

## Modelling of DRIS Functions on Mango (*Mangifera indica*)

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## ABSTRACT

The objective of this research was to model DRIS functions on foliar diagnosis of mango crop. Ten commercial orchards, at yield stage, in the São Francisco River Valley were monitored monthly during a two year period by collecting leaf samples to determine N, P, K, Ca, Mg, B, Fe, Mn, Cu, Zn and Na concentrations. Data were tested for normality and bivariate relationships between nutrient concentrations were used to calculate DRIS norms. Mean, variance and minimum and maximum were calculated for each relationship within the population. Nutrients were classified as follows: HRMa - highly responsive macronutrients: N, P and K; RRMa - rarely responsive macronutrients: Ca and Mg; HRMI - highly responsive micronutrients: B, Fe, Mn and Zn, and RRMI - rarely responsive micronutrients and non-essential nutrients: Cu and Na. DRIS functions were developed for each nutrient class. Results showed that the developed model expresses more precisely the nutritional balance of mango crops, using K factor values adjusted for each nutrient and the correction factor ( $\frac{a/b}{A/B}$  or  $\frac{a/b}{A/B}$ ). The proposed model reflects more accurately the biological behavior of mango plants expected as a result of variation in the availability of nutrients.

## BIOGRAPHY

Davi José Silva is an agronomist graduated at the Federal University of Lavras, in Brazil. He did his M.S. and Ph.D. studies in Soil Science and Plant Nutrition in the Federal University of Vigosa, in Brazil. Since 1994 he is a research scientist of the Brazilian Enterprise for Agricultural Research - Embrapa - working on soil fertility and fruit crops mineral nutrition. Besides, he has been teaching as professor in correlated areas in graduate and post-graduate courses.