



Soil structural quality degradation by the increase in grazing intensity in integrated crop-livestock system

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The intensification of soil use, as in integrated crop-livestock system (ICLS) might promote soil structural degradation. A field method to evaluate the soil structural quality is the Visual Evaluation of Soil Structure (VESS). Studies on the application of this method to ICLS are few. This work aimed to evaluate a structural quality of a Typic Dystrudept clayed under ICLS and different grazing intensities through VESS. Thus, the soil structure was evaluated in light grazing (LG) and heavy grazing (HG) in comparison to a neighboring native forest (NF) reference area. After the grazing period, 10 trenches were dug in each area to collect soil monoliths. The identification of structural differences and the attribution of visual scores were carried out according to the VESS. In NF and HG soils, up to 30 cm deep, it was possible to identify two layers with distinct structures, while in the LG up to three layers were identified. The NF soil presented the best structural quality. Regarding both grazing intensities, there was inversion of the structural quality between soil layers when compared to the NF. The increase in grazing intensity in ICLS promoted in depth degradation of the soil structural quality. The VESS method was shown suitable to evaluate soils under ICLS management with LG and HG.