

Method of selecting and rewarding olive oils nature

Specificity of the AVPA awarding method

For the past twenty years, AVPA has been working with the Olive Technical Centre to produce the olive oils part (HO) of the “World Edible Oils” international contest. During these years, our objectives were to award medals in a balanced and fair manner to all types of olive oils, from intense green fruitiness to light ripe fruitiness, and to apply a method that allows a fully mathematical treatment based on the tasters' notes.

NB: For "old-fashioned oils" the process that is a little different is written at the bottom of the note.

This led us to adopt the following:

Developing non-redundant and unambiguous parameters for olive oil description;

Balancing tasters' notes to homogenize all ratings and reduce personal trends;

The results are translated by statistical method in a three-dimensional space to avoid the threshold effects on limits between the categories;

Ranking oils *before* distribution in categories;

Checking the balance of prize allocation by categories *a posteriori*.

Rated settings

Settings directly evaluated by tasters

There are six parameters graded by the juries :

The intensity of the fruity (I), noted out of 10

The harmony of the fruity (H), rated out of 10

The intensity of the bitterness (A), rated out of 10

The intensity of the ardency (or pungent) (P), rated out of 10

The maturity, rated from 0% (very green) to 100% (very ripe) (M).

The intensity of possible defects, rated on 10 (maximum default rating only) (D)

Tasters should be specially trained to use this scoring grid, and in particular to eliminate any risk of interdependence between these six parameters during their work.

In particular, aromatic maturity should be noted by eliminating any dependence on bitter and pungent (or fiery) attributes, and also any dependence on the perception of defect. When the defects take precedence over the sensations of the fresh olive and it is not possible to determine whether the olives were green or ripe, then the aromatic maturity note should be brought closer to 50%.

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• **Aromatic intensity** is the intensity of all perceived aromas. In particular, it must take into account sensations specific to traditional and atypical processes, as well as defects, the intensity of which is also noted in the appropriate heading and subtracted in the final calculation.

• **Aromatic harmony** is drawn from all aromatic sensations, and only from these sensations, that is to say, by totally ignoring ardency and bitterness. In addition, it is imperative that tasters know and take into account the typicity listed in order to be able to note as harmonious olive oils whose aromatic characteristics represent this typicality.

Annex : grading sheet (extract).

| | | Group | Numéro huile | Intensité du défaut cité en description (sur 10) | Harmonie aromatique (sur 10) | Maturité (sur 100): Vert: 0% -----> Mûr: 100% | Intensité aromatique (sur 10) | Amer (sur 10) | Piquant (sur 10) | Description d'ensemble | |
|---|-----|-------|--------------|--------------------------------------------------|------------------------------|--------------------------------------------------|-------------------------------|---------------|------------------|------------------------|--|
| A | XXX | | | | | | | | | | |
| A | XXX | | | | | | | | | | |
| A | XXX | | | | | | | | | | |
| A | XXX | | | | | | | | | | |

• **Aromatic maturity** is determined from the green components of the aromatic whole, removing any influence of bitterness and spiciness. The 0% corresponds to an aromatic set composed only of sensations of greenery, leaf, grass, raw artichoke in particular, 100% corresponds to an aromatic set in which these sensations are totally absent. Bitterness and spiciness should not be considered as sensations of greenery. In the case of oil made with old-fashioned processes, which generally transform and eliminate herbaceous sensations, the aromatic maturity must be refocused on 50%, unless otherwise indicated (For example notes of cooked artichoke, from fermentation of green olives, should lead to an aromatic maturity slightly less than 50%).

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• **The standardized defects** here are the regulatory defects (COI standard). Defects are not eliminatory. The presence of a defect does not necessarily lead to a weak harmony, as for example with olive oils from olives in controlled fermentation (black fruity) where the unemployed is present but is not considered a defect by the manufacturers since it is caused voluntarily.

To mention a defect in their final evaluation of an olive oil and provide an intensity, both team members must have independently detected it at a similar level and independently identified it under the same identity. Otherwise, the defect can only be mentioned as "traces of ... ", and without giving the intensity in the field reserved for this notation.

When a defect is validated according to these rules, the harmony and aromatic intensity must not be modified beyond their actual perception. If the oil has a defect of unemployment at a level 2, and the tasters find harmony and aromatic intensity at 6 and 7 for example, it will be these values 6 and 7 that must be reported in the appropriate fields, without artificial modification according to the intensity of the defect.

