

THE DUAL CHALLENGE
FACING
BORDEAUX WINES:
ADAPTING TO
CLIMATE CHANGE
AND REDUCING
THEIR
ENVIRONMENTAL
FOOTPRINT.



In Bordeaux, as in other French regions, winegrowers are seeing the effects of climate change. While these effects currently favour the ripening of grapes in Bordeaux, the prospect of seeing the thermometer rise a further 1 or 2 degrees will have a significant impact on wine styles.

Bordeaux has many levers for adapting: agricultural and winemaking practices, adaptation of plant material, etc. Players in the sector are innovating, to continue to produce high-quality, balanced and aromatic wines.

For over 15 years, as part of its sustainable development strategy, the sector has been committed to preserving the environment while helping to reduce greenhouse gas emissions. Following an initial 2020 Climate Plan, the sector is now working on a Carbon Plan for 2030, jointly built with all stakeholders – winegrowers, merchants, cooperatives and suppliers.

Contents

- On the ground, facts and figures
- Levers for adaptation
- The sector's carbon strategy

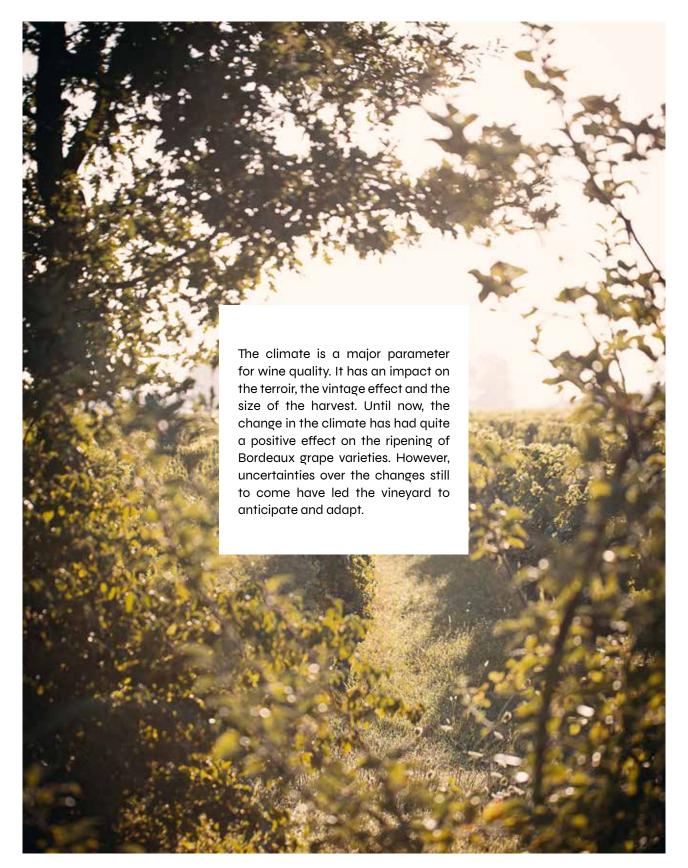
Key figures

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BORDEAUX IN THE FACE OF CLIMATE CHANGE

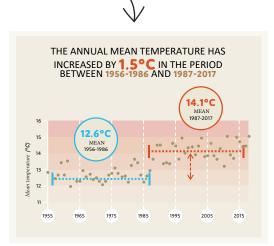
On the ground: FACTS AND FIGURES

THE CHANGING CLIMATE OF THE BORDEAUX VINEYARD

TODAY

LIFE-ADVICLIM results

- +1.5°C between the periods 1956-1986 and 1987-2017
- The winegrowing climate in Bordeaux has moved from temperate to warm temperate (according to the Huglin classification)
- On average, the number of very hot days (max. temperature >35°C) has increased by 3.5 days per year (1987 2017) in recent years.
- Since 1989: continued presence of hail showers and increase in their intensity in the spring.



LIFE-ADVICLIM (2014-2020) = CLIMATE CHANGE AT VINEYARD LEVEL. The aim of this European project is to study scenarios for diagraph to the impacts of climate change for different vineyards that are representative of European wine regions. Bordeaux, pilot site. https://www.doiclim.eu/2020/03/20/bordeaux-pilot-site-results/

AND TOMORROW

Depending on the scenario (more or less optimistic) temperatures could rise by +0.6 to +5.3 degrees by the end of the century.





