Change of cattle breed: dairy specialized farmers' motivations for Montbeliarde or Simmental breeds

<u>C. Gaillard</u>, A. Gérard, S. Mugnier , M. Courdier, S. Moureaux, E. Verrier
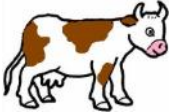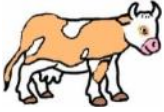
CONTEXT

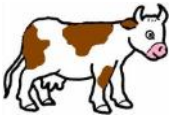**Since the 90's**, a renewed interest of some regional breeds

CONTEXT

In 2010

	Number of dairy recorded cows	Part of the total breed cattle in Western France (%)	Part of the dairy cattle in Western France (%)
Montbéliarde	30 000	8	2
Simmental	1 000	8	0,1

Verrier   ., 2010

CONTEXT

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	Number of dairy recorded cows	Part of the total breed cattle in Western France (%)	Part of the dairy cattle in Western France (%)
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Verrier   ., 2010

Dairy farmers choose to change their cattle from Holstein breed to Montbeliarde or Simmental breed, looking for less-specialized cows

QUESTION

Dairy livestock system with Holstein breed

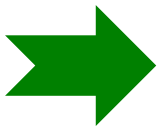Dairy livestock system with Montbeliarde or Simmental

QUESTION

Dairy livestock system with Holstein breed

→

Dairy livestock system with Montbeliarde or Simmental

Why farmers did they change their breed cattle?

QUESTION

Why farmers did they change
their breed cattle?

WHY SUCH A CHANGE ?

WHAT MOTIVATIONS AND ISSUES FOR FARMERS ?

HOW: at which time ? What modalities ?

WHICH INTERACTIONS:
      breed change / farming system evolution ?

Methods: data collection

Surveys in farms

main points

↪ Beginning of change

- Motivations of farmers
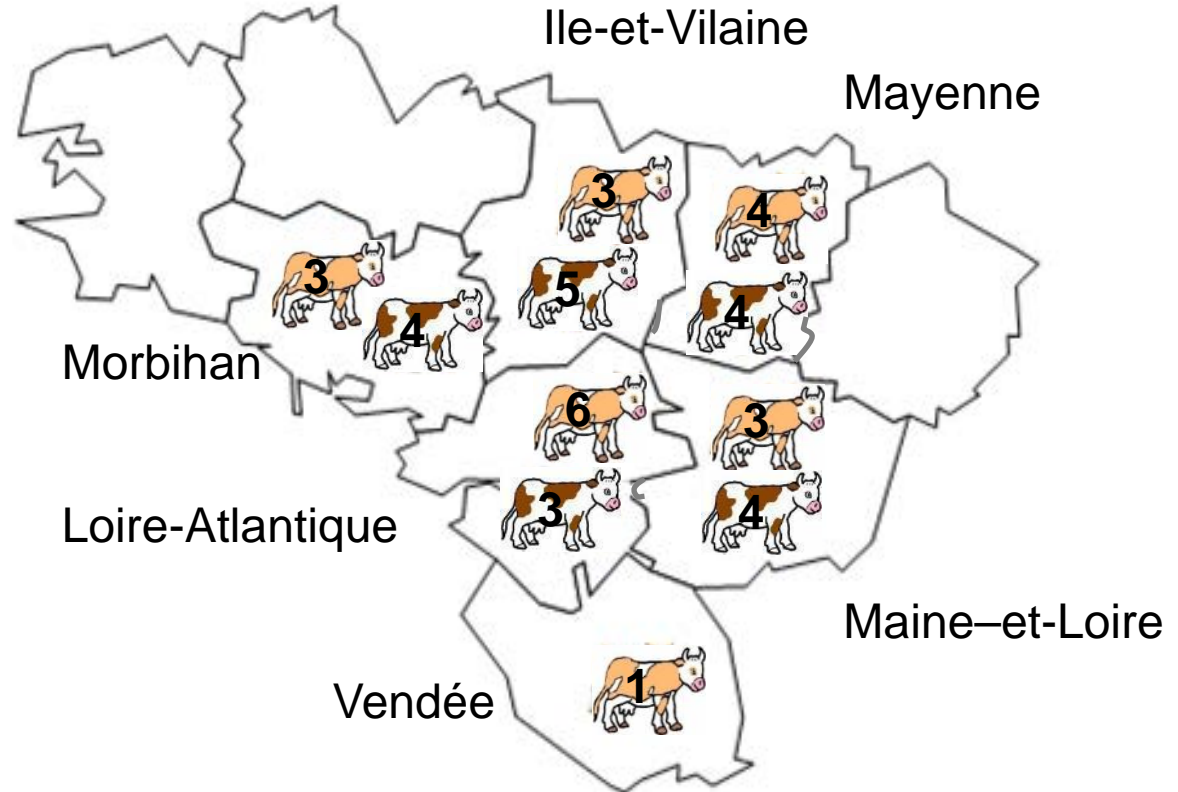- Trajectories (dates and main events)

↪ Currently

- Some traits of farm structure
- Basis of farming management

Methods: sampling

40 dairy farms in Western France

20 Montbeliarde

20 Simmental

Methods: data processing

Typologies using factorial analyses to characterize:

