



# QUALITYFRUIT

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**Stella Grando**

**P19 - Investigation of somatic variants associated with seed content in grapevine**

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Two different mechanisms are involved in grape seedlessness, namely parthenocarpy and stenospermocarpy. In parthenocarpic conditions fruit usually develops from the ovary in the absence of fertilization yielding small berries that completely lack seeds, whereas in stenospermocarpy pollination and fertilization take place normally, but seed development aborts at an early stage after fertilization and berry size at harvest is reduced. Most cultivated seedless grapes exhibit the Sultanina-derived stenospermocarpy whereas different sources of seedlessness have been much less investigated and exploited.

Here we report the characterization of several somatic variants for seed content discovered in the grapevine germplasm collections at FEM and CNR-IPSP. These accessions were evaluated for fruit and seed set in open-pollinated, self-pollinated, and emasculated conditions.

Single nucleotide polymorphism (SNP) candidates between seeded and seedless mutants were identified by using the Vitis20K SNP array and RNA-Seq-based variant calling. The latter was applied to the transcriptome comparison between Sangiovese and Corinto Nero cultivars previously reported by Nwafor et al (2014).