## Contents

- 6 About Jean Lenoir
- 6 Personal accounts

## 12 Aromas, origin and category

Primary, secondary and tertiary aromas

## 18 The sense of smell

JEAN LENOIR Defining perceptions: scent, aroma, flavour

## 21 Learning how to recognize aromas

Our selection of 54 aromas Le Nez du Vin, your educational toolkit

## 24 The art of wine tasting

Describing the scent of wine in the glass (direct olfactory perception)

Describing the aroma on the palate (retronasal perception)

## Three opening doors to tasting:

## 26 From grape varieties to aromas

The world's most famous grape varieties

## 34 From vineyards to aromas

The main aromas found in various vineyards

## 66 From aromas to wines

Aromatic itineraries through the world's wines

## Presentation of the 54 aromas

Description

## **About Jean Lenoir**

I was born in Burgundy, a "son of the vine", into a family that has always nurtured a passion for wine. Our everyday red was deep-hued and unforgettably fruity. As it was often my job to draw off the wine, plunging the pipe into the cask to fill the pitcher, I began to perceive its flavour at a very young age. I learned to taste as I learned to walk!

I should like my love for wine to reach out to you through the pages of this book. It has won me many friends with whom I have shared my discoveries. One day, the artist Henri Cueco suggested I communicate my passion to a wider audience.

So I began to introduce wine into cultural centres as a work of art, in the same way as music or painting. In 1978, I started the first wine-tasting classes for beginners at the *Maison de la Culture* in Chalon-sur-Saône. These meetings fuelled our enthusiasm and raised many questions about taste and the sense of smell.

Encouraged by another artist, Daniel Spoerri, and his idea of creating a "book-object" (book-cum-work of art), I invented *Le Nez du Vin*. My aim was to awaken a necessary sense of curiosity for odours in my readers and to help them recognize the aromas found in wine.

Using a mixture of words and scents, I have endeavoured to provide both professionals and amateurs with key knowledge about the aromas that characterize different wines. *Le Nez du Vin* has given them the appropriate words for describing wine and thereby facilitated communication between wine lovers. I hope that this encounter with the world of aromas will open the door to your own private scent memories. There is nothing like the whiff of a certain smell to whisk you back to childhood. There you are once again, standing in that wheat field just after the harvest; or you might be breathing in the baking smells of your grandmother's kitchen and there she is in her apron, smiling down at you. It brings it all back. The scent sets the film of your life rolling again.

This work offers a vast repertory of aromas found in wines made in France and the rest of the world. I hope you will enjoy adding your own discoveries to the list.

The taste of wine derives from its chemical composition and its grapes, as well as winemaking techniques and ageing methods. Therefore, I have included some notions of oenology and hope that this scientific approach will not discourage – but rather will help – you in your own explorations.

The following accounts are an open forum for wine experts whom I admire. I should like to thank these "pioneers of taste", these "pathfinders of wine-tasting", for their words of encouragement and for giving a part of themselves to illuminate this work, the "grandchild" of their research.

## Jean Lenoir

Le Nez du Vin 54 aromas © 1981 First Edition

### Personal accounts

Emile Peynaud (1912-2004), PhD, Engineer, Author of A Handbook of Oenology, Knowing and Making Wine, and The Taste of Wine

Initially, the odour of wines seems indescribable. How could words bring an odour to life? Taking a Cartesian approach to the problem, the taster first tries to determine the intensity or strength of the odour, as well as its nuances and quality. Then, while inhaling the wine in short and repeated intakes of breath, sniffing it sometimes gently and sometimes sharply, tasters explore a succession of fragrances, recalling the scent of a particular flower, fruit or wood, and let their imagination roam, playing a game of evocation and analogy. As long as it is a matter of judging general qualities, such as the strength and quantity of the odour or the olfactory pleasure, verbal expression comes naturally. If the judgment is clear, it is not overly difficult to find the right terms. But when it comes to describing an aroma or a bouquet, when it is not a matter of discernment, but one of communication or suggestion, we feel the true poverty and insufficiency of words, even more than for tastes. This is not due to a shortage of terms - there is in fact a greater abundance of terms for scent than for taste - but because the sensations are finer, more complex and less immediately classifiable. This makes it more difficult to select the most appropriate description, which will least misrepresent the sensations perceived.

