

SWISS VINEYARDS

Enjoy with moderation



Switzerland. Naturally.



SWISS WINE | OF
COURSE

THE WORLD OF SWISS WINE IS:

57%
REDS

15,000
VINEYARD OWNERS

62 AOCs

2,500
VIGNERONS



14,696
HECTARES



252
REGISTERED
GRAPE
VARIETIES



100 MIO
LITRES OF WINE
PRODUCED PER YEAR

2 MAIN GRAPE VARIETIES

PINOT NOIR [3950 HECTARES]

CHASSELAS [3650 HECTARES]

ENORMOUS DIVERSITY

Switzerland's vineyards are a collection of micro-climates, soil types, traditions, grape varieties and know-how, all of which vary from one municipality to another. To provide a framework for this diversity, Switzerland's 14,696 hectares of vineyard are divided into six regions.

GENEVA

1,390 hectares

1 AOC

22 AOC Premier Crus

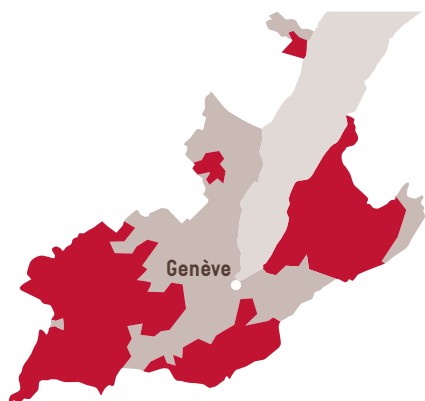
56% red grapes

Main grapes:

Chasselas (281 hectares)

Gamay (302 hectares)

geneveterroir.ch



VAUD

3,787 hectares

7 AOCs

3 AOC Grand Crus

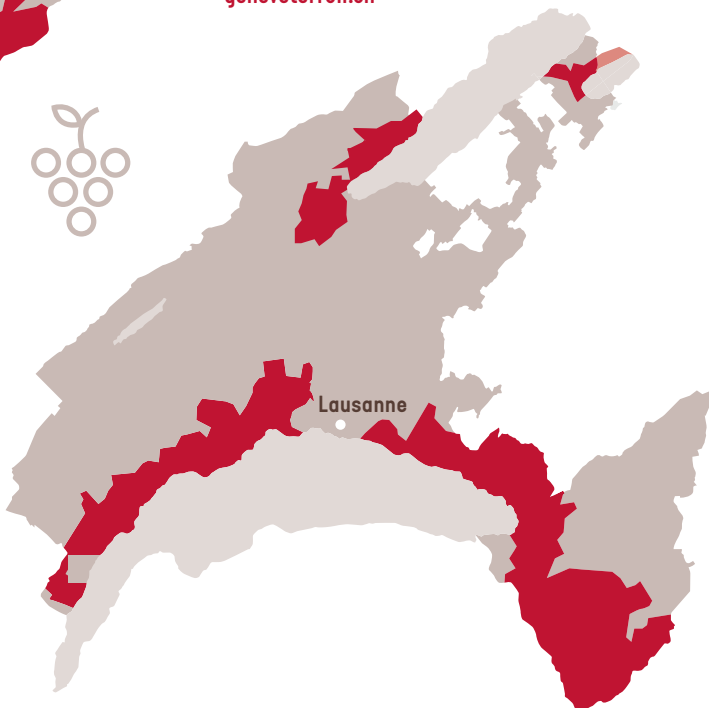
65% white grapes

Main grapes:

Chasselas (2,253 hectares)

Pinot Noir (479 hectares)

vins-vaudois.com



4 | ENORMOUS DIVERSITY

Four of these wine regions – Valais, Vaud, Geneva and Ticino – carry the names of cantons where they are located. The Three Lakes Region covers the vineyards that ring the lakes of Neuchatel, Morat and Biennne. The 16 wine-producing cantons in German-speaking Switzerland come together in one region which has three sections: western, central and eastern.

THREE LAKES

Neuchatel: 606 hectares
Lake Biennne: 223 hectares
Vully (Fribourg + Vaud): 158 hectares
Cheyres: 13.5 hectares
4 AOCs / 57% red grapes
Main grapes: Chasselas (272 hectares)
Pinot Noir (448 hectares)
neuchatel-vins-terroir.ch
vinsdulacdebiennne.ch
vully.ch



GERMAN- SPEAKING SWITZERLAND

Basel: 117 hectares
Aargau: 386 hectares
Zurich: 613 hectares
Schaffhausen: 478 hectares
Thurgau: 249 hectares
Graubünden: 423 hectares
St. Gallen: 209 hectares

20 AOCs
67% red grapes
Main grapes:
Riesling-Silvaner (410 hectares)
Pinot Noir (1,487 hectares)
weinbranche.ch



TICINO

1,127 hectares

4 AOCs

90% red grapes

Main grapes:

Chardonnay (46 hectares)

Merlot (889 hectares)

ticinowine.ch



VALAIS

4,766 hectares

1 AOC

10 AOC Grand Crus

61% red grapes

Main grape varieties:

Chasselas (796 hectares)

Pinot Noir (1,367 hectares)

lesvinsduvalais.ch

Source: The Swiss wine year 2020 (G, F, I), Federal Office for Agriculture

TRUE OR FALSE: Diversity is the one point Swiss vineyards have in common!

FALSE. While each of these regions has special characteristics, they all share something unusual: 25,000 years ago the area that corresponded to the Switzerland of today was covered by a layer of ice that was in some places thicker than one kilometre. This ancient glacier created moraine, a very particular type of rock that is found in nearly all Swiss vineyard areas.

