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Tracking down inter farm collaborations to promote crop diversity

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Tracking-down inter-farm collaborations to promote crop diversity

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➤ Context

Specialisation of farms vs. agroecology

- **Specialisation of farms and territories**
 - Mixed farms in EU28 : 30% in 2005, 24% in 2016 (Eurostat)
 - Mixed farms in Brittany : 12 % in 2020 (Eurostat)
- **Crop-livestock integration and crop diversification are major levers for the development of agroecology**
 - Improves farming system resilience by e.g. limiting disease pressure, optimizing the use of nutrients and regulating the water cycle (Lin, 2011; Martin et al., 2016).
- **A challenge for farmers**
 - Increased workload (Ryschawy et al., 2017)
 - Labour organization and mental workload (Navarrete et al., 2015)
 - Knowledge intensive (Toffolini et al., 2017)
 - Specific machinery (Meynard et al., 2018)
- **Inter-farm collaborations for crop-livestock integration and crop diversification at the inter-farm level ?**

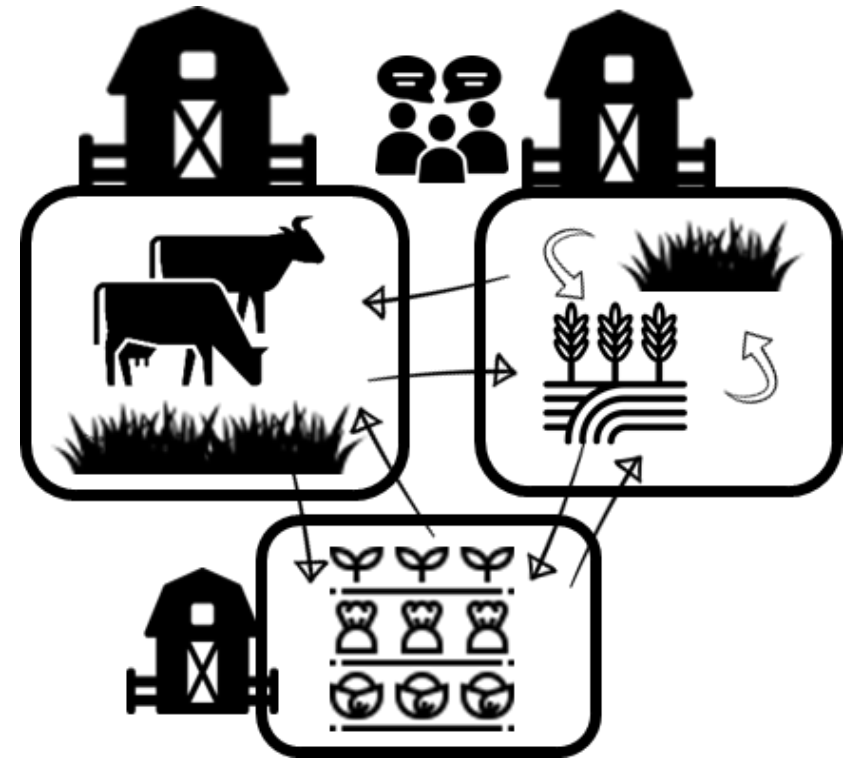


➤ Context

Inter-farm collaborations ?

- Inter-farm collaborations
 - Specialized farms
 - Sharing crops, fields or a common crop planning
- Poorly documented in the North-West of France
 - Which type of farms ?
 - What are they sharing ?
 - With which organisation ?
 - What are their interests ?
 - What are the constraints ?

