

Biogeographical patterns of Pinotage grape microbiomes in South African wine regions

In winemaking processes, there is a growing interest to return to tradition and develop spontaneous fermentations taking advantage of the metabolic diversity derived from the great microbial diversity present in grape musts. However, in order to successfully manage such processes it is important to have a good grasp of the spatial and temporal distribution of the grape-associated microbiomes. In particular, knowledge of the vintage shifts in fermentative microbiota as well as potential grape and wine spoilage organisms is pivotal towards creating a database which can be a source of information for winemakers. Modelling such microbial data to climatic data can help viticulturalists and winemakers manage their farm practices as well as cellar interventions to produce good quality wines that keep South Africa as a strong competitor in the global market. Our study aims to perform phylogenetic surveys of Pinotage (a unique South African varietal) from three wine producing regions and integrate them with climatic data to generate a database that can be accessible to all wine producers.