

Soils and climate of the satellite appellations of Saint-Emilion Château Corbin – Montagne Saint-Emilion

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The appellations Saint-Emilion and Saint-Emilion Grand Cru (5450 ha) are surrounded by four satellite appellations: Montagne Saint-Emilion (1450 ha), Lussac Saint-Emilion (1450 ha), Puisseguin Saint-Emilion (730 ha) and Saint-Georges Saint-Emilion (200 ha). The geology of the satellite appellation is composed of Tertiary sediments, including soft limestone located on the slopes, called “molasses du Fronsadais” (Oligocene), hard limestone located on the plateaus, called “calcaire à Astéries” (Oligocene) and non-calcareous river sediments in the northern part of the area, called (sables du Périgord, Eocene). The topography is gently sloping and extends between 30 m above sea level (m.a.s.l.) and 106 m.a.s.l. Soils are calcareous on 34 % of the area and vary from shallow on the “calcaire à Astéries” to medium depth on the “molasses du Fronsadais”. The texture of the calcareous soils is silty clay. On 66 % of the area soils are non-calcareous and vary in texture from sandy silt to silty clay. The non-calcareous soils are deeper and have generally a greater water holding capacity.

The climate is, on average, cooler in the satellite appellation compared to Saint-Emilion, but temperatures do vary locally. The highest average temperatures are recorded on the limestone plateaus, while temperatures are lower in the northeastern part of the area.

The wines from the satellite appellations used to be not as famous as the wines from Saint-Emilion. Because of the cooler climatic conditions, maturity was more difficult to achieve. With climate change, this handicap is progressively turning into an advantage and wine quality is steadily increasing in this area.

One of the soil types of château Corbin (Montagne Saint-Emilion) is a moderately deep lime holding clay-silt soil. Traditionally Merlot was the major variety on this soil type, but with climate change increasing proportions of Cabernet franc are grown and, more marginally, Malbec. Wines produced on this soil type are powerful and conserve good freshness, despite moderately high alcohol levels. They have a very good ageing potential.

Keywords : Soil, Climate, Saint-Emilion, satellite appellation, château Corbin, Montagne Saint-Emilion

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The Saint'Elites
 Clos Albertus
 Château La Couronne

Château Corbin
 Château De La Grenière
 Château Guibot La Fourvière
 Château Rigaud
 Château La Rose Perrière
 Château Tour Bayard îlot 1
 Château Tour Bayard îlot 2
 Château Vieux Bonneau

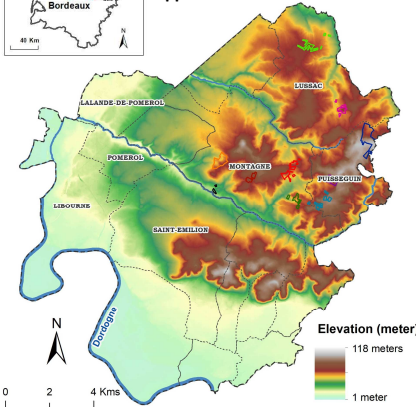


Additional information on the terroir of the Saint-Elites association

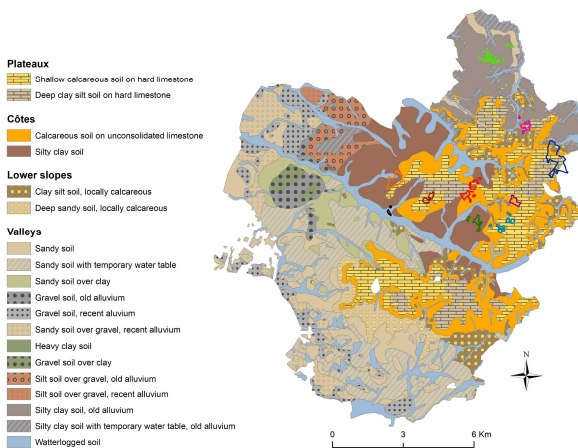


Additional information on the terroir of Saint-Emilion with multiple interactive maps (Advicim project)

