



WHAT ARE SAPIENS AND BULLIPEDIA? GENERAL PROJECT ON WINE

This section introduces the Sapiens of Wine book series in its entirety and briefly presents an overview of the subjects in each of the eight volumes it contains. In addition, the introduction places the work within the context of a much broader world: that of Bullipedia, the multiformat encyclopedia of fine dining.

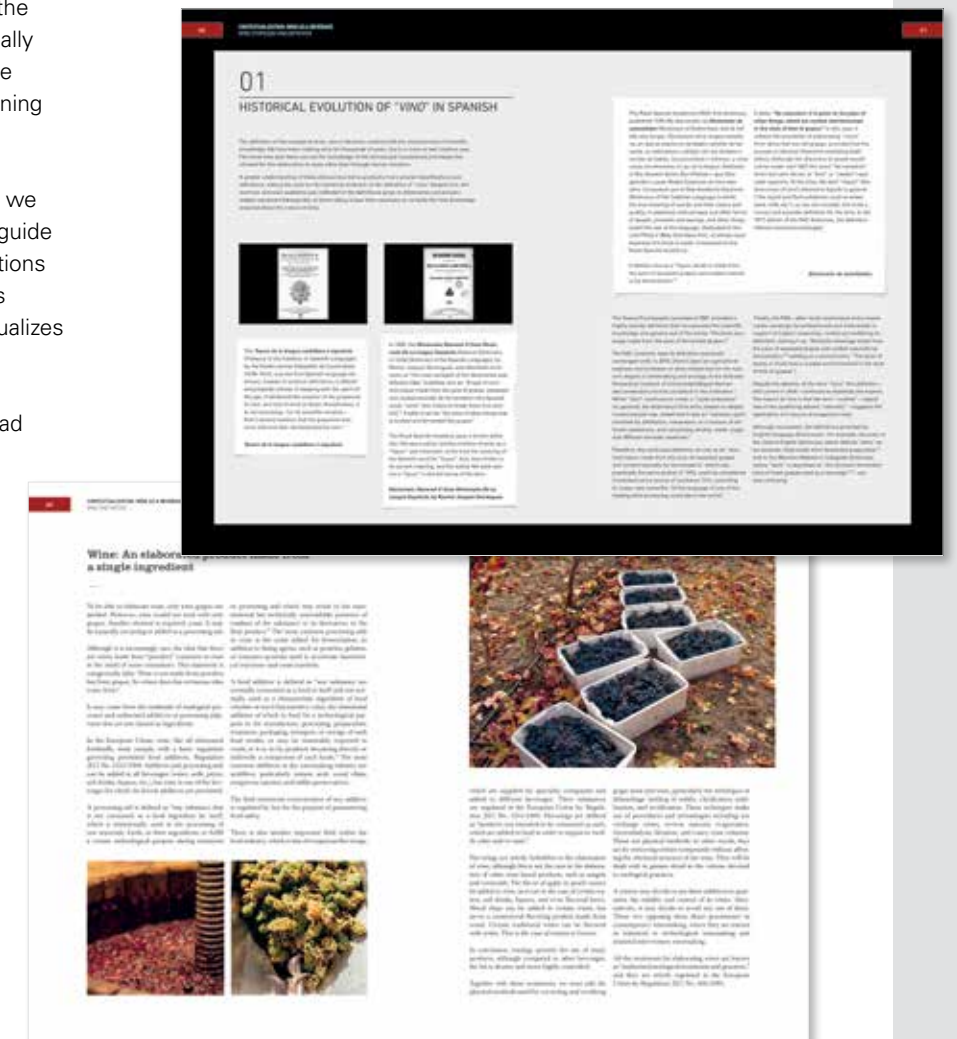
CONTEXTUALIZATION: WINE AS A BEVERAGE

The subject of our study is wine in the fine-dining restaurant. But do we really know what wine is? Where does the word come from? How has its meaning developed?

Sapiens, the research methodology we use to understand knowledge, will guide our investigation. This chapter questions commonly held notions, reassesses certain popular beliefs, and contextualizes the topic of study.

The fascinating pages that follow lead you through a series of deep and meaningful questions to help you assimilate current knowledge while offering a novel take on what is considered “wine” today.

How many ingredients are used to elaborate it? What are they? Is wine alive? Where, how, and when do we consume it? And, in particular, why? Is wine artisanal or industrial? What part does nature play in all this?