Composite settings

In order to process the results with a three-dimensional statistical analysis, these six parameters are grouped into three parameters as follows:

The intensity of the fruit (I), the harmony of the fruity (H) and the intensity of the maximum defect (D) are grouped together to give the **aromatic note** (N), rated on 20, according to the formula:

$$N = (0.50 \times I) - (0.50 \times H) + 10 - D$$

The intensity of the bitterness (A) and the intensity of the pungent (or spiciness) (P) are grouped together to give the **structure note** (S), rated out of 10, according to the formula:

$$S = ((0.62 \times A) + (0.38 \times P) + \text{MAX}(A; P)) / 2$$

NB For the structure the bitterness is preponderant because it is more permanent than the pungent (or spiciness) in the bottles of olive oil

The **maturity** remains the same from 0 to 100%.

Awarding of oils to tasters and tastings

Three teams of two tasters are formed: A, B, C;

The set of candidate olive oils is distributed randomly and anonymously to the three teams;

For each team, the oils are randomly grouped in batches of 7 to 9 samples;

For each batch, the olive oils are tasted in reverse order by each taster;

When the tasters have finished tasting their batch, they pool their results to deliver consensual results for each sample;

When the individual results for a sample are too different from each other, the tasters taste the sample again until a consensus is reached.

Tasters report on their report sheet a consensual report that includes the assessment of parameters and a one-sentence verbal commentary on each sample.

Processing the results of the first round of tasting

Elimination of severely defective oils

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The oils are arranged in order of the notes of the fruit. The oils with the lowest notes, up to the first oil without defect, are eliminated. This first elimination can affect between 5 and 12% of oils, depending on the campaigns.

Balancing tasters' ratings

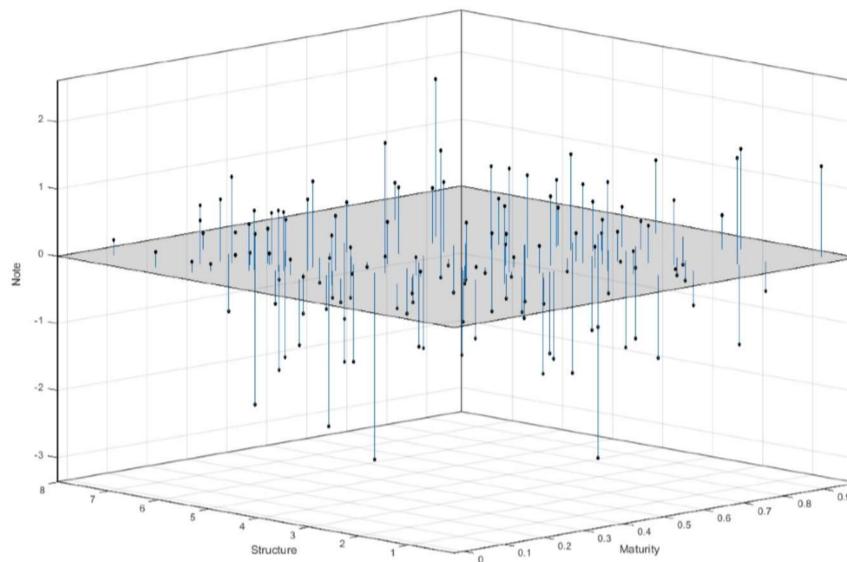
For each direct parameter, the average and standard deviation are calculated on all remaining olive oils after the removal of severely defective olive oils.

Based on the random draw of the olive oils assigned to each team, and the representativeness of each subset of olive oils in relation to the overall characteristics of all the olive oils in the competition the evaluations of each tasting team are balanced on each parameter to have the same average and standard deviation for each parameter and for each tasting team.

Statistical treatment

The scores obtained for the three composed parameters (maturity, structure and aromatic note) are used to obtain a representation in space of the different tasted samples defining a cloud of points with a barycenter around which the different olive oil samples are distributed.

Illustration opposite:
Representation in space of the regression model used to select the best olive oil samples, based on the scores of composite parameters (structure-maturity- aromatic note)



The combination of a mathematical model (linear regression) and geometric representation (barycenter) allows to obtain a classification of samples taking into account the three parameters simultaneously, and thus to select the olive oils for the second round of tasting aiming for a fair distribution of the olive oils selected in all directions ie from intense green to light ripe.

Selection rate for the second round

The highest ranked olive oils are presented in the second round, on the basis of 2/3 selected from the initial set, the 1/3 eliminated including severely defective oils.

Distribution of samples for the second round

The selected samples are distributed to teams A, B, C by random draw but by applying the following rules so that no samples are tasted twice by the same team::

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The samples tasted by Team A in the first round are presented for 50% to Team B and 50% to Team C;

The samples tasted by Team B in the first round are presented for 50% to Team A and 50% to Team C;

The samples tasted by Team C in the first round are presented for 50% to Team A and 50% to Team B;

Processing the results of the second round

Balancing tasters' ratings

The raw results of the second round are balanced in the same way as in the first round between the tasting teams, and are also balanced with the scores assigned to these oils in the first round, on the principle that they are the same set of olive oils and that therefore the averages and standard deviations must be the same for each of the parameters.