It has been demonstrated that the scent of wine in the glass and the aroma on the palate are two aspects of a single, volatile and odorous entity. In fact, the sensations perceived directly and retronasally complement each other, but the former may be studied longer by repeated olfaction. One uses the same vocabulary in both cases but treats them separately when making an overall comment on the wine.

The attractiveness of the scent is fundamental to the wine's quality. We say that a wine is delicate and refined when its smell is pleasant and harmonious. Finesse is the combination of the qualities characterizing a first-class wine. Such a wine distinguishes itself by the delicacy of its body, the attractiveness of its bouquet, the cleanness of its taste and colour and the perfection of the whole. The finesse of young wines is based on aromas of flowers and ripe fruit, hence the descriptions "fruity", "flowery" or "floral".

How can an odour be described? It is possible only by using an analogy with a known smell, which it resembles or brings to mind. The world of smells is so vast that it is not always possible to establish a likeness with a particular odorous reference but an approximation will usually suffice to unleash recognition.

We learn aromas from nature or perfumery. If we have not been curious about scents in our youth, or have not had the opportunity to explore them, the olfactory references may be limited and remain to be gathered. So we have to set out on a "scent-hunt", exploring every season, using our nose as

a guide, the garden, meadows, heath and prairies; we crumple a leaf, smell a flower, squeeze a fruit, sniff a range of spices and condiments, breathe in the scent of the herbs used in cooking, the herbalist's medicinal plants, the liqueur-maker's essences; we carefully inhale a cologne, or a soap, or learn to recognize the perfume a woman is wearing.

With its choice of 54 wine aromas, Jean Lenoir's work is an invaluable instrument for the education of the sense of smell and the olfactory memory. Le Nez du Vin 54 aromas © 1981 First Edition

Jacques Puisais, Oenologist, Honorary Chairman of the *Union Française* des Oenologues and the *Union Internationale* des œnologues, Founding Chairman of the Institut Français du Goût For many years, Jean Lenoir has devoted himself to exploring the entire range of subtleties found in wine. This pursuit has necessitated a serious apprenticeship: it is only by analysing our intuition and feelings that we can understand and benefit from our discoveries.

As we know, wine involves hundreds of components, whose combinations are modified every year by the climate. So, if we are going to understand the language of wine, we need to develop a firm foundation of knowledge. Jean Lenoir is proposing a way to acquire that knowledge. He has put into *Le Nez du Vin* everything that has helped him master his own nose. It is now up to the rest of us to profit from his experience.

Oenologists are all too often present at occasions where wine is consumed without time and thought being given to expressing reactions to it. This is akin to leafing through a book without really grasping the author's central theme. Isn't it time for society to cultivate its sense of taste? The produce of the earth should no longer be considered merely as liquid or solid, and a source of calories, nutrients and vitamins, but rather as a gateway to profound sensorial emotions.

Jean Lenoir helps us develop an ability to cultivate our own awareness of taste. We should be grateful for this learning game that unites language and senses and enriches us in the process.

Le Nez du Vin 54 aromas © 1981 First Edition

déaustation des grands vins.

Max Léglise (1924-1996), Honorary Director of the Burgundy Oenology Station in Beaune (INRA, French National Institute for Agribusiness Research). Author of *Une initiation à la* 

With the diversity of its characteristics, wine is one of the richest and most delightful substances that we can taste. Since the beginning of time, these virtues have inspired cults, symbolism and passions mirroring human culture. Our knowledge of wine is more extensive than ever, and interest in this original approach is growing the world over. It is now up to wine drinkers - the last link in the chain – to be worthy of the wine they consume, wine that others have made for them with perseverance and honest commitment. What is the point of refining winemaking techniques and increasing the legal arsenal of protections of authenticity, if the ultimate beneficiaries, the wine drinkers, are unable to discern a bad white wine from a good eider. Or if they do not understand the range of information provided on the label? Competent judgement of wines demands that the senses be trained and developed. To this end, Jean Lenoir's book is particularly useful and instructive. Tasting implies a certain personal interpretation, involving more art than science. Proceeding methodically, wine tasters who have reached a certain level of virtuosity should be able to make their analyses with their noses and mouths, needing no other equipment.