AND ITS IMPACT ON VINEYARDS AND WINE

ON VINEYARDS

- Shortening of the vine growth cycle: since 1989, all stages of development have been taking place earlier.
- Earlier ripening and harvesting (by around twenty days over 30 years).
- Increased water stress.
- Year-to-year variations in yield.
- Ripening that takes place in increasingly hot conditions,

requiring early-morning harvesting to preserve the aromas.

ON WINE:

- A marked vintage effect.
- Increased alcohol levels
- Reduced acidity.
- Modified gromas.



AVERAGE HARVEST SIZE

FOR THE BORDEAUX

VINEYARD

OVER THE PAST 5 YEARS =

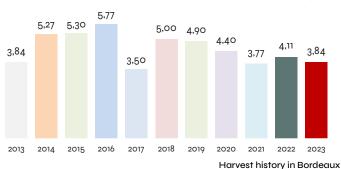
4.2 MILLION **HECTOLITRES**

(base: 2023 harvest)

ON THE HARVEST:

Even if all of the drop in harvests can only be attributed to climate change, multiplying and weakening the (5-year average from 2014 to 2018 = 4.96 million hectolitres // 5-year average from 2019 to 2023 = 4.20 million hectolitres)

- 2013 vintage: Heavy rain and cold during flowering => Harvest reduced by more than 30% below the average.
- 2017 vintage: Late spring frost (end April) after a very mild winter => Historically small harvest
- 2020 vintage: Hail, frost, floods, summer heatwave
- => Harvest down 9% vs 2019.
- 2021 vintage: Widespread late frost in the spring
- => Harvest down nearly 14% vs 2020.
- 2023 vintage: near-tropical weather in June provoked an outbreak of downy mildew (a fungal disease) of record proportions, both in terms of its speed of spreading and its scale. => Harvest down 7% vs 2022.



(source: Customs

BORDEAUX IN THE FACE OF CLIMATE CHANGE

Levers for ADAPTATION AND FORWARD PLANNING

- New practices in the vineyard
- Adapting the plant material
- Innovation.

ADAPTATION THROUGH NEW PRACTICES

CHANGING AGRONOMIC PRACTICES

- Delaying pruning to delay the growth cycle and limit the impact of spring frosts.
- Increasing the height of the trunk to reduce the canopy area and thus limit photosynthesis to moderate the alcohol level.
- Rethinking plot location to reduce exposure to the sun
- Limiting leaf removal to protect the grapes from the sun's rays.
- Using grass cover to reduce evapotranspiration.
- Adapting the harvest date and picking at dawn.



PROTECTING AGAINST CLIMATE HAZARDS

Some areas for improvement:

- Installation of collective systems to combat hail and frost.
- Policy measures to better insure winegrowers and encourage them to take out crop insurance.
- Aid for investments to combat frost and limit its impact (e.g. wind machines, vineyard spraying systems).
- Investment in research and innovation to improve the ability of vines to adapt to climate change.



We cultivate our vines with passion, respect, patience, resilience and humility in the face of the elements, whatever they may bring



ADAPTING THE PLANT MATERIAL

(grape variety and rootstock)

The choice of plant material is a production commitment lasting several decades. Highly regulated, it results from the examination of many criteria in an evolving context (climate change, reduction of inputs, varietal creation and diversification, market expectations) and with respect for the typical character of the wines. Today, it is useful to give priority to later-ripening varieties. Merlot for example, the emblematic grape variety of Bordeaux (66% of the vineyard area for red grape varieties), reaches optimal maturity, making it possible to produce very great wines. But faced with rising temperatures, this early variety could start to fall outside its ideal ripening window.



A CATALOGUE OF GRAPE VARIETIES AUTHORISED IN AOPs

To date, for production of AOP wines in Bordeaux, 6* red grape varieties and up to 8** white grape varieties are authorised in the technical specifications. Growers therefore have a catalogue of varieties with different growth cycles and aromatic profiles, and ripening at different times.

Similarly, as Bordeaux produces blended wines, professionals can diversify their varietal mix and vary the proportions of each grape variety in the final wine to mitigate the effects of climate change.

*6 red grape varieties: Cabernet Sauvignon, Cabernet Franc, Merlot, Malbec. Carménère. Petit Verdot

**8 white grape varieties: Sémillon, Sauvignon Blanc, Sauvignon Gris, Muscadelle, Colombard, Ugni Blanc, Merlot Blanc, Mauzac.