"HEROIC" VITICULTURE

The term describes vines grown on steep slopes that produce wines of great quality and which account for impressive landscapes. Even if these are only 7% of Europe's vineyards, these vine parcels – whose steep slopes are often tamed by terraces – are very numerous in Switzerland, a land covered by the Alps (60% of the territory) and Jura (10%) mountains. The slopes help ensure good sun exposure for grapes and provide an appropriate amount of rain. They have sculpted the landscape and strongly influenced Swiss viticulture. The mountains also provide their share of challenges, which Swiss growers have learned to deal with, using ingenious solutions.

Wine at every altitude

Vines in Visperterminen, in Upper Valais, grow to 1,100 metres altitude. The vineyards are mostly planted with Savagnin Blanc, called Heida or Païen here. On the other side of the Alps, in canton Ticino, vine parcels planted in the Maggia delta grow at just 200 metres above sea level. Between these two extremes vines can be found at all altitudes, in general preferring slopes on the banks of rivers or overlooking the lakes. The most notable of these vineyards appears to plunge directly into the lake: Lavaux, in canton Vaud, which in 2007 was registered as a Unesco World Heritage Site.



Visperterminen (Valais)
© Up to You



Sion (Valais)
© Up to You

Thousands of terraced vines

In Valais alone there are an estimated 3,000 kilometres, if you lined them up, of terraced vineyard stone walls. You could probably double the figure if you add to these the walls built by vigneron in Lavaux, Chablais in Vaud, and Ticino and Graubünden, to name only the main areas. The most spectacular ones overlook the capital of Valais and are made of dry stone walls – no mortar, no cement, simply an ancient know-how to fight the combination of the passage of time, gravity and the elements. The walls are emblematic of the vineyards, but they also serve as a refuge for a great many fauna.

The search for water

Outside the Alpine regions most Swiss vineyards overlook a lake or a river. In Zurich you even find vines on the tiny island of Ufenau, which has belonged to the Einsiedeln convent for more than 1,000 years. In the mountain regions it's often necessary to look for water to irrigate land which is not very deep and with runoff. The semi-desert climate of Valais has pushed its inhabitants to build a very dense irrigation network, the "bisses", to carry water from the waterfalls and rushing streams to land under cultivation. Whether they are still used for agriculture or not, the bisses are greatly appreciated as hiking trails.



Auvernier (Neuchâtel)
© Up to You



Cologny (Genève)
© Up to You

Falling rocks, wines of repute

In 1584, a landslide buried the village of Yvoire, in canton Vaud's Chablais region, and the vineyards that surrounded it. Chasselas grapes that are notable for their mineral aromas have since grown on this terroir where the soil is composed of debris carried by the catastrophe, locally known as "oaille", a regional term that means disaster. Landslides elsewhere, far older, created the right conditions for the development of very high quality vineyards. Among the more spectacular: the Bürgli vineyards in Glaris, those of Domat Ems in Graubünden, the Val Blenio in Ticino and those at the foot of the Jura mountains, in the Bernese part of the Three Lakes region.



Yvoire (Vaud)
© Visualps Matthias Lehmann

TERRACES

THE LEGEND OF THE VIGNERON AND THE MOUNTAIN

Swiss vigneron built thousands of terraces, in Dézaley, Ticino, Graubünden and in Valais. Wine finds its reflection in poetic sagas; we will put aside the informative tone of this booklet to focus on a more dreamlike approach. Let us recount a popular epic tale about how these sumptuous wine landscapes came about.

"I created the slope," murmured the mountain. "It is slippery, steep, hostile. The wind blows hard. The streams rush along too fast for the vegetation to drink from the water. Never will your carefully tended vines be able to take root and prosper and provide you with golden grapes."

"Very well, then," said the vigneron, "I will build terraces!"

"You are joking," answered the mountain. "You would have to clear the land, dig, cut the rock to make walls, plan ahead to build canals to avoid rain from storms causing them to burst. And when the terraces are done, you'll have to climb up here with your tools and work under a burning hot sun that the stones reflect. When the grapes are ripe, the ones that haven't been eaten by the chamois and the birds who hide in my forests will need to be carried down steep paths and slippery stairs."

"You're undoubtedly right," said the vigneron, taking up his pick-axe, "so I'd better get started right away."

"You are obstinate!" continued the mountain. "Your harvests will never be as opulent as the fruits from orchards on the plain, and they won't have the sweetness of fruit from the slopes of gentle valleys. They will give you wines as lively as the wind that blows across my flanks, floral like the edelweiss perched high on the slopes that are steep, and cristalline – like the gems that I hide in my grottos."

"Perfect," said the vigneron from Vaud, "I'll call this wine Dézaley."

"Excellent," said the Valais vigneron. "I'll call this wine Païen."

"Fantastic!" said the Ticino vigneron. "I'll call this wine Bondola."

"That's great," said the Zurich vigneron. "I'll call this wine Räuschling."



HAND-CRAFTED WINES

A vine requires very attentive and regular care throughout the year. Industrialization during the past two centuries allowed people to design machines that make the lives of vigneronns easier, such as electric secateurs, for example. Nevertheless, the very special profile of Switzerland's vineyards – with their many vines on steep slopes or on narrow pieces of land or in terraces – does not always make it possible to use the machines that we find on large farms in Europe and in the New World.



