

## ABSTRACT

The purpose of this research was to establish indicators and indices for soil quality which allow quick assessments and estimations in soils under high mountain páramo and its replacement by anthropogenic actions. The study area includes the cantons of Colta, Chambo and Alausí in Chimborazo province, where four land uses were selected: páramo (Pa), pasture (Ps), forest (Bo) and crop (Cu) that belong to the same taxonomic unit (Andosol). Four replications of a completely randomized block experimental design were used. The physicochemical indicators analyzed were aggregate stability (EA), bulk density (Dap), pore space (EP), texture, color, organic carbon (CO), pH, earthworm count (CL) and total number of individuals of edaphic mesofauna. The findings indicate that the soils under Pa, achieved the highest with an approximate value of 4 in the three sectors that soils under cultivation surrounded a value of 2 in the three study areas respectively. The ICS $\mu$  values obtained show that the conversion of natural soils to cultivated soils originates a reduction in the ICS $\mu$ , therefore, it is necessary to implement short-term measures for the sustainability and preservation of these natural ecosystems that fulfill multiple ecosystemic functions.

**Key words:** páramo, cultivated soils, quality indexes.

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