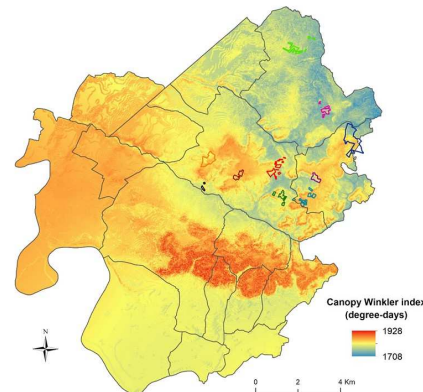
Topography map of Saint-Emilion, Pomerol and their Satellite appellations



Soil map of Saint-Emilion, Pomerol and their Satellite appellations



Canopy Winkler index map (average 2012-18) of Saint-Emilion, Pomerol and their Satellite appellations

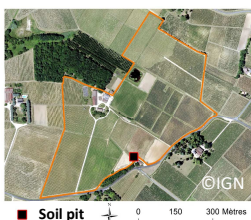


Geology, topographic and soils have a high degree of similarity between Saint-Emilion and its satellite appellations

The climate is cooler in the satellite appellations compared to Saint-Emilion and Pomerol

Château Corbin PDO Montagne Saint-Emilion

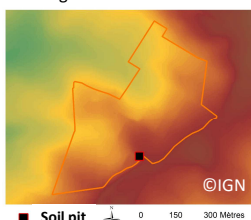
Parcels of château Corbin



Soil pit parcel informations:

- Plant material: Malbec/101-14Mt
- Planting year: 2018

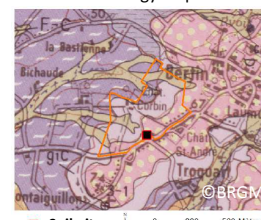
Digital Elevation Model



Topography:

Top of the hill, 66 m.a.s.l.

Geology map



Geology:

Molasses du Fronsadais (Oligocene)



Soil type (Fr):
CALCISOL moyennement profond sur molasse du Fronsadais

Soil type (En):
Moderately deep calcareous clay-silt soil on molasse du Fronsadais

Parcel "La Clie"	Horizon 1	Horizon 2	Horizon 3	Horizon 4
DEPTH (cm)	0-50	50-75	75-100	100-120
COURSE ELEMENTS (>2 mm) (%)	2%	2%	5%	0%
FINE EARTH (%)	98%	98%	95%	100%
Coarse sand	25%	23%	8%	3%
Fine sand	21%	8%	8%	25%
Coarse silt	17%	17%	33%	25%
Fine silt	7%	22%	28%	30%
Clay	31%	31%	24%	18%
TEXTURE	Clay-silt	Clay-silt	silty clay	silty clay
ORGANIC MATTER (%)	1.6	1.0	<0.4	-
ORGANIC CARBON (%)	0.9	0.6	-	-
TOTAL NITROGEN (%)	0.101	0.077	0.035	0.033
C/N ratio	9.2	7.6	-	-
pH (water)	8.4	8.5	8.6	8.8
pH (KCl)	7.5	7.6	7.7	7.9
ADSORBANT COMPLEX				
K ⁺ cmol ⁺ /kg	0.58	0.49	0.29	0.28
Mg ²⁺ cmol ⁺ /kg	3.55	4.03	4.67	3.93
Ca ²⁺ cmol ⁺ /kg	++	++	++	++
S (sum of cations)	++	++	++	++
V (saturation rate)	Sat.	Sat.	Sat.	Sat.
C.E.C cmol ⁺ /kg	13.6	13.7	11.3	9.6
Total Ca (%)	3.6	1.3	35.2	7.8
Active Ca (%)	-	-	3.6	0.5
IPC	-	-	90	12
P ₂ O ₅ g/kg Joret-Hébert	0.037	0.03	0.03	0.03
TRACE ELEMENTS				
Cu exch. mg/kg	2.7	5.7	0.6	<0.5
Mn exch. mg/kg	1.2	0.7	0.5	0.5

Soil description:

- Parent rock appears at 100 cm
- Gradient of increasing CaCO₃ from top soil to parent rock
- Clay texture in topsoil, silt texture in subsoil
- Medium content in organic matter and total nitrogen
- Roots penetrate in parent rock in cracks
- Limited water supply due to:
 - topography
 - restriction of rooting depth

Recommended plant material:

- Merlot, Cabernet franc or Malbec
- Grafted on 420A or 161-49C

Wine style:

- Powerful wines
- Nice freshness
- Blend well with wines from the limestone plateau
- Complexity and aging potential