WINE-BASED ELABORATIONS AND ELABORATED PRODUCTS

It is inevitable. When hearing the word "wine," most people automatically imagine an idyllic setting: a glass filled with a delicious nectar prepared to captivate us with its flavor. However, this idealized image is in no way the only purpose or intention for wine.

- Is wine a beverage?
-No!
-Isn't it? Then what is it?

Wine is a product that somebody elaborates for you; its natural habitat is the tasting tool (preferably, it goes without saying, a good wine glass). However, it is also a versatile liquid. It is used to make cocktails, in cooking,



and even—in the hands of innovative chefs—it becomes a highly sophisticated culinary product. In addition, there are countless

other products on the market that are made by the winemaking industry: grape must, nonalcoholic wines, aromatized wines, etc.

OTHER USES FOR WINE AND COMPARATIVE STUDIES

Wine has uses that go beyond gastronomic pleasure. It is—and has been—much more than a product we drink to gratify our palate. At its very beginnings, wine was used in religious rituals as an offering to the deities and as a magical ingredient, too. Physicians would also use it as a healing potion and believed it was a remedy for many ailments, even

until more recent times than we might think.

Unfortunately, wine is also misused, to its detriment and to that of the person who consumes it in such a way. For centuries, certain individuals have been interested in only its psychoactive and intoxicating effects, driven by a misunderstood and rampant hedonism

that probably conceals a need to quench desires and heal wounds of the soul.

But wine has more uses. It is a prized (and precious) object for collecting. Among those who consider it and use it in this way, the most astute manage to draw great economic benefit. It is an object in which to invest, a desirable asset that offers great returns. Such adepts and serious collectors treat wine as if it were just another tradable security.

Comparative studies are another of the areas covered in this chapter. The search for differences and similarities helps to contextualize and understand wine from different perspectives: Are grapes for wine obtained in the same way as rice for sake? Is wine sold in the same way as beer? Can I advertise a wine as if it were a soft drink? Does wine keep as well as other beverages?



INTRODUCTION TO VITICULTURE

To produce an excellent wine, you need a place that produces succulent, quality grapes with the necessary characteristics for elaborating the desired type of wine. For this purpose, viticulture (from the Latin vitis, "vine," and cultura, "cultivation"), or wine-growing, uses all available knowledge and devotes the greatest effort to tending grapevines. This knowledge—of an empirical rather than scientific nature—has been passed down from generation to generation.

are equally valid, coexist harmoniously, and, as such, are dealt with in this chapter: conventional, organic, sustainable, biodynamic, etc. What values are they based on? What ideologies do they reflect? What are their strengths? What are their weaknesses? What results does each of them offer?

This chapter ends on a high note, thanks to Pedro Ballesteros MW (Master of Wine), who adds his spin on one of the most recurring and conflictive subjects in viticulture: the concept of terroir. Pedro offers an up-to-date view, which is as surprising as it is logical, on the

different terroirs and how these influence the final perception of wine.

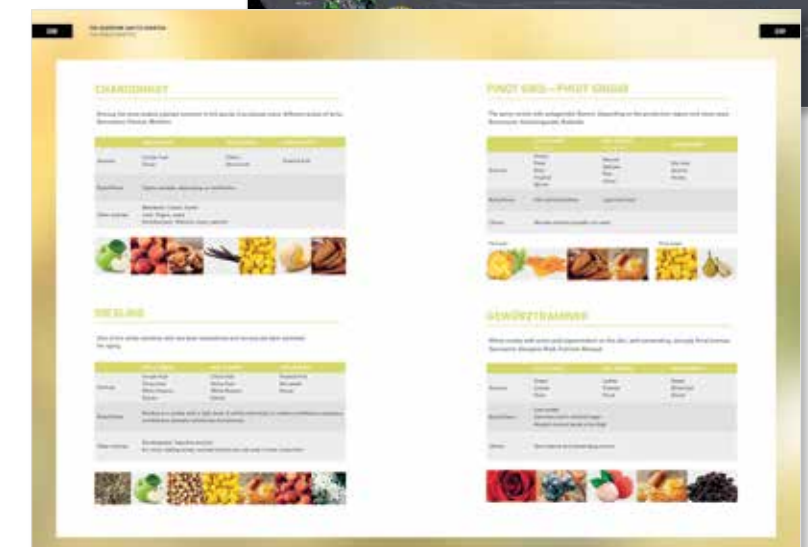
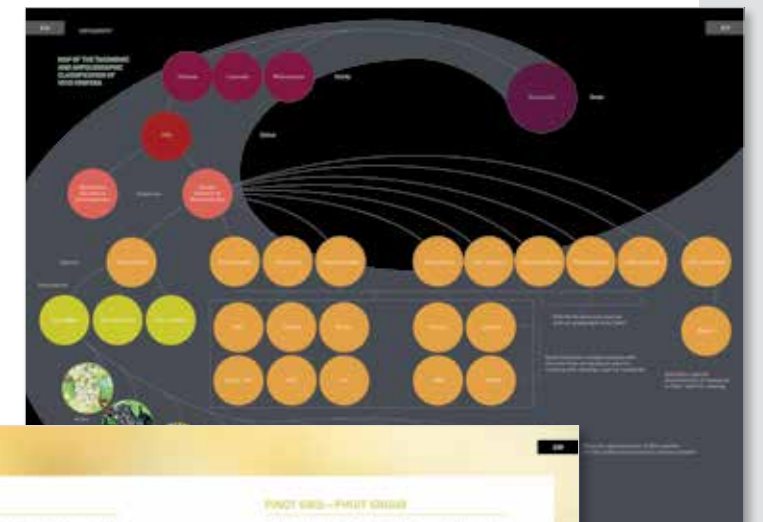


