



Reviving perspectives on innovation in Agri-Food Systems (AFS)

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For two main raisons :

1. **First, because The AFS** are characterized by specificities at different levels :

- Depends on natural unstable environment → High level of risk for investment.
- Biological process of production → different from industrial products.
- Strong cultural/patrimonial aspects in both production and consumption sides.
- Wide variety of stakeholders between research and farm, in global value chains and territories.

2. **Secondly, because Innovation in AFS are driven by news global challenges**

- Food and nutritional security. We have the traditional need of increasing quantity of food production at global level. But also to response the new demand for sanitary, quality, nutrition and health.
- Social and territorial issues. in the rural areas, AFS is number 1 job supplier in the world.
- Climate change. AFS contribute to the emission of Greenhouse Gas. At the same time they contribute to mitigation of the Climate change.
- Ecological transition,

....calling for new perspective to both “economic actors” and “researchers” who analyse and gouvern the evolution of agriculture and food.

Methodologic framework and outline

- The main insight from a research program carried out by the joint research unit “Innovation”. between 3 organizations (disciplines : Economy – Sociology – Management –Agronomy – Geography)
- Initiate a collective action in coordination for writing one book. This book using reviews and analyses of case studies undertaken and in many countries in Europe and the Global South: Africa, south America, and Asia.
- This book’s contributors, all share a systemic approach to innovation
- Scientific Editors : Faure G., Chiffoleau Y., Goulet F., Temple L., Touzard J.-M., 2018 - QUAE – Open access
- Both in French and in English

<https://www.quae.com/produit/1540/9782759229604/innovation-and-development-in-agricultural-and-food-systems>



The main contributions of this book in four points:

- To explain why Innovation in AFS is the subject of increasing social and political debates
- To present how Innovation in AFS is analyzed by interdisciplinary research
- To analyze the debates regarding different models and the possible coexistence of various agri-food models.
- To propose new methods for supporting innovation

1 - Why Innovation in AFS is the subject of increasing social and political debates ?

- No common understanding of ethical considerations that define what is a "good" or "bad" innovation (ex GMO)
 - *Where some see : a sign of progress a way of reducing the use of pesticides or of improving food production*
 - *Others see : only a strategy to increase the profits of multinational firms and reduce the farmers' autonomy*

Given that an innovation cannot be considered good - just because it is an innovation we need to develop methodologic impact and risk assessment
- Different objectives that go beyond the economic aspects and open up to the challenges of sustainable development
 - During the 20 century, innovation was presented as the only factor of economic growth
 - Today innovation should answer several goals responding to the major challenges that confront societies and public policies: food security, biodiversity, fight against pollution

- Who are the real beneficiaries of innovation : enterprises or population ?
 - *The literature in innovation process is focus on the performance of enterprise.*
 - *But in reaction, is the necessity to address the innovation concerning the publics goods or the commons in favor of populations that are economically or socially the most vulnerable.*
- The models of innovation : the way to innovate, with more open and collaborative methods (*contestation of 'top-down'*)
 - *The idea is instead to involve a growing number of heterogeneous stake holder in the development of innovations.*
 - *To create more democratic regime of innovation based on collective experimentation by the creation of local platforms and territorial 'living lab*

2 - Innovation in AFS is more and more analyzed by interdisciplinary research

In the “Innovations studies”, these are mainly economists and policymakers who work on the governance of innovation. They take into account technical, organizational and institutional dimensions, at different levels, national, regional, local.

In the “Science and Technology Studies”, There are mainly sociologists, who work on the network of stakeholders. They underline the socio-technical dimensions of innovation and the influence of learning networks.

In the “Transition studies”, sociologists and economists analyse structural conditions which explain the mechanism of transition between technological systems. They use multi-levels perspective.

3 - these innovations refer to different agricultural and food production models

- The agro-industrial model is intensive in capital and industrial inputs : it increases concentration of farms and enterprises.
- Other existing models use ecological inputs and other indicators for performance :
 - Social and environmental externality
 - Proximity between supply and consumers.
 - Food diversity
 - Social inclusiveness

The question is to understand the modalities of coexistence of these different models (space, time)

You have situation where the relation is **confrontation**.

But you also have situations where you have good **complementary**.

Coexistence of different of these models depends both as a feature of globalization and as a sectoral specificity :

- while innovations can be part of each of these models,
- they can also result from their combinations and interactions



4. Conclusion

This book presents new perspectives on innovation in AFS, it proposes a set of new methods

Co-design approaches using modeling and experimentation with farmers

Evolution of advice and consulting based on NTIC

New systemic methods to assess impact and risk (Impress)