This is viticulture on a human scale, where the main tool needed to bring grapes to maturity remains the hand of the vigneron. It encourages the development of original wines that reflect the land that gives birth to them as well as the people who tend them. But it's important to remember that this work comes at a cost. Specialists estimate that one hectare of vineyard planted in the traditional way requires 1,900 hours of work per year. Essentially, the double of a vineyard where large machines can be used. In Switzerland, the price of

wine goes up yet again because salaries – agricultural and vineyard personnel – as well as expenses for supplies (bottles, labels, corks), insurance and marketing – are higher than in most other wine-producing countries. If Swiss wine is often considered expensive, we must not ever forget that Swiss environmental, social and financial standards carry costs that must be added to those already engendered by an accident of topography that lies at the heart of the “smallest of the great wine regions”.

NEED A HAND?

This calendar shows, in a simplified way, work in the vineyard. The time these tasks take varies depending on weather in the region and the vintage.

Winter	JANUARY Pruning	FEBRUARY Pruning	MARCH Pruning
	APRIL Suckering Treatments	MAY Suckering Treatments	JUNE De-leafing Trimming Treatments
Spring	JULY De-leafing Trimming Treatments Green harvesting	AUGUST Trimming Treatments Green harvesting	SEPTEMBER Harvest
	OCTOBER Harvest	NOVEMBER	DECEMBER
Sommer			
Autumn			

Pruning: cutting back dormant canes in order to manage the vine's production

Suckering: suppressing poorly placed new growth

Green harvesting: removing excess bunches

This is work that must be done by hand.

De-leafing: removing some of the leaves

Trimming: cutting back the shoots to allow more sun to reach the berries

Phytosanitary treatments: these help protect grapevines against disease and pests

Harvest: harvesting bunches of mature grapes

This can be done by machine when the lay of the land permits.

THE VINE AND ITS ENEMIES

Vines, initially wild, were domesticated by humans and have shown themselves to be relatively resistant. They grow in many and greatly varied kinds of soil. We find them along the edge of the sea and against the ridges of mountains. Their fruit attracts a number of opportunists, from wasps to boars. Nevertheless, these thieves have never posed existential problems.



© envato elements

The hoopoe abandoned vineyards in the 1950s due to the lack of insects on which it needed to feed; it is now returning to French-speaking Switzerland.

This insect-eater has taken great advantage of the increase in cover crops between vines and the end of the use of insecticides.

Until the middle of the 19th century, the main worry of vignerons was always the capricious weather (frost, hail, drought). Today, these traditional enemies are managed, using methods that have only a negligible or no impact on the environment.

INDIGENOUS PESTS



Mites

The two species of mites that attack vines have a common enemy: the Typhlodrom. In order to encourage this beneficial insect, research scientists at Agroscope Changins have seen to it that no treatment products are used that would reduce numbers of this carnivorous mite. As a result, the miticide treatments that were widespread in the 1970s are no longer used today.



Grapevine moths

Some grapevine moths lay their eggs inside grapes while these are still green berries. Not only does the caterpillar eat the fruit, but they also encourage diseases. Since 1986, vigneronns have been using a sexual confusion technique developed by Agroscope Changins, which has made it possible to limit the proliferation of this species without resorting to insecticides.



Vertebrae

While red deer and chamois nibble on the young shoots of working vines, badgers and wild boar eat the grapes. As for hares, they have the annoying habit of attacking young plants. In order to protect young vines, growers protect them by simply placing plastic collars around them.



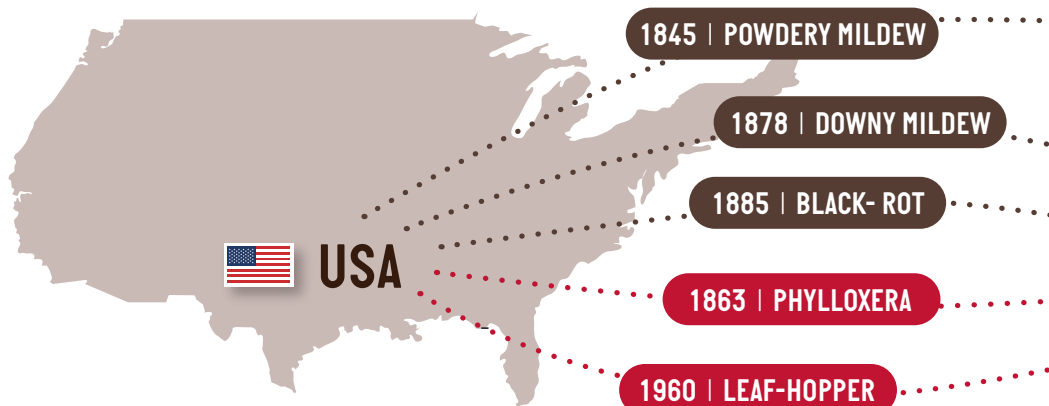
Starlings

The starling was the symbol for the Fête des Vignerons in 2019; they move in impressive flocks and can strip an unprotected vine. As with the majority of other two- and four-footed gourmands, the damage they do can be limited by using nets.

TRUE or FALSE: Phytosanitary products make it possible to produce more!

FALSE. While some methods of production and intensive agriculture let us make a link between additional gains and the massive use of antibiotics and pesticides, this is not at all the case for grapevines. Production quotas and designated appellation areas mean that it is often necessary to cut grapes while they are still green. So it is clear that the products used by vigneronns do not have as their goal to produce more, but rather to avoid having a harvest destroyed by an insect or a fungal disease.

SCOURGES THAT COME FROM ELSEWHERE



Like all living matter, vines cohabit with parasites, pests and beneficial insects who feed off these others. The problems begin when invasive species are introduced to an area where our local plant has no natural defense or efficient allies. People must, at this point, intervene to avoid devastation. And of course the faster and more comfortable the means of transport, the greater the risk that an undesirable traveler will survive the trip and trigger a significant epidemic.



