

**Performance of inbred lines considering different agronomic traits**

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In order to evaluate the relationship among different traits of the ear of maize inbred lines, and to group genotypes according to performance, ten inbred lines developed at IGEAF (INTA Castelar) and five public inbred lines used as checks were evaluated in a field trial. At harvest, individual weight (P.E.), diameter (D.E.), row number (N.H.) and length (L.E.) of ears were assessed, using a principal component analysis, PCA (Infostat 2005). Principal components 1 and 2 (CP1 and CP2) explained 90% of the data variability. CP1 was correlated with P.E., L.E. and D.E., while CP2 was correlated with N.H. It was found that individual weight (P.E.) was more correlated with diameter of the ear (D.E.) than with length (L.E). Five groups of inbred lines were distinguished: high P.E. and mean N.H., high P.E. but less N.H., mean P.E. and N.H., high N.H. but less P.E. and low P.E. and low N.H. The use of PCA showed which variables had the greatest correlation with ear weight and what the correlation was among them. Moreover, the different groups discovered with this analysis allow the evaluation of inbred lines by several traits simultaneously.