



3131 - Crop Breeding & Genetics

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NOVEL CULTIVARS OF BRAZILIAN SEEDLESS GRAPES

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The problems faced by Brazilian tropical regions grape growers are low fertility, high susceptibility to diseases and berry skin cracking during the rainy season. In order to contribute to solving these problems, Embrapa Grape and Wine has initiated in 1997 a breeding program aiming the development of seedless grape cultivars. The breeding program is based on sexual hybridizations to obtain segregating populations, which undergo several field evaluation and selection cycles, in tropical conditions at the Tropical Viticulture Station, Embrapa Grape and Wine, in Jales, SP. In order to simulate the juvenility period, successive trimming practices during plant formation are carried out to reduce the time necessary to develop a novel cultivar. The basic germplasm stock used for the crosses are *Vitis vinifera* for quality attributes and *V. labrusca*, interspecific hybrids and wild *Vitis* species, mainly *V. shuttleworthii* and *V. gigas*, along with *V. caribaea*, *V. candicans*, *V. smalliana* among others, as source of genes for adaptation and fungal diseases resistance. Forty to 50 progenitor combinations are performed yearly according to the demands from viticulturists. Six weeks after the hybridizations, embryo rescue and regeneration is performed at the Plant Tissue Culture Laboratory. Approximately 1,000 hybrids of seedless grapes are evaluated per year and selected to further evaluation, when meeting the planned goals for each specific progenitor combination. Subsequently, the selected plants are submitted to progressively more strict selection during 6-7 cycles. The final evaluation step consists in semi-commercial scale testing, in growers' vineyards, to evaluate the material adaptation and acceptability by the market. Approved cultivars are released and made available to viticulturists. Cultivars 'BRS Clara', 'BRS Morena' and 'BRS Linda', released in 2003, exhibit firm berry consistency, high fertility and precocious cycle. In 2010, validation tests of 15 novel selections of seedless grape material under subtropical and tropical climate were initiated. The selections display high fertility, berries with strong cluster adherence, firm texture, adequate size and high sugar contents. From those, three selections are tolerant to mildew, the main grapevine disease in Brazil. Two novel seedless grape cultivars for tropical and subtropical conditions in Brazil will be released by Embrapa Grape and Wine breeding program, until 2015.