<Summary>

Regional Patterns of Agriculture in the State of Pernambuco, Northeast Brazil

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In Northeast Brazil, the declining precipitation from the coast to the interior results in three distinct ecological regions: the coastal area (*zona da mata*) defined as the traditional sugar cane region with high temperatures and humidity, the semi-arid backcountry (sertão) defined as a hot and arid cattle country with frequent drought, and the transitional zone between them (*agreste*) defined as having small holdings and mixed farming (Fig. 1 and 2). In the present study, attempts are made to clarify the regional differences of both agriculture and livestock ranching in the Pernambuco State, Northeast Brazil, by means of factor and cluster analyses.

In order to accomplish the purpose of this study, first, the statistical data of 30 variables relating to a *agropecuária* for 164 *municípios* were arranged into the 164 x 30 matrix for the period of 1980. Factor analysis was then applied to this 164 x 30 matrix. As a result, seven factors with eigenvalues of greater than 1.0 were extracted (Table 2). The arrangements of three distinct ecological regions were basically reflected in the distribution of each factor score (Fig. 5-11).

The 164 x 7 factor score matrix was treated by cluster analysis in order to classify *municípios*. Consequently, 164 *municípios* were classi-

fied into six regions as optimal regionalization (Fig. 13 and Table 4). The coastal area *(zona da mata)* characterized by the predominance of sugar cane production can be divided into two agricultural regions, i. e., sugar cane – suburban agriculture region (Type A) and large-scale sugar cane production region (Type B). The transitional zone *(agreste)* between *zona da mata* and *sertão* is also divided into two regions, i. e., small-scale mixed farming region (Type C) and small-scale livestock ranching region (Type D). Moreover, the semi-arid backcountry *(sertão)* consists of two regions, i. e., extensive livestock ranching with subsistence agriculture region (Type E) and modern irrigation agriculture region (Type F).