Oral presentations

Agronomical behaviour of 21 new disease resistant winegrape varieties grown in northeast Italy

Bavaresco, Luigi[1*]; Vercesi, Alberto[1]; Belvini, Paolo[2]; Dalla Costa, Lorenzo[2]; Fogal, Jacopo[2]; Marcon, Luana[2]; Masaro, Loredana[2]; Pascarella, Giovanni[2]; Pastro, Mattia[2]; Pizzolato, Angelo[2]; Traversari, Giacomo[2]; Vianello, Matteo[2]; Zanatta, Bruno[2]; Borgo, Michele[3]; Carnio, Daniele[4]; La Malfa, Giuseppe[4]; Leoni, Alessandro[4]

[1]Università Cattolica S. Cuore, Dept. Sustainable Crop Production, Pomology & Viticulture section, Piacenza, Italy

[2]Extenda Vitis, Consulting and extension service (former Cecat – Centro educazione formazione assistenza tecnica), Montebelluna (TV), Italy

[3]Grapevine phytopathologist, Povegliano (TV), Italy

[4]ISISS – Agricultural High School- Domenico Sartor, Castelfranco Veneto (TV), Italy

*luigi.bavaresco@unicatt.it

Abstract

The goal of the field trial was to evaluate the agronomical characteristics of 21 (10 red and 11 white) winegrape varieties obtained from recent breeding programmes for disease resistance developed in Hungary, Germany and Italy. The tested red varieties were as follows: Cabernet Carbon, Cabernet Eidos, Cabernet Volos, Julius, Merlot Kanthus, Monarch, Prior, UD. 31.103, Vinera. The tested white varieties were as follows: Aromera, Bronner, Fleurtai, Johanniter, Muscaris, Souvignier gris, Sauvignon Kretos, Sauvignon Nepis, Sauvignon Rytos, Solaris, Soreli. Cvs. Merlot (red) and Glera (white) were included as control. The experimental vineyard was established in Castelfranco Veneto (Treviso province – northeast Italy, 45° 40’ lat N; 11° 55’ Long E, temperate-warm climate) on the plain, in 2014. Spray treatments were applied against downy and powdery mildew, by using only copper and sulphur. Grape production, grape quality, and phenology were recorded over a six-year-period, while disease resistance (downy and powdery mildew, black rot and anthracnose) were detected only during a few years. The most significant findings were: a) red grape varieties had a earlier bud burst but a later veraison compared to Merlot; as concerning ripening, some varieties were earlier than Merlot, other ones were later; b) white varieties had a later bud burst but an earlier veraison and ripening time as compared to Glera; c) grape production and quality changed significantly depending on the varieties, being titratable acidity higher than 6.4 g tartaric acid/L and pH lower than 3.5; d) the following varieties (tested in unsprayed plots) resulted very downy mildew resistant: Cabernet Carbon, Monarch, Prior, UD 31.103, Muscaris, Solaris, Souvignier gris, Bronner, Fleurtai; e) Monarch, Muscaris, Solaris, Sauvignier gris also showed a high level of resistance toward black rot and anthracnose.

Keywords: grapevine, production, quality, diseases, phenology