

SUMMARY

OBJECTIVES

To determine, during five consecutive seasons, the productive and qualitative parameters of three clones and one massal selection of Cabernet Sauvignon in Cauquenes, in order to establish in quantitative terms the viticultural and oenological potential for the production of Premium and Super-Premium wines.

METHODS AND RESULTS

An observational study of five consecutive seasons was established for contiguous vineyards which were specially planted in 2008, with ENTAV-INRA clones 169, 191, 337 and a massal selection. The results of the first three seasons provide a viticultural characterization, as well as a chemical and sensory evaluation, of the wines.

CONCLUSIONS

The wines demonstrate greater differences associated with the plant material than the yield adjustment. The production management affects several quality parameters which must be taken into consideration, such as the anthocyanin content and sensory profile. These results may be a consequence of the genetic quality of the plant material, and other vineyard management conditions. The clones demonstrate higher yield than that observed in the massal selection. Under natural conditions [control treatment], clone 337 stands out for its high Ravaz Index, associated with its high yield and moderate vigor, as well as a greater weight of the clusters, stems and a greater number of berries per cluster. With regard to the accumulation of monomeric anthocyanins, it can be concluded that the plant materials only present significant differences under the Super Premium production management, in which clone 169 demonstrates significantly superior levels when compared to clone 191. Meanwhile, tannin accumulation is higher in the massal selection and lower in clone 191. With regard to the sensory quality of the wines, clone 337 and the massal selection demonstrate greater associations with positive sensory attributes and greater hedonistic preference. The attributes which demonstrate greatest significance are fullness of the wine [significance after three years], color and grape ripeness [significance after two years]. The herbaceous aroma was only significant during the coldest seasons [2012-2013].

SIGNIFICANCE OF THE STUDY

The behavior of vines with a specific genetic quality in a specific environment [climate and soil], and under a specific production management regime, determines in large part the productivity of the vineyard and the quality of the grapes and wine. This study provides valuable information which will enable uncertainty in the planning of new plantations in the Cauquenes area to be reduced: choice of plant material [clone or massal selection] of Cabernet Sauvignon to be planted, production management and the interaction between both aspects.