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Spatial Dynamics of Grapes Production in Brazil Between 1975 and 2003

Mello, L. M. R.[1]; **Garagorry, F. L.**[2]; **Chaib Filho, H.**[3]

[1]Embrapa Uva e Vinho - Bento Gonçalves-RS – Brazil

[2]Embrapa-SGE - Brasília-DF - Brazil

[3]Embrapa Cerrados - Planaltina-DF - Brazil

Viticulture is an activity which creates employment and is adequate to provide economic and social sustainability to small family-based farms. For these reasons, it has been used in several regions of Brazil. More than 50% of grapes is consumed in natura; the remaining is processed to produce juices and table wines. The present work evaluates the spatial dynamics of grapes production in Brazil, between 1975 and 2003, using measures of assymetry, and distance, and showing the center of gravity, for the years 1975, 1985, 1995 and 2003. The work used data from the Brazilian Statistical Service (IBGE), at the micro-regional level. It was found that grapes production is concentrated in a few micro-regions. Theil's concentration index (standardized to a maximum of 1) changed very little during the period, from 0,879 in 1975 to 0,842 in 2003. Throughout the period, only one micro-region was sufficient to reach 25% of grapes production, and between one and three to reach 50%. In order to reach 75% of total production, between 5 and 9 micro-regions were sufficient. Of the six micro-regions which were sufficient to reach 75% in 1975, four remained in 2003, while two left and were replaced by five new ones. These spatial changes were reflected in a persistence index (Jaccard's coefficient) of 0,3636 and a transvariation distance of 0,4091. The national center of gravity, which may not fall into a grapes producing micro-region, moved in the North direction. In 1975, it was in the Rio do Sul micro-region, in the state of Santa Catarina, while in 2003 it was in Avaré, in the state of São Paulo, with a terrestrial distance of 464 kilometers between these two points.

Keywords: agricultural dynamics, concentration measures, distance measures, center of gravity.