

CELLAR CLIMATE

The vintners in Burgundy have a saying that goes something like this: when you build a cellar and no mould develops, then begin again and build in a different place. Many Burgundian vintners continue to be convinced of this. Their cellars are often the opposite of what one would today call "state of the art". Despite this, the wines that are made in them are benchmarks and among the best in the world. Could mould be an ideal indication for a place that is particularly well-suited for the maturation of wine? It appears likely.

A vintner from Burgundy would probably feel fairly at home in our old cellar. Wines have been vinified and stored there for a good 300 years. There is no air conditioning to regulate temperature and humidity, just so-called "vapour holes" that lead to the ground surface 15 metres above. Directly next to the vaulted cellar, where our old wooden casks, amphorae and concrete eggs reside, is where we have built a modern vinification facility. It is principally exposed to the same environmental conditions as the old cellar, but offers the ability to work in a significantly more efficient, flexible, and gentle manner. It facilitates our work process and gives us the possibility to achieve various wine styles, selections and expressions of origin.

Temperatures in the old cellar vault are between 10 and 11 °C (50 - 52 °F) throughout the year, an optimal parameter for traditional wine production and storage. The cool and humid milieu is also an ideal environment for various types of mould. The cellar smells like earth and fresh spring water - inviting and unique. The fluctuation of +/-1 °C and 90 % air humidity provides ideal conditions for a slow, stable and harmonious development of wine in barrel. Because the humidity exposes corks to too much moisture on its outside surface, it is not a suitable place for the storage of bottles; these are stored in a drier part of our cellar.

Even if the mould in our cellar has no direct influence on the aroma and texture of wine, we still had our mould populations analysed. Air samples were taken and analysed to reveal that the moulds belong exclusively to the genus *Penicillium*, predominantly from the subgenera *Aspergilloides* and *Biverticillium*.

Penicillium mould was so named due to its „pencil-like“ appearance, which referred to a camel's hair pencil brush. Its exact identification is not an easy undertaking since there are more than 300 species known, several of which are very similar. *Penicillium* commonly populate cool and moderate zones. A unique form appears to have developed in our cellar over decades of isolated reproduction. The water that seeps in through the walls in our vaulted cellar provides good conditions for the growth of these micro-organisms.

Prolonged contact with *Penicillium* can be a burden on people with allergies. *Penicillium* are used in the production of certain foods (mould cheeses like Camembert, Brie and Roquefort or cured hams and certain sausages) and in biotechnology (production of citric, gluconic and tartaric acids, cellulases and proteases). In addition to this, it is also used to produce important antibiotics, for example penicillin.

