

WINE SOILS

The most important soils to know are the 4 soil compositions (shown immediately below). These basically tell you how porous the ground is. (Water drainage is important to vines!) Often these 4 soil compositions can be blended. Below these 'blends' of soil, I outline the various soil types (or rocks) that make up these soil compositions.



The most porous of all! Great drainage. Poor water retention. Very infertile. Retains heat well. Found in: Left Bank Bordeaux (including Sauternes and Graves), Piedmont, Friuli, and The Rhone Valley (Chateauneuf Du Pape) along with various other places.



Smaller grained. Less porous. Good drainage. Little water retention. Slightly more fertile. Great heat retention. Also, is known to resist Phylloxera. Found in: Bordeaux (generally left bank), Piedmont (Barolo), Chile (Maipo), and California (Lodi, Santa Barbara).



Finer grained. Not very porous. Pretty poor drainage. One of the most water retaining. More fertile. Fairly heat retaining. Found in Washington, Oregon, Germany, and Austria.



The least porous. The most dense. The least drainage. Super water retaining. The most fertile. The least heat retaining. Keeps the soil cool. Found in Right Bank Bordeaux (Pomerol) Australia (Barossa) and California (Napa) along with various other places.

BLENDS

LOAM

A blend of sand, silt, and clay in generally equal amounts. This soil is super fertile and needs good vineyard management (limited yields) or to be blended with other soil types. Generally, these types are found in Valley areas.

ALLUVIAL

A blend of gravel, sand, silt, and clay generally deposited by water. Also very fertile and found in valley floor areas.

CALCAREOUS

A blend of sand, silt, and clay generally formed by the weathering of rocks and shells and have high levels of Calcium and Magnesium Carbonate. These soils are made up of limestone primarily.

Types of calcareous soils include:

MARL is a blend of clay and limestone. This soil is found in Bordeaux and Rioja, as both Merlot and Tempranillo fair well in it!

KIMMERIDGEIAN MARL is unique in that it's made up of fossils and shells from the Jurassic age! These soils are found in Chablis, Champagne, and the eastern Loire.

ALBARESE is a marl specific to Chianti (Sangiovese).

SOILS

SEDIMENTARY

LIMESTONE

Retains water, but also provides good drainage! Leads to bright acidity and wines that age well. Pinot Noir, Chardonnay, and Sauvignon Blanc grow well in limestone.

CHALK is a type of soft Limestone that works well for grapes with high acidity. TERRA ROSA is soil that is left when all the limestone is broken down. It has increased levels of iron that turn it red and can be found in Australia and Spain.

FLINT

Retains heat well and is found primarily in the Eastern Loire Valley. It is said to contribute to the smokey flavors in Pouilly Fume!

SANDSTONE

Formed by grains of mostly quartz and feldspar, sandstone is found in Alsace and Chianti as well as other areas.

METAMORPHIC

SLATE

Retains heat and warms quickly. This is great for cool climate regions like the Mosel.

FYI - SHALE is basically slate under pressure

SCHIST

Harder than slate, schist retains heat well. This leads to big, dense, powerful wines with good minerality. It is found in Spain in Alsace.

GALESTRO is a type of schist in Tuscany.

GNEISS

Made from a combination of minerals. It is very infertile and often found in Austria.

IGNEOUS

VOLCANIC

Drains well, but also retains water. It also retains heat and is great for hot regions. This is found in Spain and Sicily as well as other regions.

GRANITE

Great drainage and retains heat, warming pretty quickly. It is also a higher acid soil that lends to higher acid wines. It is found in Beaujolais, Alsace, and Spain (Rias Baixas).