∨ REVIVAL OF OLD GRAPE VARIETIES

Bordeaux winegrowers can draw on the diversity of grape varieties, especially those that ripen later. With changes in knowledge and in the climate, some old grape varieties, previously abandoned because they were more difficult to grow, are making their return to the vineyard.

The most emblematic of them is Petit Verdot. A late-ripening red grape, it benefits from the effects of climate change. In 2000, it was planted on less than 400 hectares. 20 years later, it covers more than 1,400 hectares, an increase of more than 200%. In the blend, it brings a final tannic touch with liquorice and violet aromas.

INNOVATION

INTRODUCTION OF NEW GRAPE VARIETIES: VIFAS



2007 >> launch of the Vitadapt experimental programme

Conducted within the ISVV (Institute of Vine and Wine Sciences), Vitadapt aims to study the behaviour and adaptive capacity of the vine in situ, in the face of climate change and in the context of the Bordeaux terroir. A study plot, made up of 52 French and foreign grape varieties, all of the Vitis vinifera species, was planted in Bordeaux in 2007.

Goals:

- Measure the changes in the quantity of grapes over time.
- Study the behaviour of grape varieties in the context of climate change.
- Study the possibilities for adaptation and the quality potential of grape varieties that are little known in Bordeaux.
- Record and archive observational data for these grape varieties.
- Establish a ripening chronology for these grape varieties and quantify their physiological response to drought.

VARIETY SELECTION CRITERIA

- Red and white grape varieties that are not emblematic of other wine regions (e.g. not Syrah, Pinot Noir or Chardonnay).
- Varieties already listed in the Official Catalogue of Vine Varieties
- Vitis vinifera grape varieties.
- Ability to resist water stress.
- Aromas close to existing Bordeaux styles.
- Late ripening.
- Resistance to certain diseases.

2021 >> The Bordeaux AOP receives approval for the introduction of 6 varieties of interest for adaptation (VIFAs).

Since spring 2021, 6 new red and white grape varieties, resulting from the Vitadapt experiment, have been authorised in the Bordeaux & Bordeaux Supérieur AOP technical specifications. This development represents the culmination of more than a decade of research carried out by scientists and winegrowers in Bordeaux to face up to the impact of climate change.

2022 >> Experiments in the AOPs with winegrowers

Goal: Take into account the spatial variability of the climate at appellation level.

Bordeaux winegrowers now have access to an expanded catalogue of varieties with different growth cycles and ripening periods.

2022: first VIFA plantations.

This 10-year experiment (renewable once) on the scale of the Bordeaux vineyard will be subject to monitoring, of benefit to the entire community, to manage the change and definitively validate the incorporation of these new grape varieties.



HOW THESE VARIETIES CAN BE USED

- Limited to 5% of the varietal mix on an estate.
- Limited to 10% of the final blend for each colour. In accordance with labelling legislation, naming these varieties on the product label is not permitted.
- The implementation of this approach is subject to a tripartite agreement signed by the INAO, the growers' union and the producer for a period of 10 years, renewable once.



The varieties of interest for adaptation (VIFAs)

4 red grape varieties

Arinarnoa Developed by INRA in 1956 - The result of a cross between Tannat and Cabernet Sauvignon, this variety gives regular production. It has good resistance to botrytis bunch rot. Its ability to adapt to climate change allows for low sugar production and good acidity. It produces well-structured, highly coloured, tannic wines, with complex and persistent aromas.

Castets Origin: South-west France, possibly the Gironde - This historic and forgotten Bordeaux grape has low sensitivity to botrytis bunch rot, powdery mildew and especially downy mildew, hence its undeniable environmental interest. It produces highly coloured wines for ageing.

Marselan Origin: INRA 1961 - A cross between Cabernet Sauvignon and Grenache, this late grape variety is less exposed to late frosts and corresponds to classic Bordeaux harvest dates. It is adapted to climate change and has low sensitivity to botrytis bunch rot, powdery mildew and mites. It allows the production of highly coloured, distinctive wines of high quality and suitable for ageing.

Touriga Nacional Origin: Portugal - A very late variety, it is less exposed to the risk of spring frost, allows for a later harvest and is adapted to climate change. It has no particular sensitivity to fungal diseases, with the exception of dead arm (excoriose). It produces wines of excellent quality, complex and aromatic, full-bodied and structured, highly coloured, suitable for ageing.