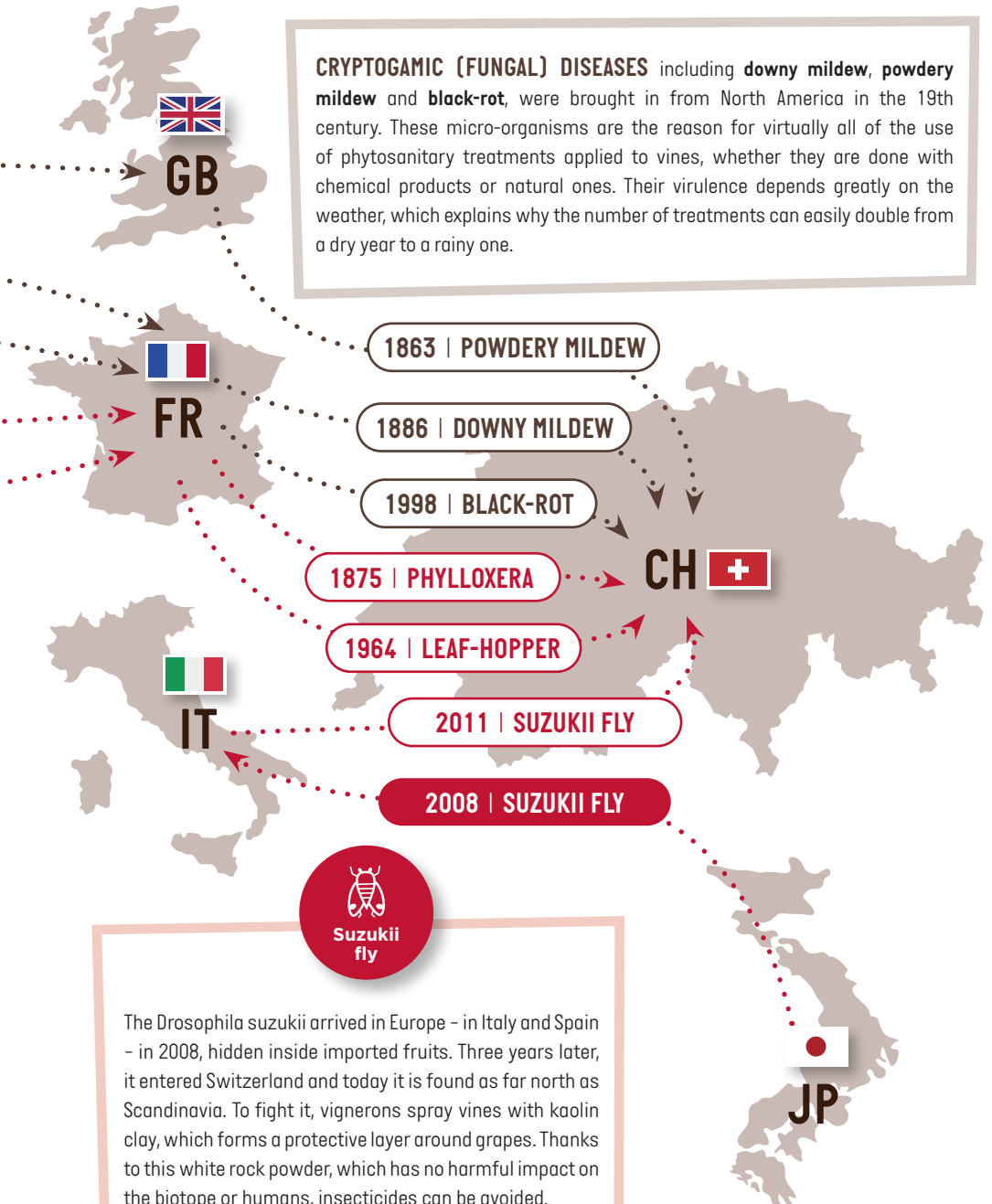
Phylloxera

It is scarcely a millimetre in size, but this minuscule insect is the vine's worst enemy. The vines that it attacks die in three years. It is capable of flying and reproducing at a crazy speed, and thus phylloxera managed to destroy 99% of Europe's vineyards between 1863 and 1918. The first means of fighting it, flooding and insecticides, were very inefficient. The vineyards were in the end saved by grafting European plants onto American vines, which had a natural resistance.



Leaf-hopper

Flavescence dorée is an incurable disease that is fatal to vines. It is caused by a microorganism that must be carried to infect healthy plants. It is spread through grafting or by an intermediary vector insect, the *Scaphoideus titanus* leaf-hopper, which doesn't, on its own, cause any damage to vines, but which undoubtedly came from North American at the same time as imported rootstocks.



1811

In Neuchatel, the Bouvier brothers begin making sparkling wine.



1816



The eruption of Mt. Tambora causes a "year without summer". In Lausanne, the harvest is 12 November.

1973

FiBL, a research institute for organic agriculture, opens in canton Aargau.



1863

Powdery mildew, from the Americas, arrives in Swiss vineyards.



1981

BioSuisse is created; its products carry the Bio-Bud label.

2021

Regulations are established for producing Swiss "natural wine".



2018



SWISS VITICULTURE

1986

Sexual confusion, developed by Agroscope, makes it possible to manage grapevine parasitic moths without insecticides.



1871

Phylloxera lands in Geneva. Half of Switzerland's vines will never be replanted.



1993

The Vitiswiss label is created, which provides a framework for sustainable viticulture.



1882

CuSO_4

It's discovered that copper sulphate [Bordeaux mixture] stops downy mildew, which arrived in Europe in 1878.



58 BC

Helvetia becomes Roman and vines are planted throughout the territory that makes up today's Switzerland.



