

ESTIMATION OF REPEATABILITY AND NUMBER OF
EVALUATIONS FOR CHARACTERIZATION OF MANGO
GERMPLASM¹

João Gomes da Costa²

¹Embrapa Semi Árido and Program Advances Brazil, Financial Support.

²Embrapa Semi-arid, P.O. Box, 5600-970, Petrolina, Pernambuco, Brazil, jgomes@cpatsa.embrapa.br

This study had the objective of estimating the repetition coefficient for the traits number of fruits per plant (NFP), fruit yield per plant (FYP), mean fruit weight (MFW), flesh weight (FW), skin weight (SW), seed weight (SEW), longitudinal diameter of fruit (LDF), transversal diameter of fruit (TDF), LDF/TDF ratio, longitudinal diameter of seed (LDS), transversal diameter of seed (TDS), and LDS/TDS ratio, as well as finding the minimal number of evaluations necessary for the characterization of mango germplasm. The estimation of repetition was carried using the principal components method extracted from the correlation matrix during four years for NFP, FYP and MFW and four evaluations in the same year for the other traits. The estimations of the repetition coefficient of the traits LDF, TDF, LDF/TDF ratio and SW demonstrated that only two evaluations are necessary to reach R^2 of 95%. For the traits FW and LDS, two evaluations are necessary to reach R^2 of 90%, three for TDS and four for SEW and LDS/TDS. However, for the traits NFP and FYP, a minimal of six and five evaluations are necessary, respectively, to obtain a precision of 85%.