Area of concentration: Plant Breeding

GENOTYPE X ENVIRONMENT INTERACTION FOR ADVANCED TABLE GRAPE PROGENIES IN SÃO FRANCISCO VALLEY

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Plant breeding has been a strong ally in increasing the productivity and quality of table grapes. This study aimed to evaluate the agronomic performance of table grape progenies in different locations in the Submédio São Francisco Valley. The experiments were carried out under field conditions between March and October 2021, on vines in the first production cycle, grafted onto rootstock 'SO4'. Five progenies (45, 54, 64, 80 and 81) were evaluated in seven commercial areas in the Vale do Submédio São Francisco. The scions were trained in horizontal trellis system, 3.0 x 2.0 m spacing, with drip irrigation. The experimental design was in strips, with five replications (plants). The variables evaluated were: production (PR), in kg.plant^{-1}; bunch mass (MC), in g; number of bunches per plant (NC); length (CC) and width (LC) of bunches, in cm; berry mass (MB), in g; berry length (CB) and diameter (DB), in mm; soluble solids (SS); total acidity (AT) and ratio (SS/AT). There was a significant interaction between genotypes and environments for all variables evaluated. Location three provided the best performance of variables related to production, except NC, as location four had the highest average (74.56). For the chemical variables SS and AT, the means of the progenies showed the highest values (22.0 and 0.52) at site two, but the SS/AT ratio was higher at sites five and three (55.36 and 48.21). About all environments, progeny 80 was superior for MC, LC, MB, CB and DB, however the highest PR was obtained by progeny 45 with 19.3 kg.plant^{-1}. Progeny 81 had the highest values for SS (24.56) and ratio (60.11), while progeny 80 was the most acidic (0.63). Based on the results, location three was the one that provided the best agronomic performance, and progeny 45 being the most productive in all locations.

KEYWORDS: Genotype-by-environment interaction; Table grapes; Tropical viticulture.