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Soil Quality Index Determination Models for Restinga Forest

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The Restinga Forest is a set of plant communities in mosaic, determined by the characteristics of their substrates as a result of depositional processes and ages. In this complex mosaic are the physiognomies of restinga forests of high-stage regeneration (high restinga) and middle stage of regeneration (low restinga), each with its plant characteristics that differentiate them. Located on the coastal plains of the Brazilian coast, suffering internal influences both the continental slopes, as well as from the sea. Its soils come from the Quaternary and are subject to constant deposition of sediments. The climate in the coastal type is tropical (Köppen). This work was conducted in four locations: (1) Anchieta Island, Ubatuba, (2) Juréia-Itatins Ecological Station, Iguape, (3) Vila das Pedrinhas, Comprida Island; and (4) Cardoso Island, Cananeia. The soil samples were collect at a depths of 0 to 5, 0-10, 0-20, 20-40 and 40 to 60cm for the chemical and physical analysis. Were studied the additive and pondering additive models to evaluate soil quality. It was concluded: a) the comparative additive model produces quantitative results and the pondering additive model quantitative results; b) as the pondering additive model, the values of Soil Quality Index (SQI) for soils under forest of restinga are low and realistic, demonstrating the small plant biomass production potential of these soils, as well as their low resilience; c) the values of SQI similar to areas with and without restinga forest give quantitative demonstration of the restinga be considered as soil phase; d) restinga forest, probably, is maintained solely by the cycling of nutrients in a closed nutrient cycling; e) for the determination of IQS for soils under restinga vegetation the use of routine chemical analysis is adequate.
Keywords: Model, restinga forest, Soil Quality Index (SQI).