2 white grape varieties

Alvarinho The pronounced aromatic qualities of this grape make up for the loss of aromas that usually results from climate change. Its adaptability to climatic problems means that it is not very sensitive to botrytis bunch rot. Its moderate sugar potential allows for production of fine, aromatic wines with good acidity.

Liliorila Like Alvarinho, the pronounced aromatic qualities of this variety make up for the loss of aromas that usually results from climate change. A cross between Baroque and Chardonnay, this grape has low sensitivity to botrytis bunch rot. It gives aromatic, powerful wines with a good bouquet.





NEWVINE

creation of plant material

ongoing programme (IFV, INRA Colmar, INRAe Bordeaux) 2015 - 2030

The aim of this programme is to create new varieties that are resistant to the main fungal diseases (downy mildew and powdery mildew), while respecting the typical characteristics of Bordeaux wines and the need to adapt to climate change.

Using varieties that are resistant to fungal diseases is one way of reducing the use of plant protection products. They are obtained by conventional crossing of two varieties. In France, resistant varieties were reworked at INRAE by Alain Bouquet from 1974 onwards, then as part of the Resdur programme from 2000 onwards.

BORDEAUX IN THE FACE OF CLIMATE CHANGE

Reduction OF GREENHOUSE GAS emissions

- Measuring to take better action
- A plan to reduce, capture, store and recover CO

MEASURING to take better action

In 2007, Bordeaux wines committed to reducing their footprint with the support of a 1st carbon audit. 2019 marked a new stage, with the completion of the 3rd carbon audit.

The goal is to identify the changes in the main sources of emissions, to define a new action plan to encourage their reduction.



THE SECTOR'S APPROACH

Measure → Prioritise → Build → Support → Plan ahead

1ST CARBON AUDIT OF THE SECTOR 2007

929,000 tonnes CO₂ equivalent 2ND CARBON AUDIT 2012 = 775,000 tCO₂eq

of greenhouse gas

(GHG) emissions vs 2007

CREATION OF THE

2020 CLIMATE PLAN

FOR BORDEAUX WINES GOALS:

- 20% in total emissions
- 20% in energy
- + 20% in renewable energies
- 20% in water

3RD CARBON AUDIT 2019 = **587,000 †CO2eq**

i.e. **-37%**

of GHG EMISSIONS vs 2007

2030 CARBON PLAN Goal:

-54%

RESULTS

of the 3rd carbon audit

of the Bordeaux wine sector

(based on 2019 GHG emissions - @Carbone 4)



- Glass
- · Cardboard, paper, plastic, metals
- · Wood: cases, barrels, corks
- Plant protection products, fertilisers
- Winemaking products



- Upstream: delivery by suppliers Internal: in the Gironde between players
- Downstream: to customers (including export)

ENERGY 18%

(FUEL OIL, GAS, ELECTRICITY)

- Viticulture
- Vinification
- Distillation
- Growers, cooperative cellars, distilleries, merchants

FIXED ASSETS 11%

- Buildings, wineries
- Machinery, agricultural machinery

= 587,000 tonnes CO₂ equivalent

• IT



- Commuting by employees
- Professional (car / train / plane)

- waste 2%
- Direct productionPackaging at end of life
- Untreated effluent

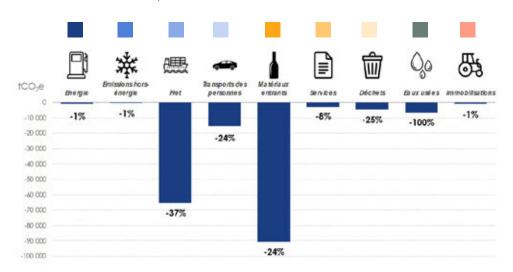


• Miscellaneous services: IT subcontracting, winemaking consulting, etc.



- N2O emissions (fertiliser)
- Leaks from cooling systems
- Inorganic CO2

2012-2019 CHANGES IN EMISSIONS, BY SOURCE

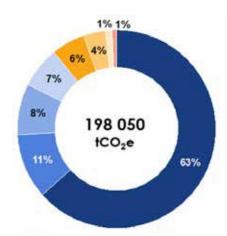


Main emissions categories

34% input materials

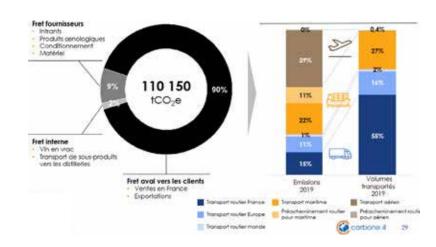
This takes into account indirect emissions related to the manufacture of materials purchased by the sector