The king of Burgundy founds the Abbey of St. Maurice, which still has vines today, 1500 years later.

1797



The Confrérie des Vignerons organizes a festival in Vevey to thank its growers/labourers.

1654

The term "Chasselas" appears for the first time, in a book.



1948



CHANGINS A school opens, first in Lausanne, then in Changins, that offers higher education in viticulture, oenology and arboriculture.

2014



Drosophila suzukii, from Japan, causes significant damage shortly before harvest time.

1419

After taking refuge in Saint Prex, Marie of Burgundy offers Pinot Noir plants to the vignerons there.



1924

Rudolf Steiner's "The Agriculture Course" sets out the basic principles of biodynamic farming.



bio-dynamic™

2013

Agroscope in Pully creates a new generation hybrid variety, Divico, a quality grape that is resistant.



1890

A Swiss agronomic research station is established in Wädenswil.



1313

A notarized act mentions the names of three grapes: Rèze, Humagne and Neyrun.



1886

Powdery mildew crosses the Swiss border and begins to trouble the lives of Swiss vignerons.



515



1141

Lausanne's bishop invites religious orders to clear the Lavaux hillsides in order to plant vines.



NEAYARDS

GRAFTING

When phylloxera arrived in Europe in the 1860s vignerons were looking to protect their vineyards against this insect, which would destroy more than 99% of the continent's vines – the only areas that were able to evade it were sandy regions, protected because the insects could not dig galleries allowing them to go from one vine to the next.



1 Preparing the scions: the wood of the vine that you want to multiply is cut in such a way that each bud gives a new vine.

Several techniques were used: sometimes the vines were flooded to drown the insects. Others brushed the vines with a mixture of water, chalk, naphthalene and mineral oil. Others tried to kill pests with chemical products such as carbon sulphur and potassium sulfo-carbonate. These are not very efficient, expensive and dangerous for the people handling them. These techniques rapidly gave way to planting direct producer hybrids and grafting. This technique, used systematically today, consists of grafting a European grape type (Pinot Noir, Chardonnay, Chasselas, Merlot and any other high-quality varieties) onto the rootstock of a phylloxera-resistant American variety. While it was once enough to plant the tip of one cane in the ground to obtain a new vine, today you have to order young plants, called scions, from a nursery. And of course, some of the grafts don't take correctly, which means that there is more or less a high percentage of mortality among young plants.



2 Grafting: the scions and the rootstock are cut by a machine and assembled by hand.



3 Forcing: the scion is heated to 30 degrees C to provoke the bud to open and the graft to take.



4 Plantation : the young grafts, covered in wax to allow the scars to heal, are planted and watered by drop sprinklers.

RESISTANT GRAPE VARIETIES

In the early days of grafting, phylloxera encouraged the world of wine to create hundreds of grapes from crossings between high quality European grapes and American vines that were resistant to fungal diseases. These virtually disappeared by the end of the 1950s, but resistant grapes have been seen in the past few decades as an alternative to using products for treatments. Very promising new grapes, such as Divico and Divona, are playing a growing role in Swiss vineyards.

FROM CROSSINGS TO HYBRIDS

Interspecific crossings are reproductions between two varieties of different species, unlike crossings (two members of the same species). Hybrid techniques were developed once the world of grape production realized that, unlike *Vitis vitifera* (cultivated grapes), other varieties of *Vitis* are not touched by powdery mildew and downy mildew. After the arrival in Europe of American pests at the end of the 19th century, more than one thousand grapes referred to as direct producer hybrids were created. The mediocre quality of the wines they produced would prompt France to ban six of them for planting in 1935. Growers were forced to pull them up by 1953. This policy accompanied the development of phytosanitary treatment products that cost little and were easy to use.



Divico grape bunch, the multi-resistant variety created by Agroscope.

THE EVOLUTION OF INTERSPECIFIC GRAPE VARIETIES IN SWITZERLAND

In 2020, the Federal Office of Agriculture listed 316 hectares, or 2.5% of Swiss vineyards as having grapes that are naturally resistant to diseases of the vine. These varieties, called Piwi, or interspecific, do not need to be treated with pesticides, either officially organic or chemical. Piwis show strong growth, as seen in the following table.

REDS

DIVICO		CABERNET JURA		REGENT	
2020	66 ha	2020	37 ha	2020	30 ha
2015	10 ha	2015	27 ha	2015	38 ha
2010	2,5 ha	2010	0,5 ha	2010	40 ha

WHITES

JOHANNITER		SOLARIS		SOUVIGNIER GRIS	
2020	34 ha	2020	32 ha	2020	19 ha
2015	18 ha	2015	19 ha	2015	3 ha
2010	12 ha	2010	13 ha	2010	1,6 ha

DIVICO OFFERS NEW HOPE

Starting in the 1980s, more and more voices were raised against the use of products to treat vines and grapes. While some growers turned towards organic production methods, others wanted to relaunch the hybrids. The Changins Agroscope research centre therefore placed research into grape varieties that are naturally resistant at the top of its list of priorities. The first of the grapes that combined taste quality and inherited resistance was Divico. It was marketed and sold starting in 2013; the grape is barely affected by the main fungal diseases (powdery mildew, downy mildew and gray rot). It does not need to be protected – or needs very little protection – using phytosanitary products. In less than 10 years the vigneron were convinced by its success and it was planted on more than 50 hectares. In 2018 a white variety appeared, also resistant: Divona. These still play a small part, but the production of quality wines made from grapes that are resistant to disease will take off in a significant way in years to come.