➔ Tracking-down « innovations »



➤ Context

- First stage of a broader project
- Co-designing inter-farm collaborations with a group of farmers next to Rennes
- Produce transferable knowledge to provide advice to farmers

Partners

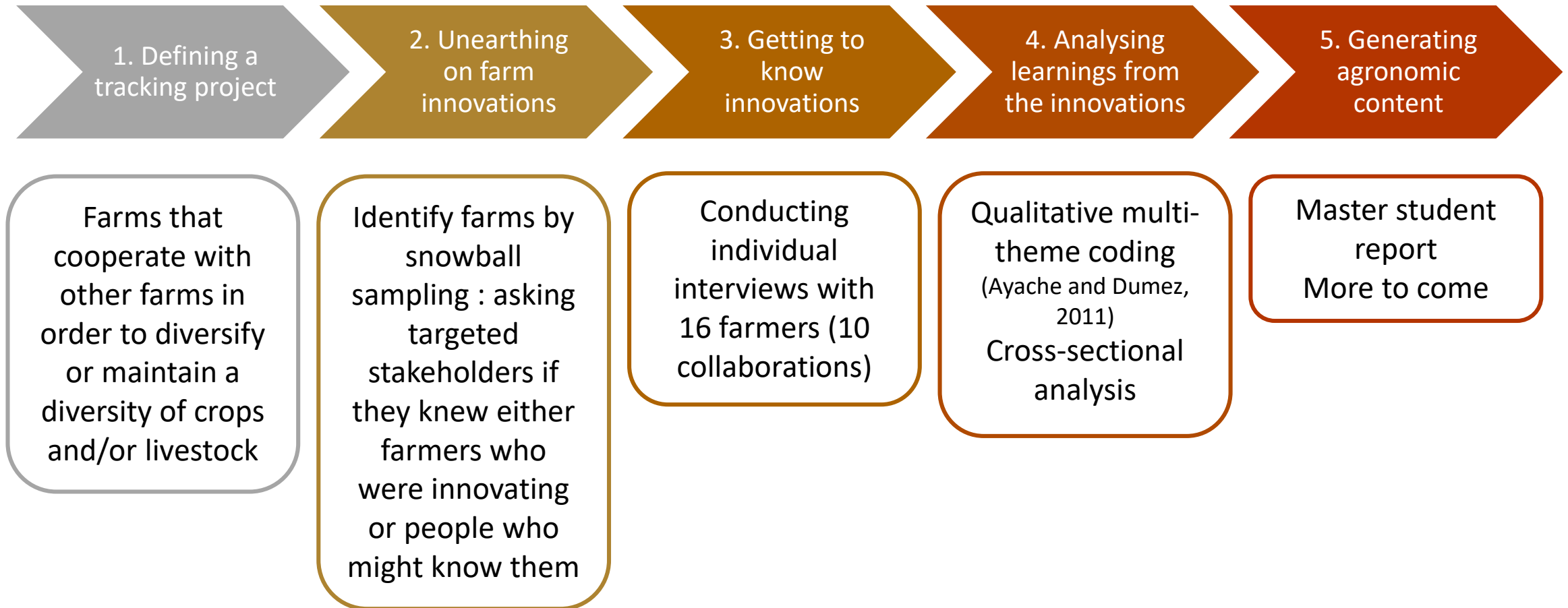


Funded by



> Method

Tracking farmers' innovations (Salembier et al., 2021)



> Results

Four types of collaborations

Complementarity  Synergy

Joint selling

Coordination between farmers to offer a complete range of products for direct selling

N=1

Planned sales between 2 farms

A farmer produces a crop on his/her own land and sells it to his/her neighbour on a regular basis. The neighbour commits to buying the crop each year.

N=4

Exchange of raw materials

The 2 (or more) farmers produce a crop on his/her own land for his/her neighbour on a regular basis. Financial compensation can occur in case of unbalanced value.

N=2

Shared crop rotation

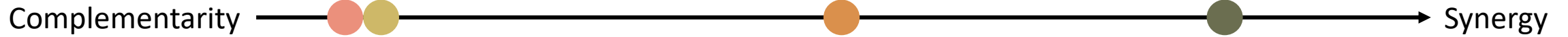
Plot exchange or plot sharing. Often formalised by an agreement as the operations are very intertwined and therefore require better guarantees.

