

“Avoiding disease has never favoured health”

**Governance of plant health and management of crop diversity -
the case of bean health management among members of the
association *Croqueurs de Carottes***

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“From the living to the social: seed in question”
Louvain la Neuve / October 6th, 2016





Data and methods

Hypothesis

A dispute on the governance of a disease of common bean reveals the approach to plant health of a group of artisanal seed companies.

Data

Semi-directive interviews (*Croqueurs* + French officials)

Participant observation (4 years)

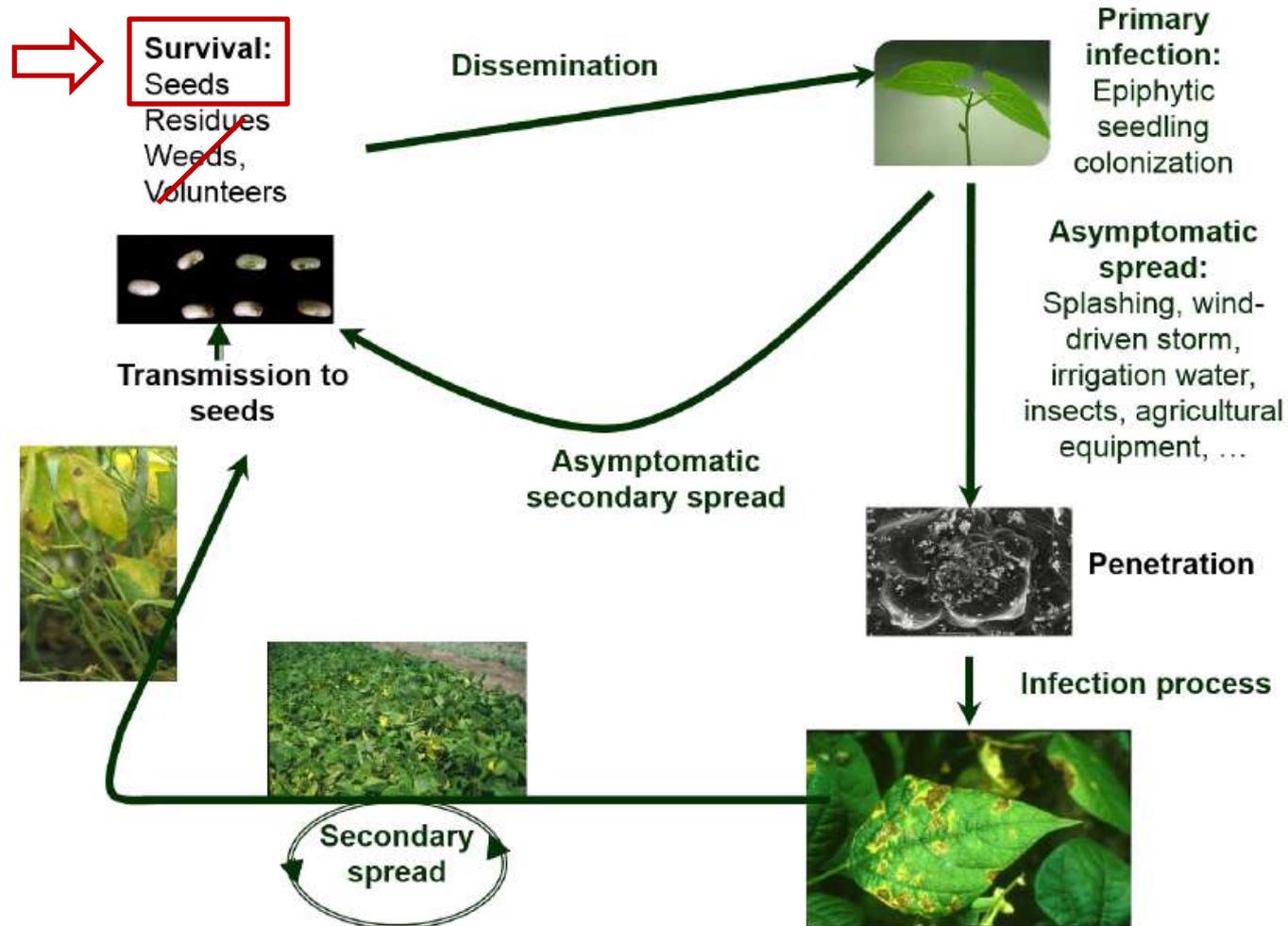
Analytical framework

Actor-network theory (Latour, Callon)

