

Institut National de la Recherche Agronomique



# An institutional economics framework based on competencies to analyze dairy cattle health

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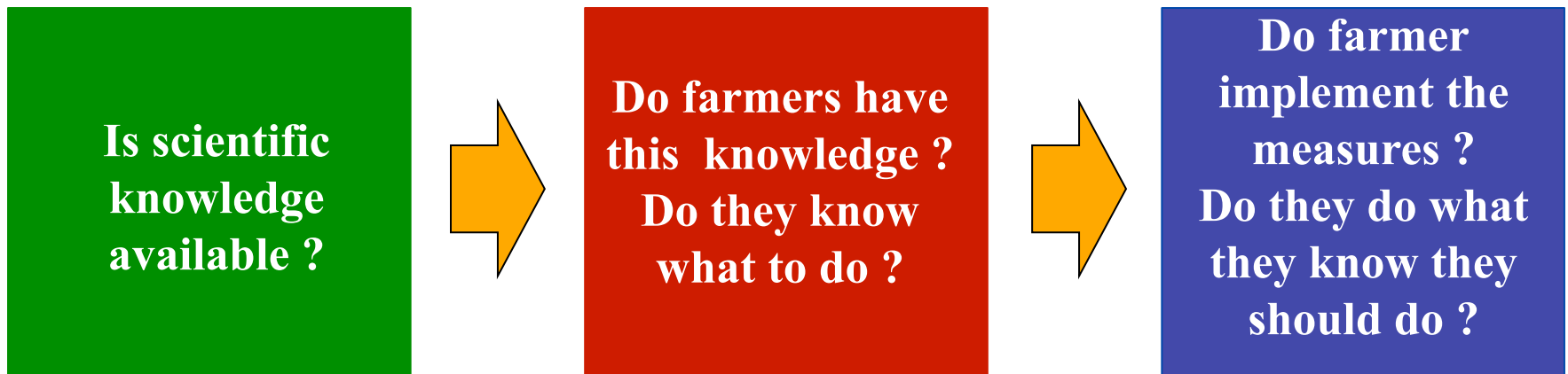


*Jacques Espinasse Award*

EBF 2011



- What is economics ?
  - Allocation of rare resources
- Decision making at the herd level

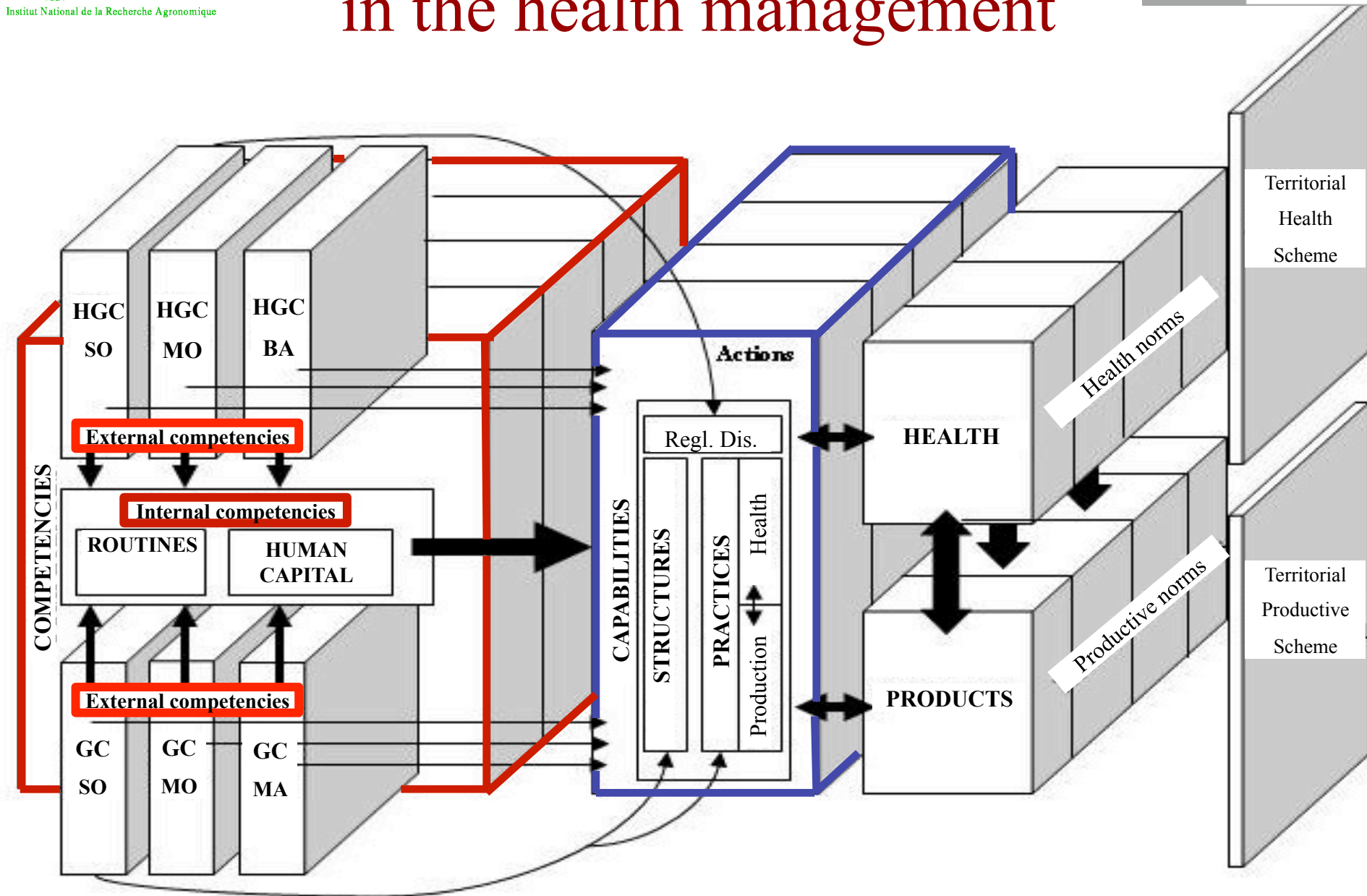


**Creation of  
scientific  
knowledge**

**Diffusion of scientific  
knowledge = creation  
of competencies**

**Implementation of  
competencies into  
capabilities**

# Competencies and capabilities in the health management



# Hypothesis

- 1 – Core competencies and strategic activities of the farmer
  - Specialisation of farmers
  - Farmers not always implemented competencies into capabilities
- 2 – Collective competencies and capabilities
  - Depend on livestock system history
  - Collective component of competencies / capabilities

- Databases
  - NBID – MCP – others
    - 5 million dairy cows - 5 million beef cows - 30 million cattle
    - 50 million movements – 80 million test-day record
    - 2005-2006
- Treatment
  - Production & health indicators at the herd level
- Statistics

- 1 – Core competencies and strategic activities of the farmer
  - Farmers specialised in dairy farms have more or less health issues
    - Less health issues for dairy cow mortality and milk quality
    - More health issues for dairy calf mortality
  - Competencies implemented into capabilities
    - Dairy heifers mortality decrease when heifer availability decrease
- 2 – Presence of collective competencies
  - Health results depend on collective competencies of farmers
    - There is an non-identified variable that explain a part of the health variation at several geographical levels



Thanks to

- Economics framework

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