Tasting allows a degree of escapism which is comparable to that of other arts, and is similarly a source of culture in so far as it teaches discrimination, tempers impulses, refines judgement and reconciles us with the world of nature. Its originality lies in the rejuvenation and safeguarding of two senses of which our appreciation is in decline: taste and smell. Modern society is in danger of shutting out the garden of its senses. But tasting opens it anew, enhancing the pleasure of our existence, broadening our senses and self-awareness.

Le Nez du Vin 54 aromas © 1981 First Edition

# Aromas: origin and classification

More than one thousand aroma molecules have been identified in wines to date; who knows how many more remain to be discovered? These molecules, in varying mixes and quantities, create a whole array of different aromas, though they only account for one part of wine in a thousand, or 0.1%, i.e. 1.2g per litre on average. Some of these aroma compounds are mere traces, hardly COPARIGHT detectable by our powerful analytical tools.

# **Determining factors**

Vines (age and varieties)
Geological nature of vineyard soil
Local climate
Terroir ("land", a mix of parts of the above concepts)
Vintage (year)
Vine-cultivation practices (pruning, harvesting, and more)
Vinification processes
Maturing, storage and ageing conditions

Wines can also be blended from several cuvées, made from different grape varieties, selected with a view to optimizing quality, taste and aromas.

## What are the origins of aromas?

Which ones were already present in the grapes? How did the others develop? All these questions have led scientists to carry out research on aroma precursors and to classify aromas according to the winemaking stage which produces them.

## Aroma precursors:

A grape is born when the flower forms as a bud (in June in Europe). It gives off a subtle scent. After the initiation of berry development, called setting, the seeds are protected until they are fully developed.

With time, and sunshine, the grapes make and store aroma precursors. These precursors are water-soluble molecules. They do not give off any fragrance of their own, so the aroma is not free, not accessible. They are made up of an aromatic fraction attached to a small carbohydrate. Thanks to an enzyme, a protein in the grape, a reaction occurs and releases the aroma.

This production of aromas from precursors continues during alcoholic fermentation and then during the maturing process.

Besides these aroma molecules stemming from precursors, other primary or varietal aromas develop after the grapes are harvested.

Then, both alcoholic fermentation and malolactic fermentation give rise to secondary aromas, also described as pre-fermentation and fermentation aromas.

Lastly, during the maturing phase and the bottled stage, new aroma molecules form in the wine. These are called tertiary or post-fermentation aromas.

This classification of wine aromas as primary, secondary and tertiary cannot be followed to the letter, as an aroma may originate from various sources. For example, the rose scent may stem from primary molecules such as ß-citronellol and others of secondary origin connected with fermentation such as phenylethyl alcohol, all of which contribute to the final rose note.

13

## Opening doors to wine tasting:

# From grape varieties to aromas

Wines inherit their qualities, their legacy of flavour, from the vines that yield their grapes. The characteristics of each vine are unique to the variety. The vine is a living entity and as such, it is subject to influence and evolves with age. A wine can be made from a single grape variety or from several different ones. The study of grape varieties is a discipline in its own right called ampelography. Grape vines belong to the Ampelidacea or Vitacea family, a botanical classification covering more than a thousand species and divided into fourteen living genres and two extinct ones. There are one hundred and ten species of the Vitis genre, the only one grown for its fruits, but all the great wines in the world originate from one species alone: Vitis vinifera, or "European" vine. Vitis vinifera includes several thousand varieties but most wines are made from the varieties presented below.

LENOIR

From grape varieties to aromas / The world's most prestigious grape varieties White wines

## White wines

## **Albariño**

## Apple, hawthorn, linden, honey...

This Galician variety is grown primarily in the Rías Baixas area. In Portugal, where it is known as Alvarinho, it produces a high-quality Vinho Verde. It yields highly aromatic dry white wines whose fine bouquet includes hints of slightly honey-scented white flowers and green apple.