CHEMICALS

Whether they are “natural” or manmade, chemical products have been part of agriculture and viticulture since their creation. An overview of a complex situation that raises a number of important health and environmental questions, but that is also the object of many deluded notions.

Agriculture and animal husbandry were born from the observation that people could do better than nature. By selecting plants, fertilizing soils with animal dung and building irrigation canals, human societies can produce food sources that are much larger than those that hunter-gatherers can collect in biotopes that are virgin, in the sense of no human intervention. This observation is true for viticulture and oenology – remember that the wild grapevine produces no grapes, or extremely few.

THE LONG HISTORY OF WINE ADDITIVES

Wine is a product that is not stable and is very sensitive to oxygen and natural bacteria present in air. Archeologists have in fact found nearly 50 ingredients (honey, spices, sea water, aromatic herbs) in Roman wines that were used to improve their taste and to conserve them. While many of these additives posed no danger to the consumer, others – such as lead – used from the Middle Ages to the end of the 19th century to camouflage acidity, were clearly toxic. Scientific discoveries during the Age of Enlightenment made it possible for chemists to make wine by blending water, alcohol and raisined grapes. These derivative products came to an end after France issued edicts in 1889 regulating wine: it could be only “a product exclusively resulting from the fermentation of fresh grapes and grape juice.”



**Fenugrec, a grain used by
The Romans to improve their wine**

FUNGI AND TREATMENTS

Powdery mildew, downy mildew and gray rot – three fungi that attack vines – are the main challenges faced by vigneron today. At the moment there are just two ways to avoid the damage they cause: to plant disease-resistant grapes or use chemical products, fungicides. These fall into two categories, preventive treatments, which prevent the development of the disease, and curative treatments, which are used on plants where the di-

sease has already attacked. For nearly a century, from 1870 to 1950, Bordeaux mixture (copper sulphate, lime, and water) has been the main method used in the vineyard. The first manual pumps (which made it possible to treat 100m² in an hour) gave way in the second half of the 20th century to sprayers that could treat 10,000m² in an hour – and a helicopter, which could cover 60,000m² in 10 minutes.

EVOLVING PRACTICES

For more than fifty years the chemical industry has provided several products to fight vine pests. These are often able to penetrate the plant, thus leaving their residue – in small but detectable quantities – in the grape and thus in the wine. The problem of drift and growing concern on the part of the public over these phytosanitary agents has pushed researchers to find alternatives to the chemicals-only approach during the second half of the 20th century. Thanks to the sexual confusion method and organic approaches, insecticides have virtually disappeared from vineyards since the start of the 21st century. New techniques for managing green cover weeds and a better understanding of the balance between vines and the flora surrounding them have made it possible to drastically reduce the use of herbicides. Advances in scientific research has also helped vigneron to replace some troublesome treatments with effective alternatives that are not noxious for humans and the environment, such as low-fat milk.

TRUE or FALSE: in organic production, no chemicals are used!

FALSE. The organic grower uses fungicides, just like conventional winemaking colleagues. The products are, however, different: those used in organic agriculture are generally referred to as contact products – they work only on the parts of the plant where they are applied. Unlike products made by today's chemical industry and referred to as "systemic", the contact products do not penetrate the plant itself and are more easily washed away by rain. So in organic, versus conventional cultivation, more frequent treatments are necessary, but using different products.

VEGETATION: A FRIEND, BUT BEWARE



**Vineyards
with green cover**

© Swiss Wine Promotion

For anyone hiking in a vineyard, the contrast is very noticeable: some vines seem to have luxuriant vegetation spilling over while others are stripped of any greenery. The more observant among them will see that between these two extremes, growth is nuanced. Some growers cut back every other green row, others leave plants to flourish freely between the rows of vines while weeding completely a strip 30 centimetres wide under the vines. As always in viticulture, these different practices are efforts to respond to a complex problem. The plants that grow near a vine need water and nutrients, including nitrogen, in order to grow. They are therefore competing with the vine. When soils are rich in water and nutrients, this competition is tolerated to some degree. But when soils are poor, with little humus, the competition is enough to create what scientists call water-nitrogen stress. The vine that suffers from this will not only produce an insufficient quantity of grapes, but the wine will develop unwanted aromas. Faced with this situation, the viticultural world has constructed a series of solutions such as encouraging vegetation that requires little water and nitrogen, developing machines that will weed without excessive effort. Currently, developments lead us to believe that using green covers that match the conditions in each particular region will become the norm.

SULPHITES

Nearly two thousand years ago, wooden vats from Gaul began to replace the Roman clay amphores to carry wine. To clean these containers built from oak, the vignerons of ancient times burned sticks dipped in sulphur.

Since sulphur has an antioxidant effect that slows the aging of wine, as well as antimicrobial properties, sulphites became the inseparable partner of wine. At least until the start of the 21st century and the emergence of a movement of “natural wines” (also known as *vin nature*) that prescribed wines made without added sulphites. “Added” is a key word because grapes, when they ferment, naturally produce a certain quantity of sulphites, which varies depending on the grape variety. The oenologist tops up these natural sulphites with a dose of externally produced sulphites to protect the wines from premature aging or unwanted refermentation. When the amount of sulphites goes higher than 10mg/litre, the law demands that the winemaker must note “contains sulphites” on the bottle.

Contrary to a widespread notion, sulphites are not responsible for headaches. This, as well as hangovers, is due to dehydration caused by the absorption of alcohol and the deterioration of some components in wine, such as histamine.