However, wine-growing does not turn its back on scientific advances, or on technological developments. All approaches taken in this field

THE VINE AND ITS VARIETIES

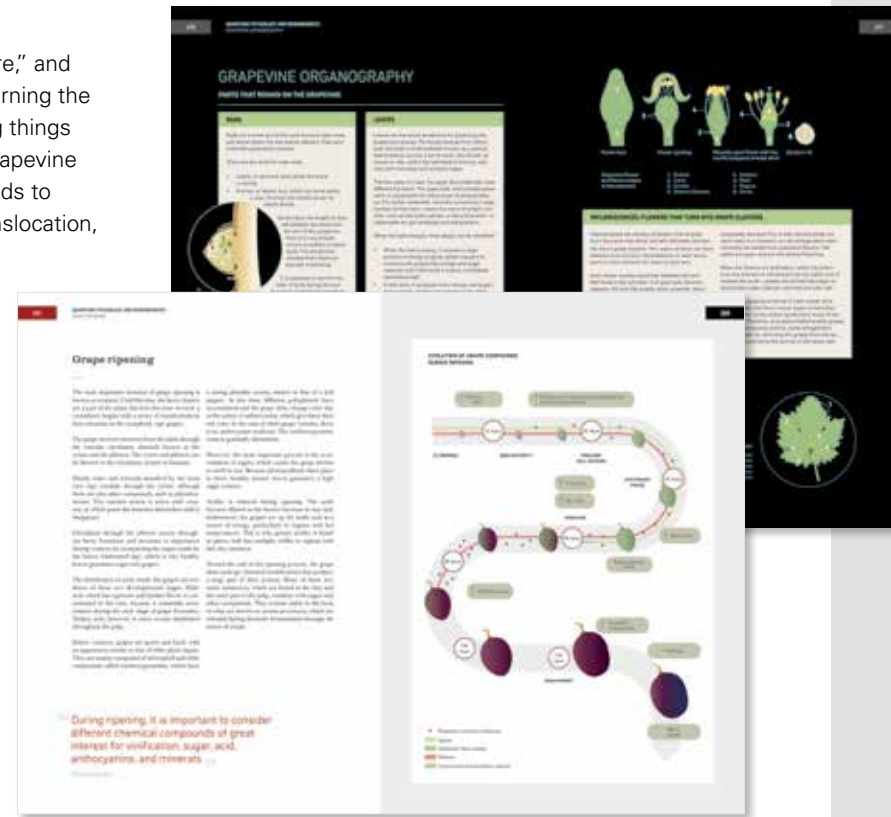
The term ampelography (from the Greek ampelos, "vine," and graphos, "writing"), is the science concerned with classifying grapevines into their different varieties. But why is this science so important? The type of variety largely determines the style of wine. A chardonnay and a riesling have different flavors, just as a pinot noir and a cabernet sauvignon are at the opposite ends of the spectrum.