Statistical treatment

The statistical processing of the results of the second round is carried out in the same way as on the first round.

Third-round selection rate

The highest ranked oils are presented in the third round, based on 50% of the initial set and in the Gastronomic Jury based on the 30 best rated oils.

However, faced with the risk of having to cancel the meeting of all jurors at once to organize a full jury, the AVPA can maintain, a third round, with the teams of selection juries by distributing the samples to them so that each member can work in isolation with then a statistical treatment.

In this year, the final Gastronomic Jury composed of chefs and taste professionals must meet in Paris for the final award of medals if health measures allow it.

The system for processing the results of the AVPA competition will therefore be fully operational while respecting any new health measures.

Distribution of samples for the third round

The selected samples are distributed to teams A, B, C by presenting each team with samples that were tasted by the other two in the previous two rounds.

Processing third round results

Balancing tasters' ratings

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The gross results are balanced in the same way as in the first and second rounds between the tasting teams, and are also balanced with the averages of the scores attributed to these olive oils at the end of the first and second rounds.

Statistical treatment

Statistical processing is again carried out, in the same way as for previous rounds.

Awarding trophies

From the ranking provided by the latest statistical treatment, the top 10% of the top-ranked oils get a “**Gourmet Or**”, the next 10% get a “**Gourmet Argent**”, the next 10% get a “**Gourmet Bronze**” and the next 20% get a “**Diplôme Produit Gourmet**”.

Category allocation and presentation of results

On all oils (except severely defective oils), a division into six categories of similar size is achieved by choosing the appropriate parameters for maturity and structure.

First, the maturity limit is positioned to separate the samples for half in green fruity and half in ripe fruity.

Depending on the year, this limit can be shifted to better account for the distribution of the maturity of competing olive oils, between 45% and 55% of olive oils, for example.

Second, the structural intensity limits are positioned to delineate three intensity groups in each fruit category: intense, medium and light.

Then we obtain six categories which are called:

Intense Green

Medium Green

Light Green

Intense Ripe

Medium Ripe

Light Ripe

The prize is then obtained by placing the winning olive oils in the six categories thus defined.

A seventh category, specific to the AVPA international contest, is presented below.

Old-fashioned olive oils

AVPA has long shown its commitment to the defense of local and traditional productions and is keen to keep it in the olive oil competition. This is a difficult task because for olive oil standardization extends to the organoleptic aspect and hinders the recognition of many traditional production processes.

To aim for an objective recognition of specific practices, tasters (who are all experts in the evaluation of organoleptic defects according to the standards in force) are invited to evaluate organoleptic defects in this sense, but also to detach themselves from the standardized notation to evaluate harmony and aromatic intensity.

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Thus, olive oils from mastered traditional processes, such as black fruity in France or some oils from Kabyly or others less known, may have the opportunity to obtain awards in this contest.

For the use of the data, all olive oils will be treated in the same way, the intensity of the defect noted by the tasters being nevertheless subtracted from the final score.

At the end of the third round, the olive oils within the final list and having a regulatory defect are grouped in the category "old-fashioned taste"

In case of obtaining an award, the olive oils classified in this category will be preceded by the following presentation:

"The tasters have noted in the olive oils of this category various attributes affiliated with organoleptic defects in the IOC standard but have nevertheless found a certain harmony in the aromas and sometimes regional specificities or typicity linked to traditional practices recognized or in the process of recognition.

AVPA does not prejudge the classification of these olive oils in the marketable categories EVOO and HOV by the awarding of its awards. »

The final winners of the competition with the seven categories of olive oils can then be presented to the public in case the final Gastronomic Jury cannot meet.

Gastronomic Jury: awarding of Gourmet AVPA medal trophies

Composition of the Jury

As specified in the regulations, the AVPA brings together one or more Juries of six to twelve members.

The members of Gastronomic Jury are French speaking:

Chefs, gourmets or discerning consumers.

They thus complete the selection juries composed of professionals in the sector.

(producers, millers, assemblers, traders, distributors),

The main characteristics of this jury are:

- Its cultural and linguistic homogeneity,
- Its plurality because it includes:

Taste professionals,

Enlightened amateurs.

It thus gives an opinion focused on a gastronomic culture and a good taste "French" which reaches a form of universalism by the high competence or gastronomic culture of its members who can thus highlight exceptional productions.

The president of the jury is appointed by the AVPA secretariat.

He agrees on the final constitution of the jury.

Awarding of trophies

After the ranking provided by the statistical treatment of the third round the best olive oils, about fifty, are tasted in turn by the Gastronomic Jury which determines the "**Gourmet Or**", the "**Gourmet Argent**" and the "**Gourmet Bronze**" in their respective categories. The oils ranked with lower grades have already obtained their awards, namely a "**Diplôme Produit Gourmet**".

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