Comparison of the maximum rate of sulphites allowed by law

						
DRY WHITE WINE	DRY RED WINE	SWEET WINE	CINNAMON	DIJON MUSTARD	DRIED APPLES	DRIED APRICOTS
210 mg/litre	160 mg/litre	400 mg/litre	150 mg/kg	500 mg/kg	600 mg/kg	2000 mg/kg

TRUE or FALSE: wine is a living product

FALSE. While wines do continue to develop once they are bottled, they have no intrinsic biological activity. The changes – which have an impact on colour, aromas and taste – are essentially due to the action of oxygen, which is present in the wine and in the interstices or space between the liquid and the cork. This prompts an oxidation similar to that which causes iron to rust. To be clear, wine is not alive; rather, it is unstable, like a grill that rusts, an ice cube that melts or a mountainside that erodes.

THE WORLD OF LABEL CLASSIFICATIONS

Regional, national and international laws regulate every aspect of viticulture and winemaking. Wine classifications give consumers a gauge for quality; they are awarded to businesses and wines that meet strict specifications, overseen by an independent body.

CLARIFYING DIVERSITY

These formal standards do not keep the world of wine from offering a remarkable degree of diversity. In Switzerland alone there are 252 grape varieties that can legally be vinified on their own or as part of blends, creating sparkling and still wines that are dry, semi-sweet and sweet. To make clear to consumers the cultivation methods used and the quality of the wines, many bottles carry classification labels and indicate medals awarded.

MEDALS FOR INTERNATIONAL RECOGNITION

Classification labels should not be confused with medals awarded by wine competitions. These competitions, whether they are local, national or international, let producers have their wines assessed by professional judges. The judges do blind tastings (in other words, they do not know who has produced the wine or what region it comes from). In Switzerland, all the competitions respect the directives of the International Organisation of Vine and Wine (OIV), which recommends that medals should not be awarded to more than 30% of the participants.

COMPETITIONS SUPPORTED BY SWISS WINE PROMOTION



NOTES, EVALUATIONS BY PROFESSIONALS

Wine notes are evaluations provided by professionals – normally not done with blind tastings – who are wine critics or journalists. These people, for the most part, use a 100-point system, where a good wine will be noted above 85 points, a very good one above 90 points. Some prefer to work on a scale of 20 points, where 15 marks the lower end for a good wine and 17 is a very good wine.



In 1993, six regional associations of growers joined forces to create Vitiswiss, the Swiss Federation for the Development of a Sustainable Viticulture. In 2014, Vitiswiss incorporated, for its Vinatura label, the principles of sustainable development in both the vineyard and the cellar. These are defined by the OIV as: “Global strategy on the scale of the grape production and processing systems, incorporating at the same time the economic sustainability of structures and territories, producing quality products, considering requirements of precision in sustainable viticulture, risks to the environment, products safety and consumer health and valuing of heritage, historical, cultural, ecological and aesthetic aspects.”

A SUSTAINABILITY LABEL

This label's goal is to guarantee the consumer that the product was made with respect for the basic principles of sustainable development. It is delivered by

Vitiswiss and indicates that the business applies these principles in the vineyard and in the cellar, and that it respects the association's set of standards.

The classification's main points

The growers and wine producers who are members of Vitiswiss undertake to work for the improvement through:

- The preservation and management of natural resources
- Preserving the landscape and its biodiversity
- Managing limited use of treatments – the products and their disposal
- Sustainable management of energy
- The business's socio-economic involvement
- Respect for the safety and health of its workers
- Owners' competence, transparency and responsibility
- Quality and value-added products.



ONE RANGE OF IP SWISS WINES

The IP Switzerland ladybug is the logo that distinguishes the products which respect standards (very similar to those of Vinatura) set by the Swiss Farmers Association of farmers practising integrated production. Starting in 2022, Swiss wines with the ladybug IP-Switzerland label will be carried by a nationwide Swiss distributor. This programme, developed as the result of a proposal by WWF Switzerland, has two objectives: reduce the use of phytosanitary products and promote biodiversity, thanks to more green cover and by increasing the surface area of vineyards that focus on biodiversity.



BIO SUISSE

To preserve natural resources for generations to come and ensure that consumers have a healthy and sustainable product: in order to reach these two fundamental goals, those who believe in organic farming push themselves to achieve and maintain a balance between nature, people and animals. Organic producers therefore use additives limited to products whose active principles exist in a natural state.

The **Bourgeon label** was created in 1981; it is without a doubt the most widely known of the organic labels. It indicates that a wine follows one of the first organic standards in the world, those of Bio Suisse. This organization brings together some 30 farm organizations that work closely with the creation of FiBL, a research institute in Aargau whose objective is to bolster, through science, the observations of organic farming pioneers. During the 1990s work was undertaken with large retail chains to make the Bourgeon label known to the public and encourage the development of products

that are certified as organic, work that has not yet reached its peak. In 2021 Bio Suisse announced that 13.3% of Switzerland's vineyards were cultivated organically, up from 5% in 2014.

The main points of the Bourgeon label are to:

- The entire domain must be cultivated organically
- The living and fertile soil must be conserved thanks to the rejection of synthetic chemical fertilizers and pesticides
- Encourage flora and fauna
- Cultivate healthy, robust plants (for example, by using varieties that are naturally disease resistant)
- Produce wines that do not have unnecessary additives
- Use water and energy parsimoniously
- Engage in offering prices that are fair to producers
- Guarantee traceability, from field to table
- Practise social responsibility towards employees

www.bio-suisse.ch



BIO INSPECTA AND BIO TEST AGRO

Some wineries follow the directives of the Federal organic ordinance (1997), which more or less reflects 1991 European legislation and regulations covering organic farming. This legislation, which is less restrictive than the Bourgeon label, does not allow the use of the Bio Suisse label. Nevertheless, "Federal Bio" producers are allowed to mention "organic" and/or their Bio Inspecta or Bio Test Agro certification on their bottles.