The study of varieties is fascinating, and advanced DNA profiling techniques are currently used for this purpose to provide real and scientific knowledge on the origin, development, and genetic makeup of the plant. What is a variety? How many are there? How many are used to make wine? How are they recognized? How are they propagated? Which of them are better? Where do wine-growers obtain them? These are some of the questions that are answered in this chapter, in a simple, clear, and easily understood language, despite their technical nature.



PHYSIOLOGY AND NEEDS OF THE VINE

Physiology (from the Greek *physis*, "nature," and *logos*, "knowledge") is the science concerning the study of the functions performed by living things and their organs. Being a living thing, a grapevine has an anatomy and organs. To live, it needs to undertake certain processes, such as translocation, photosynthesis, respiration, and transpiration. The correct functioning of these processes has a direct impact on the grapes' quality and, consequently, on the wine made from them. Understanding a grapevine's life cycle and behavior enables us to know about its requirements and, more important, how to satisfy them. If the appropriate growing techniques are applied, it will, as a sign of appreciation, deliver fruit of the highest quality. In addition, this chapter offers a contemporary contrasted approach to the ambiguous concept of "old vines." Will this term ultimately become standard?



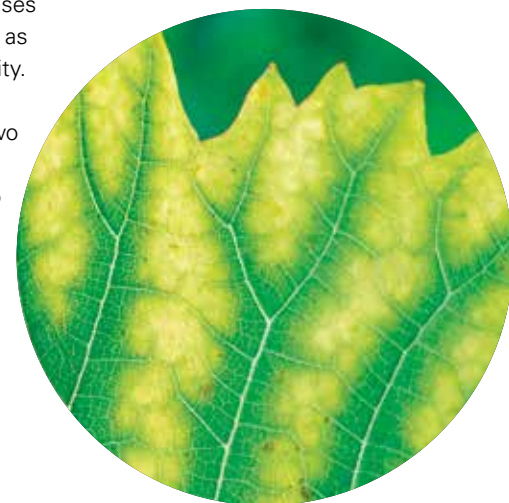
WINE-GROWING PRACTICES: FERTILIZING, IRRIGATION, AND CANOPY MANAGEMENT

A grapevine has certain minimum needs regarding nutrition and water intake, which, if not met, will have disastrous consequences for wine-growers. This is why a grapevine neglected for a few years will stop producing healthy and balanced grapes. Will it survive? Probably, but the quality and quantity of the harvest will suffer.

All of these are described in this chapter, which also presents a contemporary view of irrigation, a wine-growing practice that was forbidden for years and stigmatized in the Old World. Nevertheless, it is currently used in specific cases today, with skill and precision, as part of the quest for high quality.

The chapter concludes with two innovative sections from the sommelier's perspective, who is too often oblivious to these matters and which should not be overlooked. The first is a general classification of the main systems for training grapevines. The second is an interpretation on the modern quality indexes that associate canopy density with fruit load,

information developed by the highly knowledgeable and high-caliber experts Richard Smart and Fernando Martínez de Toda.



PESTS AND DISEASES

Throughout its life, a grapevine comes under great pressure from pests and diseases, which, if not controlled, harm the grapes and reduce yields. If an attack is serious, it will destroy vines and devastate vineyards. This is what

happened when phylloxera, a small insect, almost completely decimated European vineyards in the nineteenth and twentieth centuries. In fact, due to its ability to produce sugars and its form of vegetative development, a grapevine is the

ideal medium for hosting and feeding a large number of microorganisms and animals for which it is a resource for subsistence, including viruses and bacteria, mites, nematodes, and moths; even weeds, birds, rabbits, and wild boar become undesirable guests. When put into perspective, a wild boar is 100,000 times larger and 760,000,000,000,000,000,000 times heavier than a virus, but both are equally dangerous.

Armed with pesticides and viticultural practices, wine-growers fight off these assailants and pathogens by adopting different strategies, which can be, for example, conventional, integrated, or organic. How are they different from one another?



