

Does the introgression of disease resistance genes impacts agro-œnological traits in grapevine varieties?

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Abstract

A major aim in modern grapevine (*Vitis vinifera* L.) breeding programs is the introgression of resistance genes along with desired cultural and œnological traits. Understanding the genetic links between resistance genes and agro-œnological traits is an important issue for grapevine breeders. In this work, we studied the genetic determinism of yield components and berry quality in the progeny of a cross between two grapevine hybrids carrying each several known quantitative trait loci (QTL) of resistance to fungal diseases. Several yield descriptors like number of inflorescences per shoot, berry weight and berries sugar content were recorded during three successive seasons for 209 genotypes in the vineyard. High density parental and consensus genetic maps were built with 'Genotyping by sequencing' technology using 239 individuals. Many QTL were detected for all studied traits. We found co-localisations between resistance genes and two of the studied traits: berry weight and berries sugar content. Detailed will be presented.

Keywords: *Vitis vinifera*, sugar content of the berries, berry weight, resistance, QTL, plant breeding.