## Chardonnay

Lemon, grapefruit, pineapple, melon, apple, pear, almond (kernel), hawthorn, linden, honey, wine lees, fresh butter, toast, roasted almond, roasted hazelnut...

Chardonnay is the world's most famous white grape variety. This is the grape behind Burgundy's best dry white wines, immortalised by the illustrious Montrachets, Corton-Charlemagnes and Grands Crus of Chablis. It is also a component of many Champagnes and the only grape used for Champagne blanc de blancs.

Chardonnay is now at home all over the world and produces some extraordinary wines in Spain, Italy and Austria, where its finesse is amazing. It has also adapted remarkably well to conditions in California's Napa and Sonoma valleys. Chardonnay gives excellent wines in Chile, Argentina and South Africa, as well as in Australia and New Zealand. Wines made from Chardonnay are finely textured, beautifully aromatic and long on the finish, and they age particularly well. Their bouquet is dominated by touches of hazelnut, honey and hawthorn or acacia, usually underlined by notes of butter, brioche and toast. Chardonnay often displays lively scents of ripe lemons, tropical fruit, especially pineapple, and even melon in Australia. Many of these wines undergo malolactic fermentation, which increases the level of diacetyl and generates a distinct aroma described as "beurre noisette" (brown butter)

## Chenin

Lemon, apple, pear, quince, linden, honey, roasted hazelnut...

Chenin blanc is the typical variety of the white wines of the Loire. It is also known as Pineau de la Loire, Pineau d'Anjou and as Steen in South Africa. Depending on the vintage, the soil and the sugar content, Chenin can give dry, acidic wines or sweet wines that will age magnificently, as well as sparkling or semisparkling wines - proof of this white grape's huge potential.

In France, it gives its expression to wines of remarkable elegance. Lively, full-bodied, delicate and fine, they are robed in a golden glimmer. Young Chenin carries a cool and refreshing taste of apple and quince. Its sweet wines are superbly mellow, filling the mouth with exquisite scents of honey, acacia, linden and quince jelly.

In Vouvray (Touraine), it produces dry, demi-sec and sweet wines, which are sold as sparkling wines in average vintages. In Montlouis, on the other side of the Loire river, Chenin produces similar wines, but with a distinguishing hazelnut note.

This is the grape behind some top-class, highly regarded fine dry whites that mature slowly, like Coulee de Serrant and Roche aux Moines in the Savennières appellation.

In Anjou, it gives rise to superb sweet wines such as Quarts de Chaume, Bonnezeaux, Coteaux du Layon, Coteaux de l'Aubance and Anjou-Coteaux de la Loire appellations. Rich and powerful, these wines have a marvellous capacity for ageing. Memorable years were 1947, 1959, 1961 and 1970.

Chenin is found all over the globe. It is gaining ground in Australia and in New Zealand. It is also well represented in South Africa and in California.

## **Furmint**

## Lemon, orange, apricot, peach, honey...

This great Hungarian variety is the main grape used in making Tokaji Aszú. Acid and susceptible to noble rot, it is well suited for elaborating very elegant, complex sweet wines. Furmint is usually blended with Hàrslevelü.

## Gewurztraminer

Grapefruit, pineapple, lychee, muscat, apricot, honey, rose, clove, smoky note...

The spicy (*gewurz*) Traminer is a lovely name for a lovely variety. The wine is white and the grapes are a delicate pink. Traminer is grown in Alsace, Germany, Austria, the Czech Republic and Australia.

27

# Opening doors to wine tasting:

# From vineyards to aromas

Every vineyard is a piece of land, gifted with special aptitudes, as brilliantly witnessed by the most detailed land register boundaries. This fundamental terroir reality, and the selection of the most suitable varieties, have endowed the resulting wines with unique features and originality. For a gourmet taste of the geography of wines, here are some examples of the special aroma palettes found in the an COPTRICHE EDIT main vineyards of France and the world.