WINE-GROWING SOIL

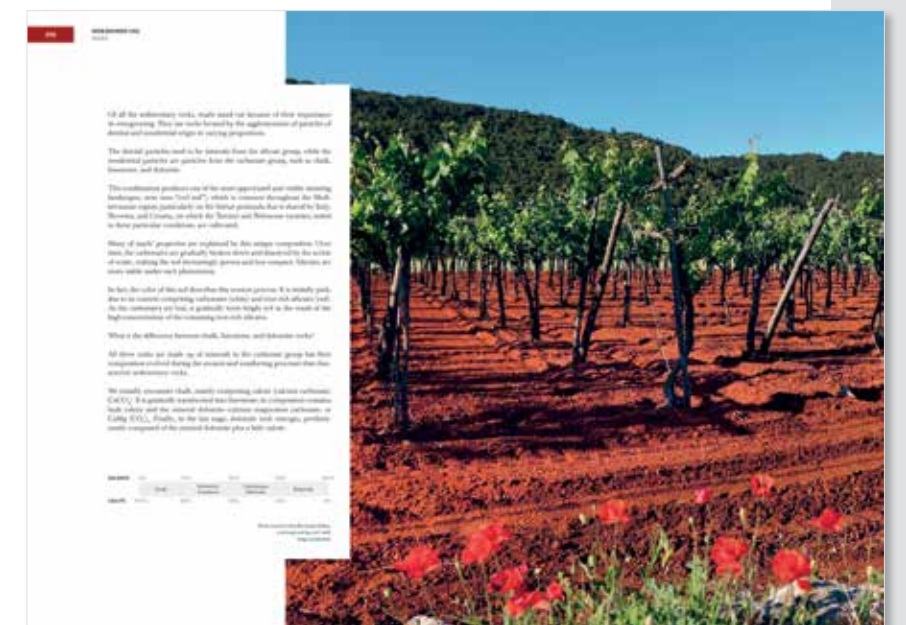
Geology (from the Greek *gê*, "earth," and *logos*, "knowledge"), is the science that explains the nature of the materials that comprise the earth. The relationship between the soil and wine is one of the most complex subjects, which at times can border on the esoteric. Do we really understand what minerals, rocks, stones, salinity, and chemical structure are? Does the plant absorb minerals?

In fact, we often read in the literature, informative websites, and, in particular, advertising about how aromas and flavors are supposedly directly related to the type of soil: "This wine tastes of slate," for example, or "there is a hint of graphite." These types of generalizing statements—which are accepted as valid and repeated

insistently without thinking—are ambiguous and superfluous, but, despite having great appeal for consumers, they have little grounding in science.

This chapter attempts to clarify these concepts and to see what

is true in them, and it sets out the current status of one of the most prominent and at the same time confusing subjects: In organoleptic terms, what does the soil give wine?



