

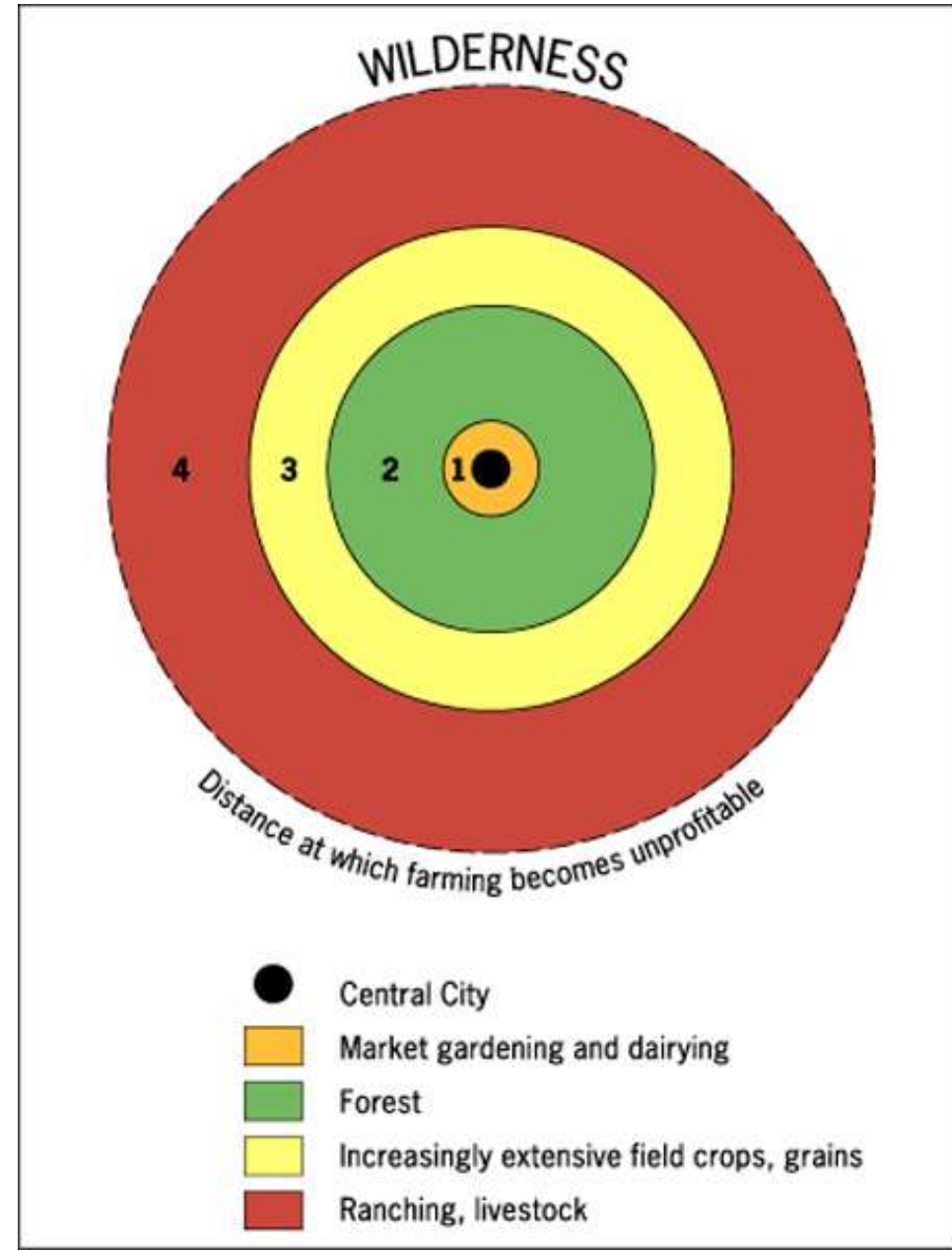
# Von Thunen

**How we grow food**

# Von Thünen Model

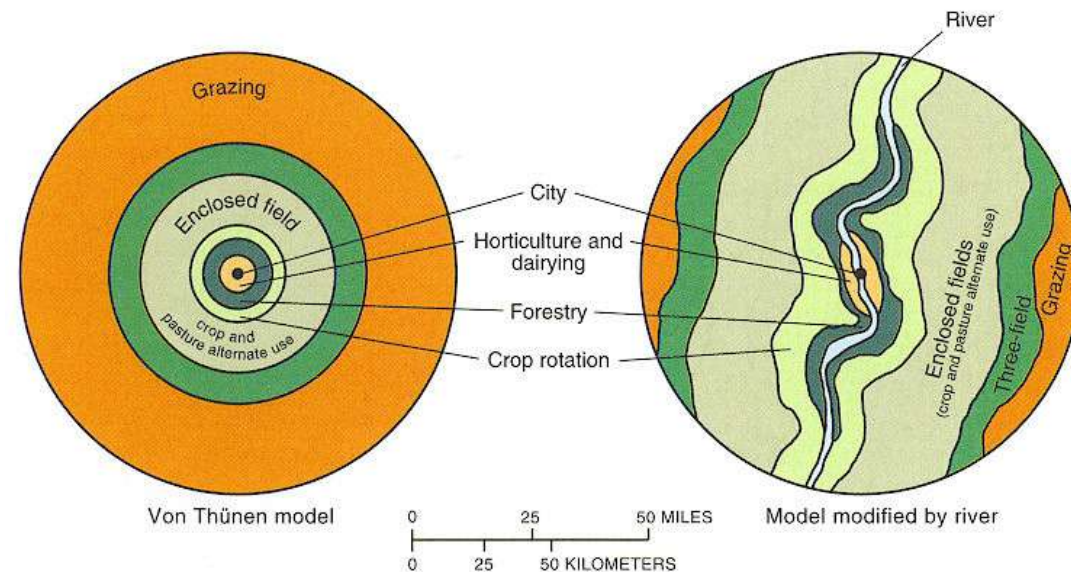
- **Von Thünen Model**

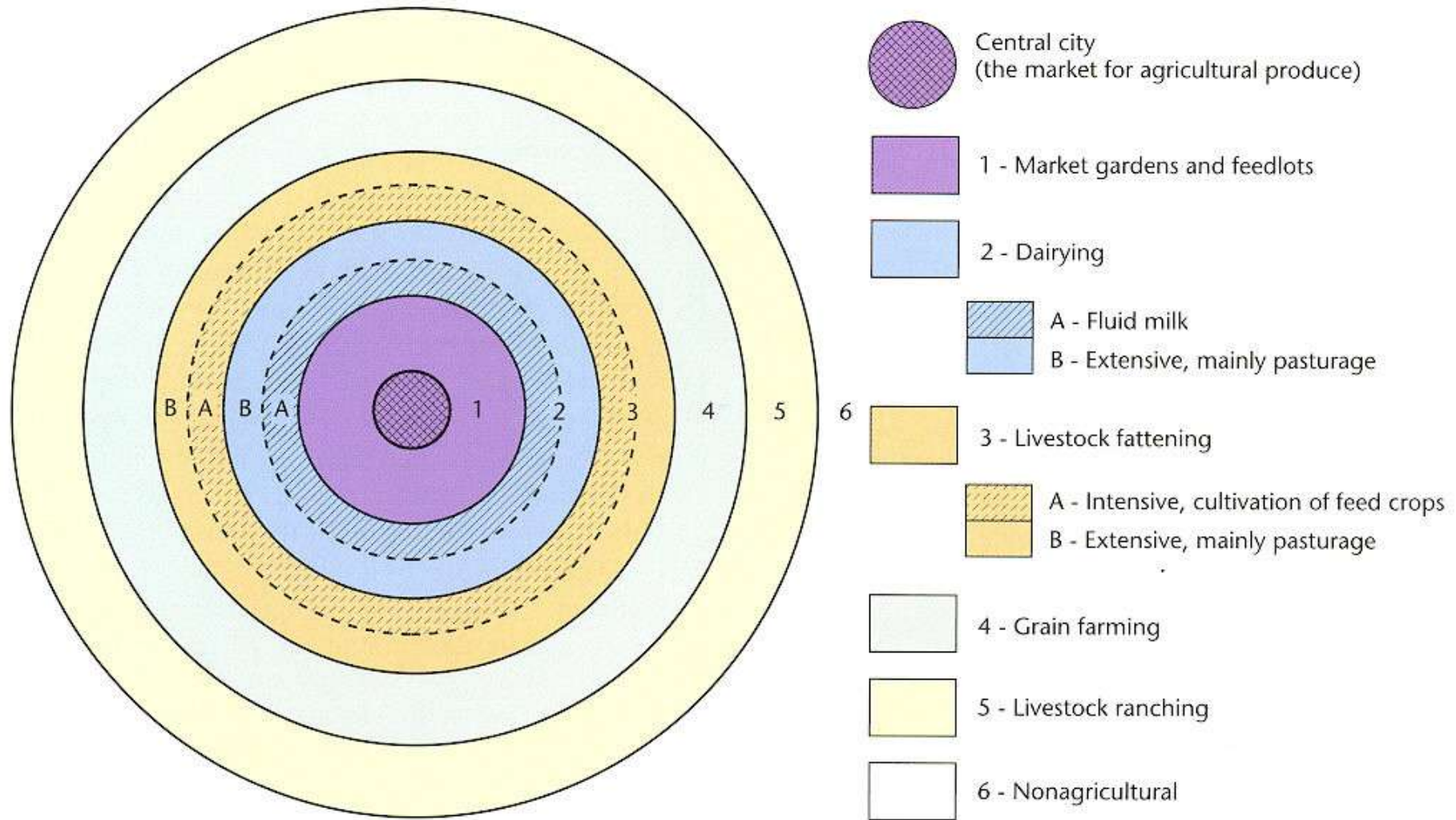
- What farmers produce varies by distance from the town, with livestock raising farthest from town.
- Cost of transportation governs use of land.
- First effort to analyze the spatial character of economic activity.