N=3



> Results

Four types of collaborations



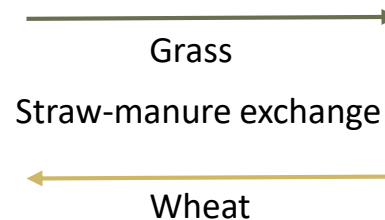
Exchange of raw materials

The 2 (or more) farmers produce a crop on his/her own land for his/her neighbour on a regular basis. Financial compensation can occur in case of unbalanced value.

N=2

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Provide wheat seeds
Field operations (weeding, harvesting) + sorting
Buys the wheat (minus the costs of seeds and field operations)



Harvest the grass
Buys the grass

- Oral agreement
 - Which plot ?
 - Price (same every year)
- Allow 1 to have enough wheat with a 4 year rotation + outlet for the grass
- Allow 2 to grow crops between 2 cycles of pasture + outlet for the wheat

> Results

Four types of collaborations

Complementarity —————> Synergy

Shared crop rotation

Plot exchange or plot sharing. Often formalised by an agreement as the operations are very intertwined and therefore require better guarantees.

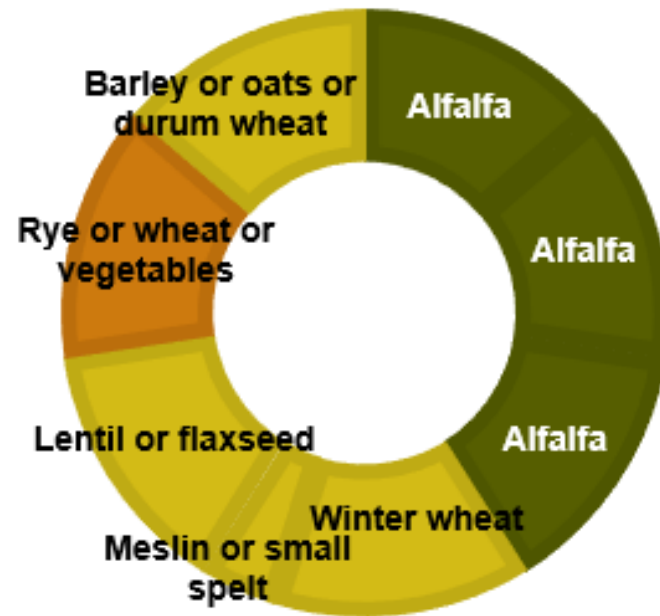
N=3



Market gardener
3,5 ha



Farmer-baker
70 ha



Cow breeder
160 ha including 40 ha in the shared rotation

- **Written agreement**
 - Management (date of harvest, fertilisation)
 - Straw-manure exchange
 - Condition of use of other farm's machinery
- **1 meeting per year**
 - Debrief
 - Plan next year



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➤ Discussion

- **Collaboration allows longer crop rotation**
 - Produce crops not directly needed
 - Forage in farms without livestock
 - Crops for human consumption in farms with livestock
 - Control of weeds and diseases
 - Fertilisation with legumes and manure
- **Only organic cases**
 - No chemicals and synthetic fertilisers : need long rotations
- **Possible intensification**
 - Fodder produced out of the farm → more livestock



➤ Discussion

- **Helps setting-up young farmers**
 - Possible to set up on a small area
 - Limited investment (land, machinery...)
 - Focus on a few crops or activities
 - Farmers without agricultural background : not the same attachment to land
- **Independence**
 - Towards suppliers of inputs
 - Towards agricultural contractors
 - Towards industry : on-farm processing (bread, cheese, beer...) + local outlet
- **Territorial diversification**



➤ Discussion

- Social aspects
 - Social relations with “colleagues”
 - Require the same vision, a good communication, trust
 - Not collective farms : each farmer make his/her own decisions
- Regulation
 - Organic certification
 - CAP subsidies



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➤ Thank you !

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