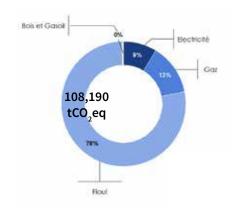
19% supplier, internal and customer freight

- Road freight:
- 45% of freight component
- Air freight:
- 35% of freight component
- Sea freight:
- 20% of freight component



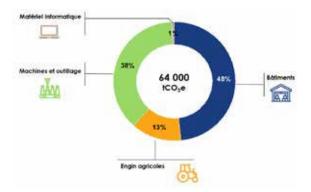
18% energy

By type of energy



11% Fixed assets

This takes into account indirect emissions related to the construction of buildings and the manufacture of machinery and IT hardware.



2030 CARBON PLAN

for the Bordeaux wine sector

5 PRIORITIES

And increased dialogue with stakeholders

Goal: **54%** reduction in greenhouse gas emissions vs 2007

Glass and packaging

Continue to work on bottle weight

- Create an awareness program on the benefits of light bottles to encourage
- Work with glassmakers to study the

possibility of making bottles even lighter.

Promote eco-designed packaging

Launch an awareness programme to encourage use of eco-designed materials.

Study new distribution methods

2007

in bottle

weight

Test a local pilot scheme with recommendations on reducing the impact of transport.

GOALS

Reduce bottle weights by 10%

+10% cullet* in bottles = increase cullet in bottles from 75 to 85%.* broken glass



Viticultural practices fuel oil, machinery, inputs GOALS

Reduce the number of passes though the vines by 7% Increase use of machinery running on fueloil alternatives by between 1% and 15%.

(biogas, biofuel, hydrogen, electricity)

Identify, test and deploy alternatives to reduce agricultural fuel oil consumption

Routes: set up alternatives to the use of machinery: plant cover, eco-pastoralism (use of sheep to maintain plant cover), animal

traction, training in environmentally friendly driving.

Reduce purchases of new equipment

Routes: pool equipment (e.g. CUMA), raise awareness of maintenance to prolong equipment life.

Reduce inputs

Routes: seek out more natural solutions (e.g. sexual confusion, encouraging bats to combat certain pests, development of ecological corridors, agroforestry, etc.); plant varieties that are resistant to disease.

Energy efficiency of buildings and processes

 Production of renewable energies for selfsupply (e.g. solar panels)

Technical and financial support programme.

Deployment of energy saving solutions

Routes: Energy audits and definition of an action plan to reduce energy consumption (e.g. electricity sub-meters, better insulation of buildings, etc.).

Construction of new low-energy buildings

Routes:

Semi-underground cellars to avoid the use of air conditioning and heating.

Preference for natural light and insulating materials with low environmental impact (e.g. straw-bale construction of cellars).



Freight

GOAL

90% of road transport provided by committed hauliers

Preference for committed and certified road hauliers

Routes: use transport operators committed to climate initiatives or using alternative fuels/vehicles (e.g. biofuels from grape pomace in collaboration with local distilleries).

 Promote and improve the impact of sea freight while reducing air freight

Routes:

Prefer maritime transporters committed to reducing GHG emissions from ships.

Test carbon-free transport solutions (e.g. sailing ships).

Identify ways to avoid short lead times that require the use of air freight.

Beyond reduction, capture, storage and utilisation of CO₂

 Capture and store the carbon naturally present in soils and plants

Agroecology: planting trees, flower cover on fallow land and plant cover in the vineyards to sequester carbon.

• Capture, storage and utilisation of carbon emitted during fermentation

This CO2 from fermentation can be used to produce bicarbonate (non-toxic biodegradable product widely used in the food, pharmaceutical and cosmetic sectors).

1,000 hl of wine and 80% capture =

10 tonnes of CO

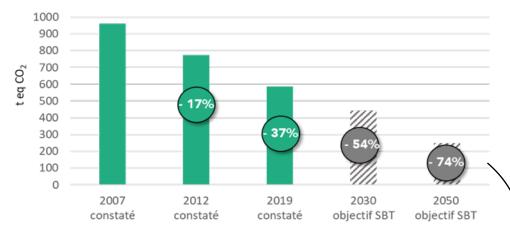
Source: Valecarb



@PIRIOU_vue 3D voilier-cargo TOWT



2050 CONTRIBUTION OF BORDEAUX WINES TO CARBON NEUTRALITY



Science-Based Targets (SBT) approach: reduction targets aligned with a 2°C trajectory



+150% captured vs 2019



FOCUS ON AGROFORESTRY in the Bordeaux vineyard

An agroforestry project involvescreating an ecological corridor by planting trees and shrubs:

- in the plot: in the row in place of a vine or lined up between the rows.
- around plots: arranged as hedges, in islands or in isolation.