BIO TEST AGRO AG

BioKompetenz mit Praxisbezug



In 1924, Rudolf Steiner, the founder of anthroposophy, offered a series of eight conferences in Germany entitled “The Agriculture Course”. The text created the basis for biodynamic agriculture. A mix of agronomic principles that would be taken up by organic agriculture was blended with spiritual and cosmic approaches that were his own. The philosophy behind this label says that: “Soil, plants, animals and humans are seen to be part of a large life cycle in which each depends on the others and they are prepared to mutually assist each other.” Demeter producers consider that biodynamic products “possess a large vital force that must be preserved”, which is why the transformation processes are very strictly regulated so that Demeter products are as little changed from their natural state as possible.

Organic and more

By mid-2021, following several years of rapid growth, there were 70 Demeter vignerons. They have 460 hectares of vines under cultivation. In order to be certified, Demeter vine parcels must satisfy the requirements for organic growing, then wait one year, the “reconversion” period, before they can be certified. Many Demeter vignerons follow the recommendations of their lunar calendar, an almanac

that lays out the periods considered as favourable or not for different work to be done with vines – but only the annual use of biodynamic preparations is obligatory. In the cellar, on the other hand, there are far more restrictions and the corrective methods, additives and farm inputs that are authorized are fewer than in organic, sustainable and conventional winemaking.

The label's main points

- A vineyard labelled as organic farming
- The use of biodynamic preparations at least once a year
- The use of compost prepared according to Demeter directives, on the farm
- One-time use, in the most limited way possible, of sulphur
- Preference given to physical methods over chemical methods
- Limiting procedures that require a significant use of primary resources or energy
- The greatest possible limitation of farm inputs and additives
- Taking measures to minimize negative effects on the environment and the elimination of vinification by-products.

www.demeter.ch

Natural wines

“The Swiss Natural Wine Association (ASVN), created 11 January 2021, has as its objective to promote natural wines. Its goal is to aid and counsel producers who are vinifying this type of wine and to present the great diversity of natural wines, from the level of their taste, their smell, and appearance, to their creative expression,” the association notes. It has established a charter which is recognized by viticulture professionals and the authorities. One of the fundamental objectives of the ASVN is to bring to a halt the ambiguity which has been part of the “natural wines”, “nature wines”, “raw wines” labels which up until now have not been protected. In addition to offering consumers a comprehensible framework, the ASVN hopes to thus encourage training and shared experiences among producers who are interested in a vinification philosophy that is demanding and relatively new.

An organic wine with no farm inputs in the cellar

Any Swiss vigneron who wants to note “Natural Wine” on wine bottles must prove that the grapes, the cellar and the wines are certified as organic farming products (Organic, Bio-Bud or Demeter). Once vinified, the “Natural Wine” must be “vinified and bottled with no inputs, additives, filtration or sulphur”. The regulations also require hand-picked grapes

and proscribe the use of selected rather than wild yeasts. However, wineries are allowed to use wooden containers – barrels and vats – to mature their wines. In addition, natural wine producers must commit to finding energy-efficient methods, to limit the weight of their bottles, to use containers and corks that are the most ecologically friendly possible and to restrict as much as possible the use of synthetic materials and to give preference to local resources.

No added sulphur but with sulphites

Fermentation with yeast naturally produces sulphites. If their concentration surpasses 10 milligrammes per litre, the law requires the vigneron to note on the label, “contains sulphites”. In the case of natural wine, where the sulphites are made by the yeasts and not added from an external source, the bottle mentions two things which at first might seem contradictory: **contains sulphites** and **without added sulphites**. Note that, contrary to the French label “natural method wine” which permits up to 10 mg/l of added sulphites and limits the total dose of sulphites to 30 mg/l, ASVN has not provided a maximum for the dose of natural sulphites that are tolerated in its natural wine. A choice motivated by the tendency of some resistant grapes, notably Divico, to produce significant quantities (up to 40 mg/l) of natural sulphites.

THE OTHER LABELS



The charter was created in 1966 in order to add value to the products made by Valais vignerons who cellar their own wines. It requires them to carry out viticultural work that respects the environment and to work their vines following the principles of integrated production. Membership is limited to self-employed producers who make wine from their own harvest; the wines must be tasted by an oversight commission. There is an understanding that clients will be given a warm and professional welcome.

www.vignerons-encaveurs-valais.ch



Established in 1963 by Yvorne's producers to ensure that canton Vaud's wines with appellations would dominate regional blends, this label has evolved over time to become a guarantee that consumers would "be drinking a local wine without any faults that would impact negatively on its taste or aromas." To have this label, Vaud candidate wines are tasted by a committee of sensory analysis specialists who judge the wine based on 20 criteria.

www.terravin.ch



Since 1996, the Grain Noble ConfidenCiel charter has worked to increase the renown of a group of fine wines from Valais, from late harvest grapes ripened on the vine. These sweet wines, often harvested in the middle of winter, must follow quite restrictive regulations that: limit the number of authorized white grape varieties, impose a minimum age for the vines, ban methods to enrich the must and insist that the wine must be oaked in casks for at least one year. Candidates for the label must, once these criteria are met, face a tasting commission to obtain its approval.

www.grainnoble.ch



This association, created by four German-speaking journalists, aims to promote high quality Swiss wines nationally and internationally by showing their aging potential. Just under sixty wines from producers in all of Switzerland's wine-producing regions are selected by the Mémorial. The group enjoys offering tasting sessions, open to the public, where it shows these wines' ability to age by presenting the current vintage side by side with older vintages of the same wines.

www.memoire.wine

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