Studies of phenotypic variability, and genetic compatibility in the National Yellow Passion Fruit Collection (Passiflora edulis F. flavicarpa Degener), as a strategy for a breeding program in Colombia..

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The development and selection of high yield and fruit quality genotypes in passion fruit is an essential strategy for competitive progress in international markets, which are constantly increasing their demands. In order to identify elite genotypes in the National Passion Fruit Collection, fourteen accessions were characterized using 30 morphological descriptors, 14 physicochemical and agronomic evaluations. Accessions 1506, 1320 and 1786 showed greater total yield, and Valfla09, 1786 and 1655 also showed a greater number of total fruits in the experiment.The accessions that presented greater weight of the fruit were Antfla04 (214g), Valfla05 (211g) and Valfla11 (210g). Analysis of variance and comparison of means showed significant differences between morphological characters, where the highest coefficient of variation was obtained by petiole length with 25%, ovule length and stigma diameter both with 20%, compared to the central lobe length with 7.8%, length Petal with 9.2% and length separate with 9%. It is possible to demonstrate in this experiment the relationship between the size of the nectariferous chamber and the volume of nectar production between accessions. The analysis allowed to identify accessions for use in genetic improvement programs that have higher performance and Brix degrees that allow to meet the needs of the market, for example, accessions 1509, 1320 and Valfla09