3 domains of expertise at the base of socio-technical norms (Callon & Rip 1992)

1. Protective measures against common bacterial blight (CBB) as socio-technical norm
2. Contestation by the *Croqueurs de Carottes*
3. *Croqueurs'* governance of bean health

Protective measures against CBB: Infection cycle of CBB



Protective measures against CBB : Eradication as socio-technical norm

1. Scientific knowledge base:

CBB agents are not widespread; seeds are the main vector
Official protocol for the detection of CBB agents on seeds.

2. Rules and regulations:

Common bean seeds produced in countries where CBB agents are known to occur and destined for professional users must undergo seed testing.

3. Socio-political scope:

Protective measures against CBB agents aim at protecting common bean production, especially in Southern Europe.

➤ **CBB-free seed as OPP**



Croqueurs (in France)

Contesting 3 domains of expertise

1. Scientific knowledge base: CBB not widespread?

... we have bought new seed from seed companies which provide sanitary passports for these seed samples [...] To check for the absence of bacteria, we asked for a control analysis by an official French laboratory: 3 of 8 samples were positive. (letter, 2009)

2. Rules and regulations: Official sampling protocol

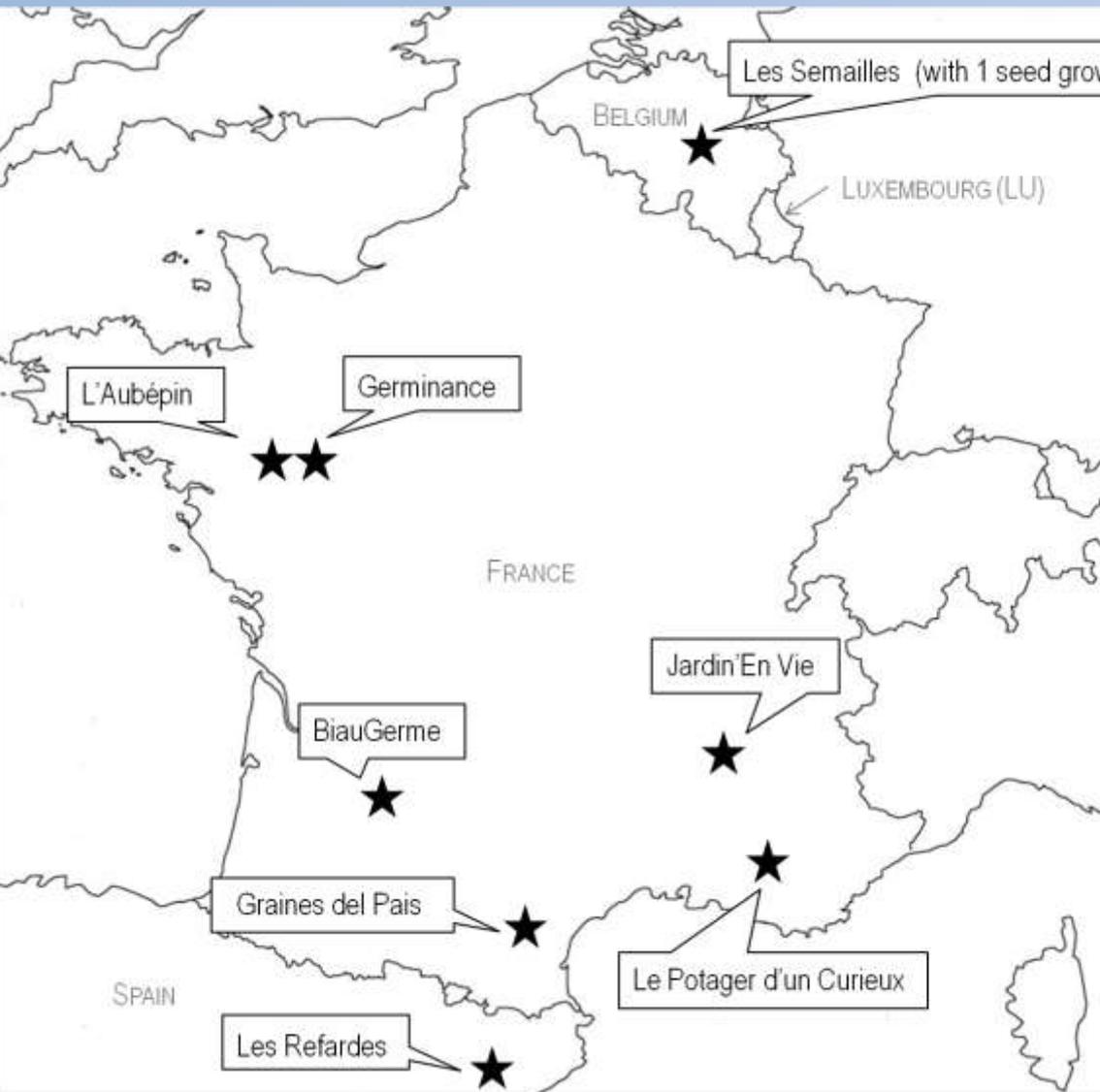
“Do you really consider that the regulation is suited for lots of 25 kg? Given that samples of 3 kg, or 4 , are needed to make an analysis...” [CRO-190515d]