THE CLIMATE: QUALITY AND RISK FACTOR

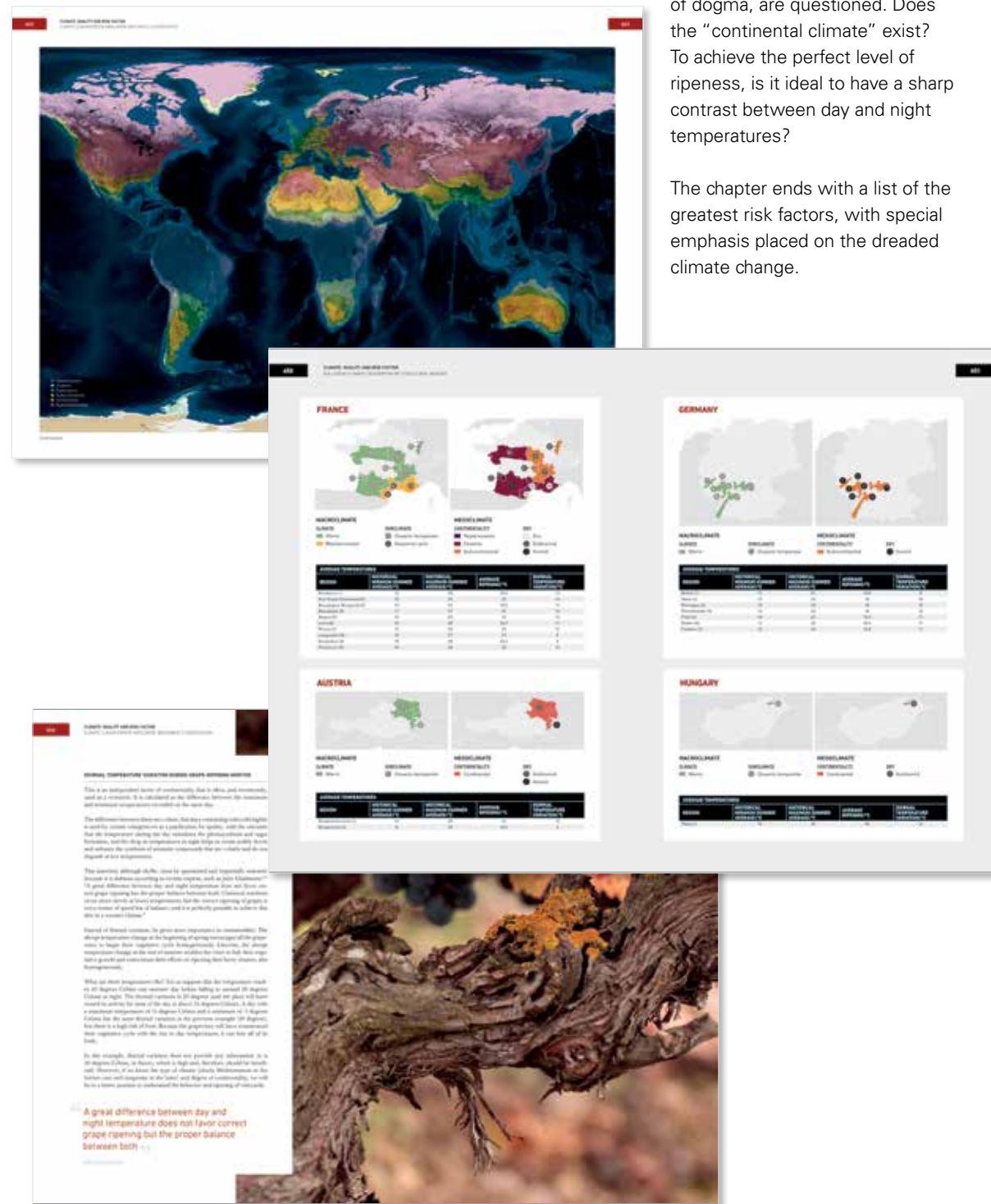
Climate is a key factor in a wine's quality and style. It is common to hear explanations, such as "this wine is from a cold climate and is, therefore, highly acidic and very refreshing" and "the weather conditions that year make this vintage one of the best."

Climate is a factor of nature—and consequently difficult to control—that without question leaves its particular stamp on wines.

This chapter sets out the *what*, *how*, and *why* of the relationship between climate and the flavor of

wine. For this purpose, a thorough study of the weather conditions in the main viticultural regions of the world has been included, taking the works by the tireless climate researcher Salvador Rivas-Martínez as a reference. Moreover, certain points, which through repetition have almost reached the level of dogma, are questioned. Does the "continental climate" exist? To achieve the perfect level of ripeness, is it ideal to have a sharp contrast between day and night temperatures?

The chapter ends with a list of the greatest risk factors, with special emphasis placed on the dreaded climate change.



THE HARVEST: THE ELABORATION OF THE GRAPES?

Grapes are unelaborated products. However, the decisions made at harvest time inevitably change the flavor and composition of the fruit. Would it be legitimate to consider that the wine-grower is *elaborating* the grapes?

But the harvest is not arbitrary. There is the hidden side, a behind the scenes, where we can observe that it is a highly technical and professionalized process. The aim of such controls as "grape ripeness monitoring" is to decide the optimum time for harvesting, when the grapes are at their peak quality. For this purpose, there are different tests, both laboratory analysis and tasting (to assess organoleptic quality), to enable making the best decisions.

In essence, the harvest is the most important time of the year for any winery. It is the time to gather the fruit and make the most of all the hours of effort and anxiety that go into tending the vineyard. It is a frenetic, intense, and exhausting period, although it is also idyllic and highly poetic. If it is carried out successfully, wine-growers consider it cause for celebration.

This chapter also explains different types of harvesting: mechanical, manual, at night, etc. All of these, as you will see, have their strengths and weaknesses.

UNDERSTANDING VITICULTURE THROUGH WINES

This chapter recapitulates all the knowledge compiled in this book. In other words, any person who may have attentively read the book will be able to understand the case studies given in this section.

By choosing three noteworthy vineyards that produce exceptional wines—with each of them being separated from the others by more than 20,000 kilometers—all the parameters of quality and style explained in the book are defined and exemplified: location, climate, soil, pruning (and other viticultural practices), diseases and treatments, etc. Finally, these parameters have been analyzed and complemented by reliable information provided by the wineries themselves. This chapter brings us down to earth by applying theoretical concepts to the *real world*.

