# DETERMINATION OF MINERALS IN IMMATURE GRAINS OF COWPEA LINEAGES AND CULTIVARS

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Hunger and poor food quality are very serious problems in populations in the North and Northeast regions of Brazil. Malnutrition is still one of the biggest public health problems in the world, and the insufficient intake of nutrients for the growth and development of children is the main cause of child mortality. Cowpea (Vigna unguiculata (L.) Walp.) is a staple food for low-income populations in Northeast Brazil and in more than 65 countries, being the main source of protein, calories, fiber, minerals and vitamins. It adapts to a wide range of environments in the tropical and subtropical regions of the world. It can be sold as dry beans (main market), pods, immature beans (green beans) and flour. The objective of this work was to determine the mineral content in immature grains of four cowpea genotypes. These were represented by two elite lines of the commercial color class, green subclass (MNC00-595F-27 and MNC05-847B-123), selected for their good agronomic attributes, and two commercial cultivars of the white class, smooth white subclass (BRS Tumucumaque and Purple Pod-THE). The cultivar Vagem Roxa-THE was used as a commercial standard for green beans. The analyses were performed at the Laboratory of Bromatology at Embrapa Meio-Norte, Teresina-PI. The concentration of the minerals Calcium (Ca), Magnesium (Mg), Phosphorus (P), Iron (Fe), Zinc (Zn), Manganese (Mn) and Copper (Cu) were determined using the technique of spectrometry and concentration of the minerals Potassium (K) and Sodium (Na) were determined using the technique of flame photometry. Data were analyzed statistically, with analysis of variance and means compared by Tukey test ($p < 0.05$). The line MNC05-847B-123 presented the highest contents of Cu, Fe, K, Mg, Na and Zn in relation to the other line and to the cultivars analyzed in the study, showing potential for future releases as a cultivar for the green bean market.

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