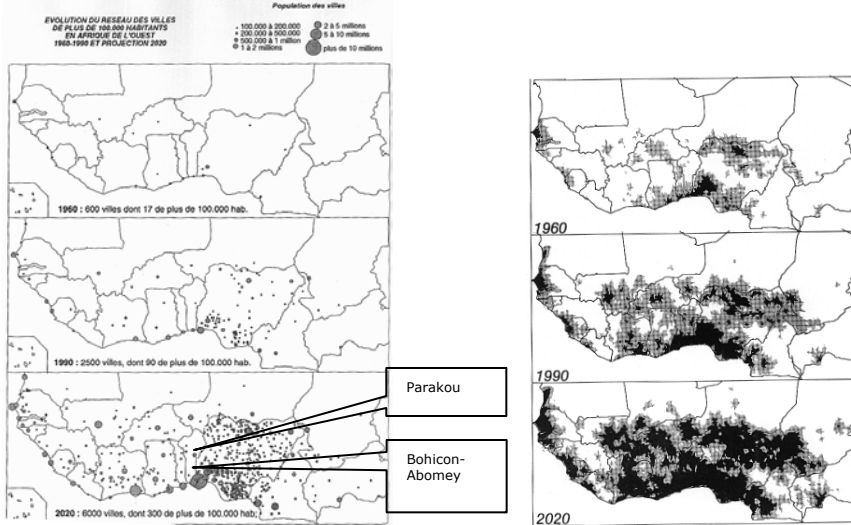


# TOWNS AS A MOTOR FOR ECONOMIC DEVELOPMENT – Trends Observed in Periurban Areas around Mid Sized Cities in Benin and the Von Thünen' s Framework

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## City growth between 1960 and 2020 and influence areas of city markets (Walpts, 1994)



The context:

- a rash urbanization with a network of giant cities related to mid-sized cities (100.000 inhabitants) and many smaller market towns (several thousands) absorbing the main part of demographic growth.
- interconnected markets along the coast, long distance exchanges in the food sector and lower dependence of cities on their specific hinterlands.

**How does city growth nowadays affect enterprises of the food sector located in city hinterlands ?**

## Von Thünen, 1783-1850, gentleman farmer in Mecklenburg and pioneer in economic geography

Studying the pattern of activities along a gradient from a city centre towards further located areas– first perishable goods (milk and vegetables) and heavy products with high transport costs (tubers or a little further, wood), then cereal-based rotation and last, extensive livestock keeping–, therefore organised in concentric rings, he developed a model.



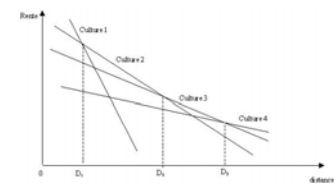
Assuming an « isolated State » combining a single marketplace and its homogeneous surrounding land ( in order to blend effects of heterogeneity in land quality and of other cities), Von Thünen's model estimates which crop maximizes the land/location rent -R- at any point in the space.

$$R = pq - c - t(x)q$$

- t: transport cost per product unit and distance
- p: market price
- x: distance between field and marketplace
- q: production value per hectare
- c: transport and production costs

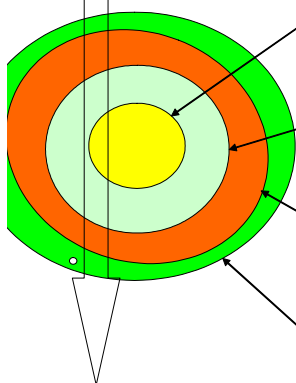


Von Thünen's rings



Location rent

**Rural areas**  
Full time grain and tuber producers at a higher scale, with a trend to intensification. Our market reaches distant areas through market networks. A same area is influenced by several markets. Our city market is mainly a transit market.

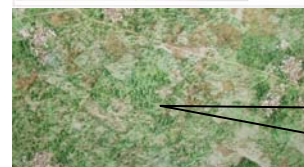


**Within the city**  
very small but numerous maize fields; small shade, firewood and food plantations; city workers with a small farming activity  
semi intensive livestock in homesteads and food processing tending to relocate further from the center

**5 km and further on the main roads**  
pluriactive farmers combining agriculture, handy crafts, food processing (women), semi intensive livestock and poultry

**5-30 km around the cities**  
Full and part time farmers  
Groundnut on impoverished soils  
Influence of city on land market: high land prices +uncertainty encourage extensive farmers to relocate or develop non farm activities

**75-30 km around the cities**  
Full time farmers  
Citrus plantations and vegetables especially on river banks  
Palm plantations and related processing activities  
Teak and other wood plantations outside the influence of city land market



A ring of numerous food processing micro enterprises (here maize)

Tree cover is getting scarce as parcelling out for future city growth is in progress

## Some results of studies around the Abomey-Bohicon conurbation

- The conurbation is mainly supplied from further located rural areas;
- In urban areas, high land prices more and more prevent from agricultural uses outside home gardening and maize fields at street corners.
- In near located periurban areas, multiple activity including farming is enduring but soil exhaustion and risks for fields of being parcelled out prevent from investing; off soil activities develop: semintensive poultry and livestock keeping and food processing.
- Some edaphic and market opportunities have been seized in further located periurban areas by local innovators (vegetables, wood, citrus)

## Main features of urban and periurban agricultures around Abomey-Bohicon

Around Abomey and Bohicon, such concentric circles can nowadays be found, partly due to processing micro firms rather than to the crops previously supplying them:

Micro enterprises in the food processing sector root in traditional skills and expand in response to a growing urban demand; their proximity to each other is a source of positive externalities so that their trends to clustering should remain; location rent = knowledge, product specificity and cluster rent  
Some farms develop new commodities like teak, citrus plantations, tomatoes and other vegetables. Their development is recent and based on innovative skills these farmers have developed and are exchanging. Clusters emerge.

In von Thünen's "isolated State", the city was supplied by its hinterland. In a context of interconnected markets and expanding exchanges, the model still partly applies: there still are specific activities which are resilient because of their "location rent". This rent is drawn out of the cultural specificity of food products and not only out of location (i.e. perishability, bulk).