rather than the proportion of all SKUs available for sale), resulted in an estimated cost to industry

of \$9,597,773. Changing labels is expensive and adds costs to consumers [13].

4. Key findings

By any objective analysis, wine is different than almost all other foods. Thus, there is a strong case that it should continue to benefit from the same exemptions it has long received in most wine-producing countries around the world, and that continue to be enjoyed by many foods with similar inherent characteristics. The attempt to introduce nutrition and ingredient labelling for wine is fraught with great difficulties and will create huge anomalies.

Wine is often regarded as a “single ingredient food” in many regulatory frameworks internationally. One of the ways this manifests itself is in the production of wine. Wine is an agricultural product and its production relies on the vagaries of the weather and the natural environment. The grapegrower and winemakers task is to husband the grapes through the growing process and the vinification process to retain the desired characteristics of the terroir.

The vast majority of substances that are used in winemaking are “natural components” of grapes, used solely to adjust the levels of the same substances already present in grape juice or wine. They are added to bring components such as sugar or acid into balance. In most cases, their addition is not necessary in order to arrive at a product meeting the definition of wine, but it is absolutely essential to produce a product that is optimal in balance and appealing to the consumer.

These additions are not essential to make a wine and therefore the additions are not “additives” in the normal way that term is understood. Nothing new is present in the product because of their addition, and no test can be conducted to show that the addition has taken place. To consider them as such creates significant scope for confusion and trade difficulties in markets where their addition is required to be declared on the label. There are also situations in which a requirement to declare the addition can actually penalize honest traders.

For these reasons, it seems appropriate to recognize that winemaking treatment agents that are “natural components” of grapes, are actually derived from grapes, and that are used in winemaking solely to adjust the levels of the same substances already present in grape juice or wine, should not be considered as “additives” within the normal understanding of the term.

It is clear from this analysis that mandatory nutritional labelling would mean significant changes in practice for the wine sector with huge associated increases in costs.

Small producers will suffer much greater cost increases than larger ones, as they attempt to order labels once per annum and well ahead of bottling. In addition, they do not have the economies of scale of larger producers, so labelling costs form a much higher proportion of their cost of goods.

One possible outcome of these considerations would be for wine businesses to try to simplify wine making in a way that allows them to produce standardized nutritional panels. That would mean abandoning the flexibility that the EU wine law permits, and, in effect, attempting to make

wine to a fixed recipe. Even if this were possible (which is unlikely at best), such an approach would without doubt lead to a fall in wine quality and also the range of wines available would contract, with the consequence that nutrition labelling would not so much inform consumer choice as reduce it.

Further, the range of winemaking practices made available to winemakers by wine law would, in practice, be taken away by labelling law. The overall effect would be in the interests of neither the industry nor consumers.

If additional labelling requirements are introduced, this will create an additional enforcement task for the Member States [14]. Unless the requirements were to be enforced equitably, however, market distortions would arise, as unscrupulous producers may present nutrition information unsupported by costly analyses. Honest producers would perform the analyses, however, and would be penalized in the marketplace as a result.

5. Conclusions

This paper has attempted to analyse the genuine difficulties that ingredient and nutrition labelling for wine would cause in the EU market. These largely stem from the nature of wine, which sets it apart from the vast majority of other foods and makes accurate nutrition labelling extraordinarily difficult.

In seeking to help the consumer to make an informed choice between different wines, ingredient and nutrition labelling actually may reduce the quality and the range of products available in the marketplace. There will also be inevitable constraints on the accuracy of the information presented.

For the enforcer, the task of policing nutritional labelling would be truly monumental. With hundreds of thousands of wineries in the EU, each producing several SKUs, the likelihood of equitable enforcement throughout the community is small, and the regulation would then introduce trade distortions in favour of unscrupulous producers.

The concept of mandatory nutrition and ingredient labelling for wine is not in keeping with several of the key principles underlying the principles of Better Regulation.

Finally, the most comprehensive Review on Ingredient and Nutritional labeling undertaken in recent years unequivocally concluded:

However, the Panel rejects the view that alcohol products like all other foods should carry a [Nutritional Information Panel] NIP. The fact that alcoholic beverages contain few nutrients of concern (other than alcohol) could mean that NIPs might be seen as conveying quite positive messages about alcohol. Indeed, they could imply that it is a healthy product. Therefore, to prescribe NIPs on all alcoholic products could be counterproductive [15].

This paper demonstrates why informative and accurate nutritional labelling for wine is difficult in contrast with the vast majority of other foods. This is rooted in the nature of wine as a food. It is also shown that ingredient labelling for

a single ingredient food for wine does not provide valuable information for consumers, but adds costs instead.

Any attempt to provide accurate nutritional information for wine or impose ingredient labelling to consumers is discriminatory against wine and imposes disproportionate administrative, economic and logistical burdens on producers.

Such requirements for mandatory nutritional or ingredient labelling on wine would contradict all principles of better and smart regulation.

The net results would be that wine quality decreases, consumer choice is restricted and the industry's ability to compete in export markets is undermined. None of these results is actually beneficial for the consumer.

The various sources of difficulty that have been mentioned in this paper – definitions, methods, production imperatives and market realities for wine all make effective, accurate and informative nutrition labelling unlikely.

Accordingly, this paper concludes that current exemption from such labelling for wine should be made permanent.

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