# Von Thünen

- Johann Heinrich von Thünen (1783-1850) wrote ***Der Isolierte Staat (The Isolated State)*** which is the foundation of location theory.
- Noted how crops near Rostock, Germany changed with no change in soil-mapped the pattern
- With terrain, soils and rainfall the same he created the ringed-pattern
- Noted that transportation costs governed land use





## Von Thünen Model

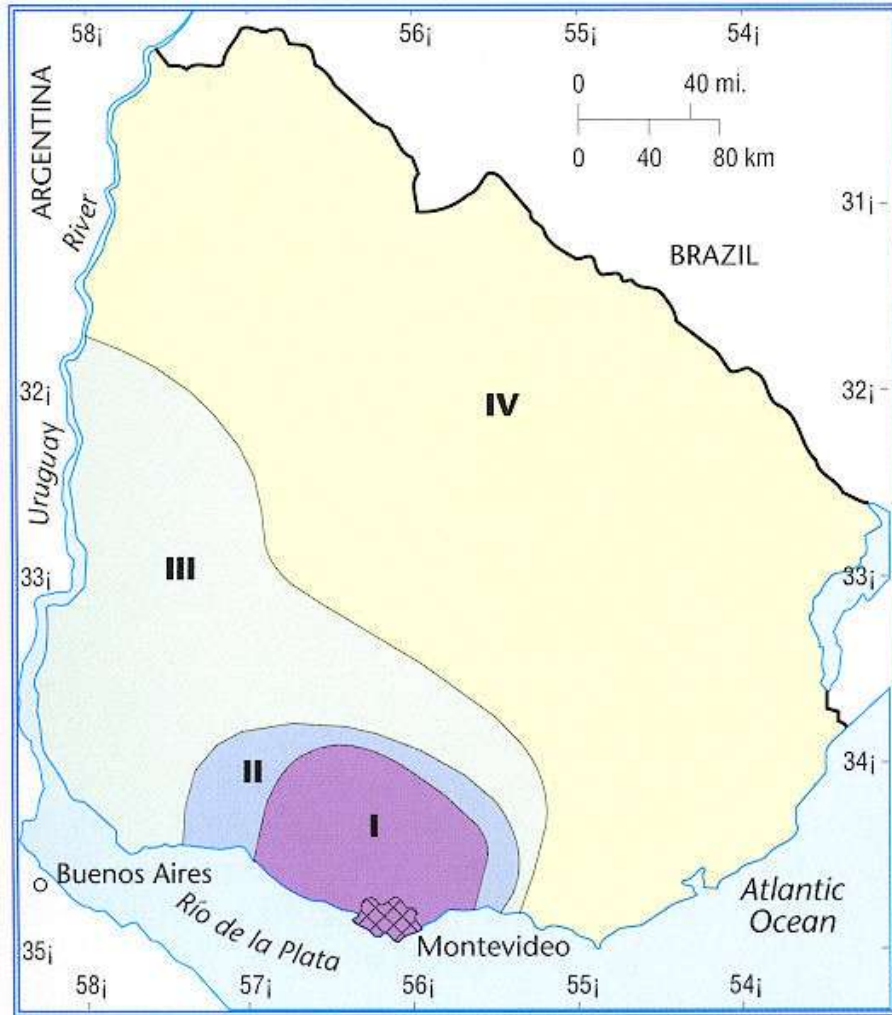
# Application of Von Thünen Model

- Geographer Lee Liu studied the spatial pattern of agriculture production in China.