From vineyards to aromas France

## **France**

## Alsace

Lemon, grapefruit, pineapple, lychee, muscat, quince, raspberry, apricot, honey, rose, cinnamon, clove, saffron...

Riesling, Gewurztraminer, Muscat, Pinot Gris, Pinot Noir... Alsace features a wide range of soils and grape varieties, which are the region's aromatic flagships. Each variety is harvested separately and made into wine that goes by the grape's name, unlike other French appellation wines, which are named after their place of origin or terroir. In their youth, Alsatian wines breathe scents of fruit: pineapple, lemon and quince for the whites and raspberry for Pinot Noir. Lychee lends its special touch to Gewurztraminer, along with ros Honey marks the great sun-dren of late-harvested wines and sélections de grains nobles made from Pinot Gris and Riesling. I would recommend Alsace wines to beginners for what I like to call their "instructive" aromas.

## Beaujolais

Red wines

Pineapple, banana or fruit drops, strawberry, raspberry, cherry, cinnamon...

Beaujolais wines are made from Gamay grapes alone, giving rise to fresh, light, fruity, flowery wines, enjoyed in their youth. Beaujolais crus allow for longer cellaring.

## Bordeaux

Dry white wines

Grapefruit, muscat, apple, apricot, white, peach, linden, blackcurrant bud, vanilla, smoky note...

Pessac-Léognan, Graves, Entre-deux-mers...

The most admirable Bordeaux dry whites are unquestionably the Pessac-Léognans appellation. Led by Château Haut-Brion, ranked premier dru in the 1855 classification, this appellation covers all Graves crus classés. The best Pessac-Léognan wines are made from Sémillon and Sauvignon; here, Sauvignon reaches the height of excellence. Lovers of great white wines will be in heaven when tasting the pure and racy Domaine de Chevalier, the rich and flavoursome Laville Haut-Brion, or the seductive, silky Château Fieuzal, while others will delight both their nose and their palate when savouring a voluptuous Château Haut-Brion.

Lemon, grapefruit, orange, pineapple, melon, pear, quince, apricot, peach, acacia, honey, vanilla, cinnamon, clove, saffron, roasted almond...

Sauternes, Barsac, Cérons, Cadillac, Loupiac, Sainte-Croix-du-Mont...

Made from Sémillon, Sauvignon and a dash of Muscadelle, the famous sweet wines of Sauternes owe their quality to the parsimonious development of noble rot (*Botrytis cinerea*), which concentrates the grapes' sugar. Young wines develop nuances of pineapple, lemon, grapefruit, pear, acacia and honey, as well as vanilla for wines aged in new barrels. With time, these aromas are superseded by notes of candied apricot, orange and quince, cinnamon and even clove.

Red wines from Médoc

Raspberry, blackcurrant, bilberry, blackberry, cherry, prune, rose, violet, green pepper, truffle, cedar, liquorice, vanilla, leather, coffee, chocolate.

Red wines from Pessac-Léognan and from Graves Strawberry, raspberry, redcurrant, bilberry, cherry, prune, green pepper, pine, vanilla, pepper, smoky note...

Red wines from Saint-Émilion

Raspberry, blackberry, cherries (in brandy), prune, mushroom, truffle, liquorice, cut hay, vanilla, cinnamon, musk, caramel, coffee, chocolate...

Red wines from Pomerol

Raspberry, blackcurrant, bilberry, prune, violet, truffle, liquorice, vanilla and cinnamon, musk, caramel, coffee and chocolate...

Cabernet Sauvignon rules supreme over most of the grands crus of the Médoc and Pessac-Léognan, producing deep-hued wines that are powerful, rich and tannic, with intense, complex flavours. It gives class, vigour, breeding and a great potential for ageing to the superb Châteaux Lafite Rothschild, Mouton Rothschild and Latour, three *premiers crus classés* from Pauillac.

Although wines made from Cabernet Franc are lighter in colour and body than Cabernet Sauvignon, this relative weakness is compensated by tremendous finesse and incomparable elegance. It is magnificent in the most prestigious crus of Pessac-Léognan and Saint-Émilion. Château Cheval Blanc (Saint-Émilion

35