3132 - Crop Breeding & Genetics

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NOVEL BRAZILIAN GRAPE CULTIVARS FOR JUICE PROCESSING

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Embrapa Grape and Wine;

In recent years, the marketing of grape juice has increased 117%. The production is mainly located in Southern Brazil, with a strong trend of expansion towards tropical areas recently. The traditional group of cultivars used by the grape juice industry, consisting of 'Isabella', 'Concord' and 'Bordô' ('Ives'), can be complemented by the development of novel cultivars exhibiting higher sugar contents, intense violet color, wide adaptation range and distinct phenology. In Brazil, genetic breeding aiming to develop novel grape cultivars for juice production is based on the diversity maintained at the Grapevine Germplasm Bank, constituted of approximately 1000 accessions that have been characterized and evaluated for the most important agronomical and industrial traits, such as disease responses and must features. The program employs sexual hybridizations, followed by evaluation and field selection cycles, along with clonal selection. During, the final steps of developing novel cultivars, advanced selections are tested in semi-commercial scale, under real production conditions, and the agronomical characteristics and the features of the juice elaborated from the potential cultivar are evaluated, alongside with growers. In the last years, a group of grape cultivars for juice elaboration ('BRS Rúbea', 'Concord Clone 30', 'Isabel Precoce', 'BRS Cora', ´;BRS Violeta' and 'BRS Carmem'), exhibiting distinct productive cycles or noteworthy contents of colored compounds, high sugar contents and suitable aroma and flavor, have been developed and released by the Grapevine Breeding Program. Further information on the cultivars is available on the open-access Embrapa Grape and Wine website.Four novel advanced selections for grape juice elaboration are under validation in partnership production sites in the states of Mato Grosso, Pernambuco, and Rio Grande do Sul. In general, the novel genetic material display one or more of the following traits: rusticity, wide adaptation, intense violet color, high glucometric potential and high contents of health-related compounds (anthocyanins and total phenolic compounds) and distinct growth cycles. At least two novel cultivars for grape juice elaboration will be released in the near future. They will add and complement the group of traditional varieties available to Brazilian producers, increasing and diversifying the options of grape cultivars for the juice industry.