Found:

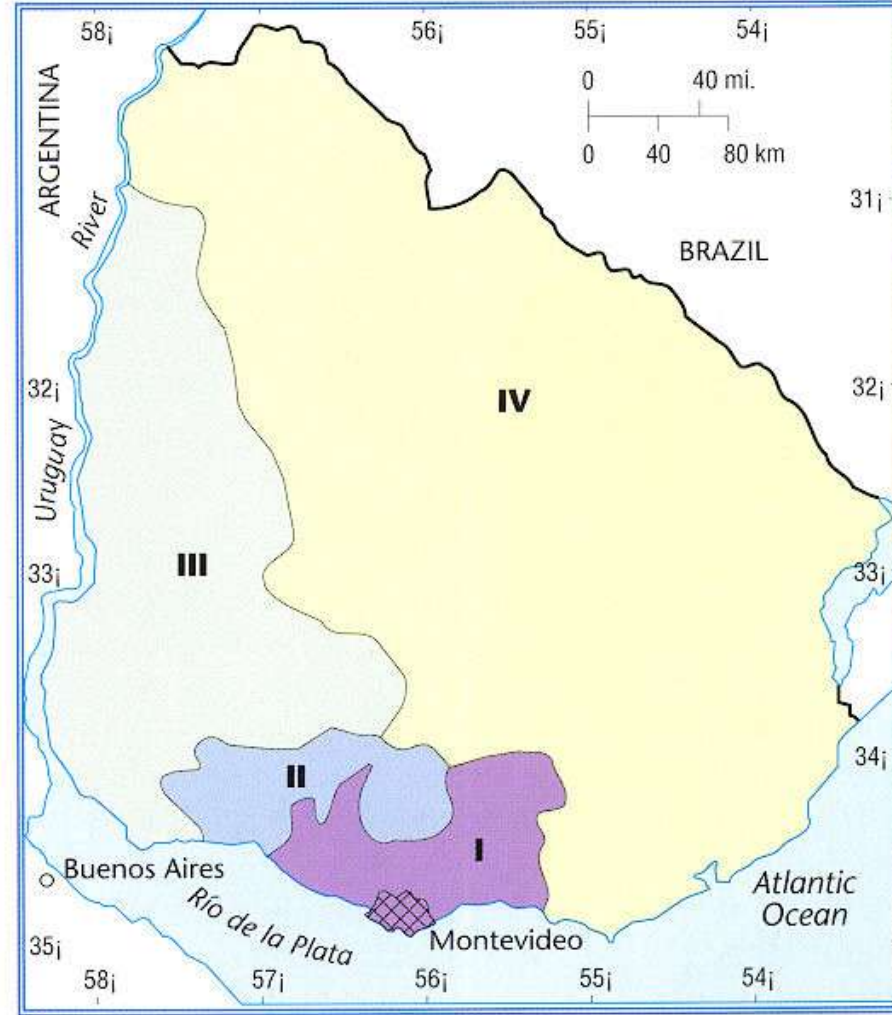
- farmers living in a village farm both lands close to the village and far away intensively
- methods varied spatially – resulting in land improvement (by adding organic material) close to village and land degradation (lots of pesticides and fewer conservation tactics) farther from village.

As Predicted by the Modified von Thünen Model



I Market gardening      II Dairying

Actual Types of Agriculture



III Grain farming      IV Livestock ranching

# Cadastral Systems

- **Township and Range System**

(rectangular survey system) is based on a grid system that creates 1 square mile sections. US method adopted after the Revolutionary War. Homestead Act-160 acres (1 section) given after 5 years of working the land)

- **Metes and Bounds Survey**

uses natural features to demarcate irregular parcels of land. Found on the east coast of North America

- **Longlot Survey System**

divides land into narrow parcels stretching back from rivers, roads, or canals. Found in Canadian maritimes & Quebec, a remnant of French rule

- **Primogeniture**-Germanic custom-first born son inherits all land-North America, Northern Europe, Australia etc.