Comparison of European Müller-Thurgau clones grown in Alpine area.

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Müller-Thurgau (MT) has a remarkable importance for Trentino, a region in the Italian Alps where MT grows on 900 ha in hilly areas from 200 to 800 m a.s.l. Since the '90s, this surface is tripled and now represents the 9 % of the total regional vineyard. This motivated both studies to select new clones fitting for the specific climatic conditions and investigations on the most promising clones already available. Here we present the results of a comparison among 6 clones, one from France (ENTAV 646) and the others from Germany (the classics Wü 7-5 and Gm 18, and the "new entries" Gm 68-10, Gm 68-13 and Gm 68-16). All have been studied in 28 climatic, agronomic and landscape "contexts" (4 years, pergola or upright vertical canopies, plots at various altitudes between 450 and 650 m a.s.l., different agronomical managements ...). In each context, the grapes have been harvested at the same date, 2-3 days before the technological harvest defined by the wineries. The basic analysis of the juice were carried out using a FT-IR approach, while the free and bound varietal aroma compounds, after fixing on ENV+ cartridge and elution, were measured using a GC-MS/MS equipped with a triple quadrupole. The bound fraction was hydrolised using Rapidase Ar2000 (40°C x 12 h). Statistical analysis (Anova, main effects: clone and context; Fisher's LSD test) was performed with STATISTICA v. 8.0. We present the clone performances regarding the sensibility to Botritys and bunch stem necrosis, and several classic vegetative and productive parameters. Moreover, the free and bound aroma composition of the juices is discussed focusing on the compounds with a possible role on the future sensory characteristics of wine. Wü 7-5 and ENTAV 646 confirmed to fit for the region. Gm 18 showed a troubling sensibility to Botrytis. This negative characteristic has been improved in particular in the new clones Gm 68-10 and Gm 68-13, the latter being, in general, the most promising.

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