Agroforestry is often also associated with orchards and vegetable gardens, plant sowing, the presence of animals (especially agro-pastoralism with sheep) and beehives.

The species planted are local to encourage the presence of wild pollinators and to feed local poultry species! There is a wide range of field and fruit species to choose from (vineyard peach and cherry trees in particular).

Regenerative agriculture

Agroforestry, based on cooperation between vines and trees, is an essential foundation of agroecology (farming practices based on cooperation with and respect for nature, while incorporating social and economic dimensions).

It contributes to regenerative agriculture in which the health of the soil plays an essential role in the ecosystem: a restored, healthy, fertile and living soil to produce quality grapes. Beyond its agronomic advantages, the tree-vine model meets many societal demands. In the 1960s and 1970s, increasing specialisation viticulture in (with the abandonment of mixed farming) and mechanisation of vineyard work (tractors and agricultural machinery between the rows of vines) often led to the disappearance of these crop combinations. As knowledge has progressed, monoculture has shown its limitations. Today, increased awareness is leading the Bordeaux vineyard to act in a different way: Bordeaux is blending and merging into a global ecosystem.

ENCOURAGING BIODIVERSITY ADDITIONAL
INCOME FOR THE
WINEGROWER

ADVANTAGES in the vineyard

A LINK WITH
THE LOCAL
POPULATION

CONTRIBUTION
TO THE
DEVELOPMENT
AND BEAUTY OF
THE LANDSCAPE

CLIMATE MITIGATION

CONTRIBUTION
TO A BETTER
AGRONOMIC
ECOSYSTEM

REDUCTION OF DRIFT FROM PLANT PROTECTION PRODUCTS



Agroforestry requires the winegrower to take a long-term view.







Many winegrowers mention an "added freshness" in the wine from plots where agroforestry is practised. So far, few studies have been carried out in this area. VITI FOREST, a study by INRAE (French National Research Institute for Agriculture, Food and the Environment) tends to confirm this impression: "the vines that were exposed to the lowest maximum temperatures during the period from flowering to harvest coincide with the highest yields in the plot and the highest acidities. This relatively higher acidity seems to be linked to high concentrations of malic acid, indicating more gradual ripening."



These higher acidities could thus explain this perception of freshness. These are initial results that need to be confirmed by other scientific work currently in progress. But in the face of climate change, agroforestry remains an interesting option for slowing down early ripening of the grapes and thus favouring their aromatic maturity.











FOCUS ON
THE ARBRES
ET PAYSAGES
EN GIRONDE
ASSOCIATION
TO ENCOURAGE THE
PLANTING OF HEDGES AND
TREES ON VINEYARD PLOTS

This association works to promote the hedgerow and its reintroduction into farming systems. In partnership with Bordeaux Wine professional bodies, the Nouvelle-Aquitaine region, the Gironde department, Bordeaux Métropole and Bordeaux winegrowers, the association carries out 5 actions:

1. DIAGNOSIS OF WINE ESTATES

Studies and advice to winegrowers on the planting of hedges at the edge of plots: selection of plants, mulching, protection of plantations, etc.

2. PLANTING ALONG DITCHES

Each year, the association enables the planting of 35,000 plants in the Gironde, 20,000 of them on wine estates, i.e. approximately 20 linear kilometres of hedge per year.

3. MAPPING HEDGES IN THE REGION Using the Bordeaux wines GIS, a collective vineyard mapping tool, it will be possible to locate ecological corridors, which will help to optimise future planting.

4. SEEKING SEED COLLECTION SITES

Seed collection takes place in the autumn, throughout the region. For the moment, 54% of the plants delivered are of local origin from these seed collections (i.e. 26 different local species). Prospecting for collection sites is being stepped up, to increase the number of species offered while ensuring the local origin of the species planted.

5. ENVIRONMENTAL STUDIES FOR BETTER DITCH MANAGEMENT

Like hedges, watercourses, ditches, streams, marshes, etc., all structure the landscape and can contribute to water quality. The association supports winegrowers in the management of these ditches.



