The analysis of the influence of edaphic finer textures, as a facilitating factor for the expansion of forest formations in the absence of fire, was possible thanks to rare characteristics found in a savanna fragment located in the State of São Paulo, Brazil. The total suppression of fire for over four decades, and the occurrence of two savanna physiognomies, cerrado sensu stricto and cerradão, allowed the conduction of this study based on the hypothesis that cerradão, a physiognomy of forest aspect consisting of fire-sensitive tree and shrubs species, is favored by fire absence and higher soil hydric retention capacity. Edaphic samples were collected from a regular grid of 200 m² for the production of isopletic maps of the distribution of clay, fine sand, coarse sand and silt edaphic textures by the geostatistic method of ordinary kriging. Changes in the areas occupied by both savanna physiognomies, defined on the basis of aerial photographs taken over a period of 43 years, were assessed through mean variation rates. Besides corroborating the hypothesis of edaphic hydric retention as a facilitating factor for the expansion of forest physiognomies in savanna areas, we were able to infer the positive influence of higher precipitation on the increase in cerradão expansion rates.

Keywords
Cerrado, fire suppression, geostatistics, savanna dynamics.