

P20 – Prospection and genetic identification of grape cultivars from old Serbian vineyards

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Abstract

Serbia has a long-standing viticulture tradition. As in other countries of the Western Balkans, current Serbian wine production relies in the cultivation of well-recognized international grape varieties together with some local varieties, such as 'Prokupac', 'Smederevka' (syn. 'Dimyat'), 'Plovdina' (syn. 'Pamid'), or 'Tamjanika Crna'. Nevertheless, many other cultivars can be found across the country, sometimes grown by small wineries. Here, we have performed the largest prospection of local grape cultivars performed in Serbia so far, collecting 163 samples in old vineyards from different viticulture regions across the country for their genetic identification. SSR and SNP marker analyses identified up to 60 different genetic profiles, which were compared to those stored in the VIVC and the ICVV databases. This work allowed the genetic identification of 49 grapevine cultivars, most of them autochthonous cultivars from Serbia and other Balkan countries, like 'Braghina Rosie', 'Pamid', 'Prokupac', 'Ruza Bijela', 'Tamjanika Crna', or 'Zacinak'. In addition, we found a considerable number of cultivars from other Eastern regions (like 'Agadai', 'Chaouch Blanc', or 'Parmak Cerven'), and other cultivars of Western origin (like 'Pinot Noir', 'Semillon', or 'Villard Blanc'). Thus, the current Serbian grapevine genetic pool includes a series of indigenous cultivars of local origin, and some exogenous cultivars from different regions that were introduced into Serbia for different purposes. In many cases, these cultivars were found to be grown under local synonymies, like 'Muscat Krokan' to refer to the French cultivar 'Muscat Fleur D'Oranger', or 'Tamjanika Bela' and 'Tamjanika Crvena' to refer to the Italian cultivar 'Moscato Giallo'. Interestingly, we revealed the genetic identity of the variety known in Serbia as 'Jagoda' ('Ferdinand de Lesseps'), locally appreciated for white wine production. In addition, we discovered 11 non-identified genetic profiles, some of them twice in vineyards of different viticulture regions, suggesting they could be old autochthonous varieties on the edge of extinction. Parentage analyses indicated that some of the identified and non-identified genetic profiles have a first-degree relationship with other local cultivars, suggesting that local genetic resources represented an important source of diversity for generating current Serbian grapevine varietal diversity.

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