3. Socio-political scope: Protection?

“CBB is to be eradicated? Then peasant seed [of common bean] will be eradicated.”
[NoB-280712]

“Avoiding disease had never favoured plant health.” [CRO-100914a]

Croqueurs de Carottes



- French-speaking association of 8 small-scale, *artisanal* seed companies
- Exclusively organic seed of open-pollinated vegetable varieties from the public domain
- Strong focus on old and heirloom varieties – *variétés anciennes*
- Member of the federation *Réseau Semences Paysannes* (“peasant seed network”)

Croqueurs:

« Living with » bean diseases

- The **lineage** of a variety (*souche*):
expression of threefold interaction:
plant variety, field environment and seed grower
- The bean population is shaped by its environment in a process of **adaptation**
- Bean health considered in this threefold interaction:
Ability of the lineage *to live with* bean diseases and adapt
Disease as a sign of *disequilibrium* in system



Croqueurs:

In situ plant health as OPP



Seed grower about to select healthiest plants

Determining the bacterial agents causing the blight is of no importance.

Bean health cannot be considered isolated from its growing environment

-> ***in situ*** plant health

Judgment on behalf of the seed growers on whether the seed crop is healthy enough

Croqueurs:

Collective governance of bean health

1. Within each company: Find the right environment for each variety among the seed growers of the network
2. Among the Croqueurs: Bean varieties are produced by several seed growers across seed companies, constituting a safety
3. Customers must maintain sound environments accordingly

We sell seeds to organic peasant farmers, and that also changes everything. If we sold our seeds to conventional farmers, with the dead soils they have and all, they would maybe have a lot of diseases. But since we sell to people who work a bit like we do - most of our customers are either home gardeners, or diversified market gardeners on small surfaces - well, they also learn to work rather as we do. [CRO-190515d]



Perspective: Political ontology

Parallels with contestation of DUS criteria:

- *In situ*, dynamic
- Collective management of diversity, collective governance of plant health

Take home

Healthy does not necessarily mean absence of symptoms

Potential pathogens are part of *sound* systems

Competencies of plant health management concern crop systems. They are distributed over a collective of seed growers and users.





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