

PINOT BLANC: HOW TERROIR AND PRESSING TECHNIQUES IMPACT ON THE MUST COMPOSITION AND WINE QUALITY

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Abstract

This study investigates how different pressing techniques impact on the sensory profile of Pinot Blanc wines sourced from different terroirs.

Two vineyards, both on east slopes, one at 550 meters elevation with a high quality potential and one at 250 meters with a medium quality potential were compared. Vineyards were chosen in collaboration with the head-winemaker of the cooperative Tramin based on his observations and experience about quality potential. For the experiment 600 kg of grapes from each vineyard site were hand-picked the day before harvest for the commercial winery took place.

Grapes were stored over night at 4°C and processed in the experimental winery at Laimburg research centre the day after harvest. Three different pressing techniques were applied in duplicates of 100kg each. Treatments were composed as follows: (1) “classic”, pre-installed press program with 120 minutes and crumbling after each pressure step, (2) “cremant”, gentle and sequential press program with 180 minutes and fewer crumbling steps and (3) “maceration” consisted of a 120 minutes cold soak followed by a very quick press program of 30 minutes.

To track the evolution and extraction kinetics of pH, total acidity, tartaric acid, malic acid, total polyphenols and catechins, juice samples were taken after each cycle and analyzed right away in the wine laboratory.

At approximately 150 kPa (21,8 psi) pressure the must is divided in fraction one and fraction two what corresponds to the press-wine. Two experimental wines are made out of each batch of grapes: one contains only must from the first fraction, and the other is a combination of fraction one and two in the original proportion.

Chemical must composition depends on the vineyard site and the processing technique in the winery. Total acidity, pH, malic acid and polyphenol content of the must are affected from the chosen press program. Nonetheless the absolute content of the chemical components is different, for grapes coming from different vineyards and the different pressing techniques, the trend of the extraction of these must components remains more or less the same during the pressing procedure.

Sensory analyses and aroma analyses show a distinct profile of the two vineyard sites. The different pressing techniques had an impact on the sensory profile of the wines. To what has been observed in this experiment, for overall wine quality it was beneficial to use the entire must; wines made without the press-fraction are described as too light, not as complex and not as typical.

Important differences are observed for the two vintages shown in this work. Depending on the quality potential of the grapes and the vintage, a two hours maceration followed by a quick pressing showed interesting results. This might be a promising option to save press-capacity and to process more fruit in the short period of harvest.

Keywords: *Terroir, viticulture, Pinot Blanc, sensory analysis, wine quality*