Assessment of Soil Fertility and the Elements Nickel, Chromium, Lead and Cadmium in Soil Cultivated with Coffee for Ten Years using Limestone Compared to the Use of Agrosilício® and these Two to Soil Under Natural Vegetation

DAMATO NETO, J.[a*]; CUNHA, D. N.[a]; SOUZA, C. M.[a]; SANTOS, M. A.[a]; SILVA, M. L.[a]; PEDROSO, M.[a]

a. Universidade Federal de Viçosa, Viçosa – MG

**José Damato Neto, josedamato@yahoo.com.br*

Abstract

Before Christ, the application of residues in agriculture was already a common practice. steel slag can be used for acidity correction. However, the soil contamination is a problem. The objective of this study was to analyze an area where Agrosilício® (steel slag) was applied comparing to two areas (one with no correction and another one with limestone application). The soil samplings were done in native forest areas and coffee plantations, one area managed only with limestone application and another with Agrosilício®, both with ten years of application of the products. The sampling depths were 0-5; 5-10; 10-15; 15-20; 20-30; 30-40; 40-60; 60-80 and under 80 centimeters, in two repetitions. It was analyzed routine fertility and the elements: boron, chromium, nickel and cadmium. Limestone and Agrosilício® showed similar results for the analyzed features.

Keywords: *heavy metals, native forest, silicon, steel slag, soil amendments*