ANNEX KEY FIGURES

The Bordeaux wine region is more than 2,000 years old, more than 2,000 years of history marked out by good and bad times; 2,000 years of landscapes shaped by the hand of man; 2,000 years that have helped Bordeaux acquire world renown. 2,000 years of history and a vineyard in **PERPETUAL MOTION**.

OUR PEOPLE

Women and men, all of them passionate, young and old, château owners and hipsters, entrepreneurs and career changers, timeless and alternative, collective and independent... together they contribute to a more sustainable and equitable society, innovate, and bring their region to life.



- 5,000 winegrowers (in the AOP) Average size of estates: 21 hectares.
- 300 wine merchants who account for more than two-thirds of Bordeaux wine sales worldwide.
- 29 cooperative cellars and 3 unions which represent 39% of AOP growers and 23% of production.
- 60,000 direct and indirect jobs

OUR APPELLATION TERROIRS

- 103,000 hectares of AOP vineyard in the Gironde region
- More than 1/4 of the AOP vineyard area in France
- 89% red varieties
 11% white varieties
 for
 blended wines
 (mix of several varieties)
 or single varietals

Merlot 66%
 Cabernet
 Sauvignon 22%
 Cabernet Franc 9%
 Other red varieties: Malbec (or Côt), Petit Verdot, Carménère, etc. 3%

- 43%
 Sémillon 44%
 Muscadelle 5%
 Sauvignon Gris 4%
 Other white varieties:
 Colombard, Ugni Blanc,
 Merlot Blanc 4%
- Our AOPs (Appellations d'Origine Protégée): Barsac Blaye Côtes de Bordeaux Blaye Côtes de Bordeaux Cadillac Côtes de Bordeaux Castillon Côtes de Bordeaux Francs Côtes de Bordeaux Sainte-Foy Côtes de Bordeaux Bordeaux Bordeaux Haut-Benauge Bordeaux Supérieur Cadillac Canon-Fronsac Cérons Côtes de Bordeaux Saint-Macaire Côtes-de-Bourg / Bourg / Crémant de Bordeaux Entre-deux-Mers Entre-deux-Mers Haut-Benauge Fronsac Graves Graves Supérieures Graves de Vayres Haut-Médoc Lalande de Pomerol Listrac-Médoc Loupiac Lussac Saint-Emilion Margaux Médoc Montagne Saint-Emilion Moulis ou Moulis en Médoc Pauillac Pessac-Léognan Pomerol Premières Côtes de Bordeaux Puisseguin Saint-Emilion Sauternes Saint-Emilion Saint-Emilio

BDX 26%	AOP VINEYARD AREA (FR.)
BDX 14%	
1.5%	

SHARE OF BORDEAUX VINEYARD AREA SOURCES: CUSTOMS, AGRESTE, OIV

in million hectolitres Source: Customs



OUR AOP WINES IN ALL COLOURS

- 4.2 million hectolitres harvested on average over the past 5 years (equivalent to 560 million bottles).
- 2023 harvest: 3.8 million hectolitres (-7% vs 2022) equivalent to 512 million bottles.
- 65 in Appellation d'Origine Protégée (AOP)



81% red wines

11% dry white wines

4% rosé wines

3% crémants (white and rosé)

1% sweet white wines

4,90 4,40 3,77 4,11 3,84



OUR ENVIRONMENTAL COMMITMENTS

- More than 75% of the Bordeaux vineyard area is certified under an environmental initiative (vs 35% in 2014). Goal: 100% in 2030
- Nearly 1/4 of the vineyard area farmed organically (AB)
 X 3 in 5 years (source: Agence Bio)
- ${\hspace{-0.1em}\raisebox{0.7ex}{\text{\circle*{1.5}}}}{\hspace{-0.1em}\raisebox{0.7ex}{\text{\circle*{1.5}}$

Target: 54% reduction in 2023 vs 2007



- Since 2021, looking to the future with Corporate Social Responsibility (CSR) =
- THE COLLECTIVE APPROACH Sustainable Impact
- An approach based on the international standard ISO 26 000 and the creation of a label
- In 2024: 82 companies have the label, covering 9,227 hectares of vines and employing more than 3,300 people (estates, merchants and cooperatives).
- GOAL: 30% by volume of Bordeaux wines sold by holders of the Sustainable Impact label in 2030