1) Motivations of farmers to change the breed

2) Farm structures and functioning

Crossing of results

3) Motivations / structures

4) Breed / motivations

Results

1) Motivations of farmers to change the breed

2) Farm structures and functioning

3) Crossing motivations and structures

Motivations

Characterization of the motivations to change the breed:

Thanks to a factorial analysis
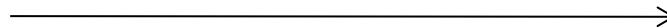
Factor 1: anticipation of breed change

Punctual
process approach → Long thought about
farming system management

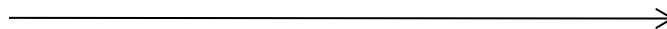**Factor 2: punctual motivations**

Sudden event
= opportunity → Worsening situation and
will of overcoming difficulties

Factor 3: motivations in relation to farm evolution

Adaptation
to a sustainable system → Dual purpose
milk and meat production

Motivations

Four groups of farms

	G1	G2	G3	G4
Anticipation of breed change				
Punctual motivations				
Motivations in relation to farm evolution				

Motivations

Four groups of farms

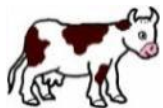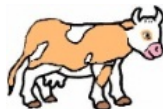|	G1	G2	G3	G4
Anticipation of breed change	Thought for a long time			
Punctual motivations				
Motivations in relation to farm evolution	Adaptation to a sustainable system			

Sustainability

	2
	6
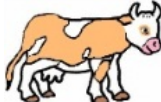
Motivations

Four groups of farms

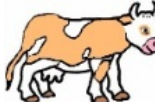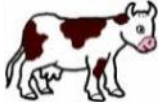|	G1	G2	G3	G4
Anticipation of breed change	Thought for a long time	Thought for a long time		
Punctual motivations				
Motivations in relation to farm evolution	Adaptation to a sustainable system	Dual purpose milk and meat production		

	Sustainability	**Optimization**
	2	6
	6	7

Motivations

Four groups of farms

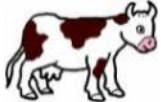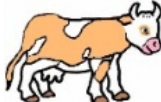|	G1	G2	G3	G4
Anticipation of breed change	Thought for a long time	Thought for a long time	Punctual process approach	
Punctual motivations			Overcoming difficulties	
Motivations in relation to farm evolution	Adaptation to a sustainable system	Dual purpose milk and meat production		
	Sustainability	**Optimization**	**Solving difficulties**	
	2	6	6	
	6	7	4	

Motivations

## Four groups of farms

	G1	G2	G3	G4
Anticipation of breed change	Thought for a long time	Thought for a long time	Punctual process approach	Punctual process approach
Punctual motivations			Overcoming difficulties	Sudden event
Motivations in relation to farm evolution	Adaptation to a sustainable system	Dual purpose milk and meat production		
	Sustainability	**Optimization**	**Solving difficulties**	**Opportunity**
	2	6	6	6
	6	7	4	3

Motivations

Four groups of farms

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Anticipation of breed change	Thought for a long time	Thought for a long time	Punctual process approach	Punctual process approach
Punctual motivations			Overcoming difficulties	Sudden event
Motivations in relation to farm evolution	Adaptation to a sustainable system	Dual purpose milk and meat production		
	Sustainability	**Optimization**	**Solving difficulties**	**Opportunity**

➡ **Number of farms in each group:**
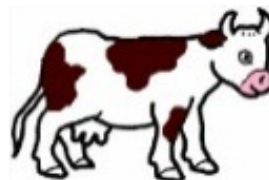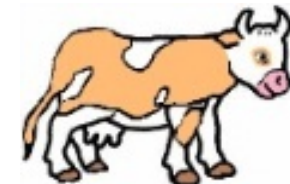
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Results

1) Motivations of farmers to change the breed

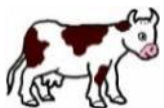2) Farm structures and functioning

3) Crossing motivations and structures

Farming structures and functioning

|	S1	S2	S3	S4
Farm size	Large	Medium	Medium	Small
Land use and type of farming	Arable crop and dairy production	Major grassland area and mixed productions	High grassland area Main dairy production	Few or very large grassland area
Milk quota level (per ha) and forage crop intensification	Medium + milk quotas Highly intensified	Medium - milk quotas Highly intensified	Small milk quotas Weakly intensified	High milk quotas Moderately intensified
	Large structures crop-livestock	**Medium structures mixed productions**	**Grass-based dairy production**	**Small structures high quotas/ha**
	4	5	4	7
	4	5	4	7

Farming structures and functioning

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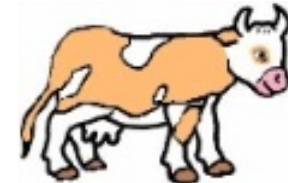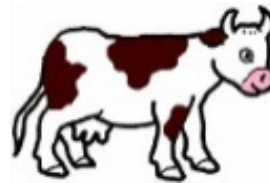
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Results

1) Motivations of farmers to change the breed

2) Farm structures and functioning

3) Crossing motivations and structures

Motivations x Structures

Number of farms	Motivations			
	Sustainability	**Optimization**	**Solving difficulties**	**Opportunity**
Large struct. Crop-livestock	1	2	3	2
Medium struct. mixed prod.	0	5	1	4
Grass-based dairy prod.	3	1	3	1
Small struct. high quotas/ha	4	5	3	2

(Farming structures)

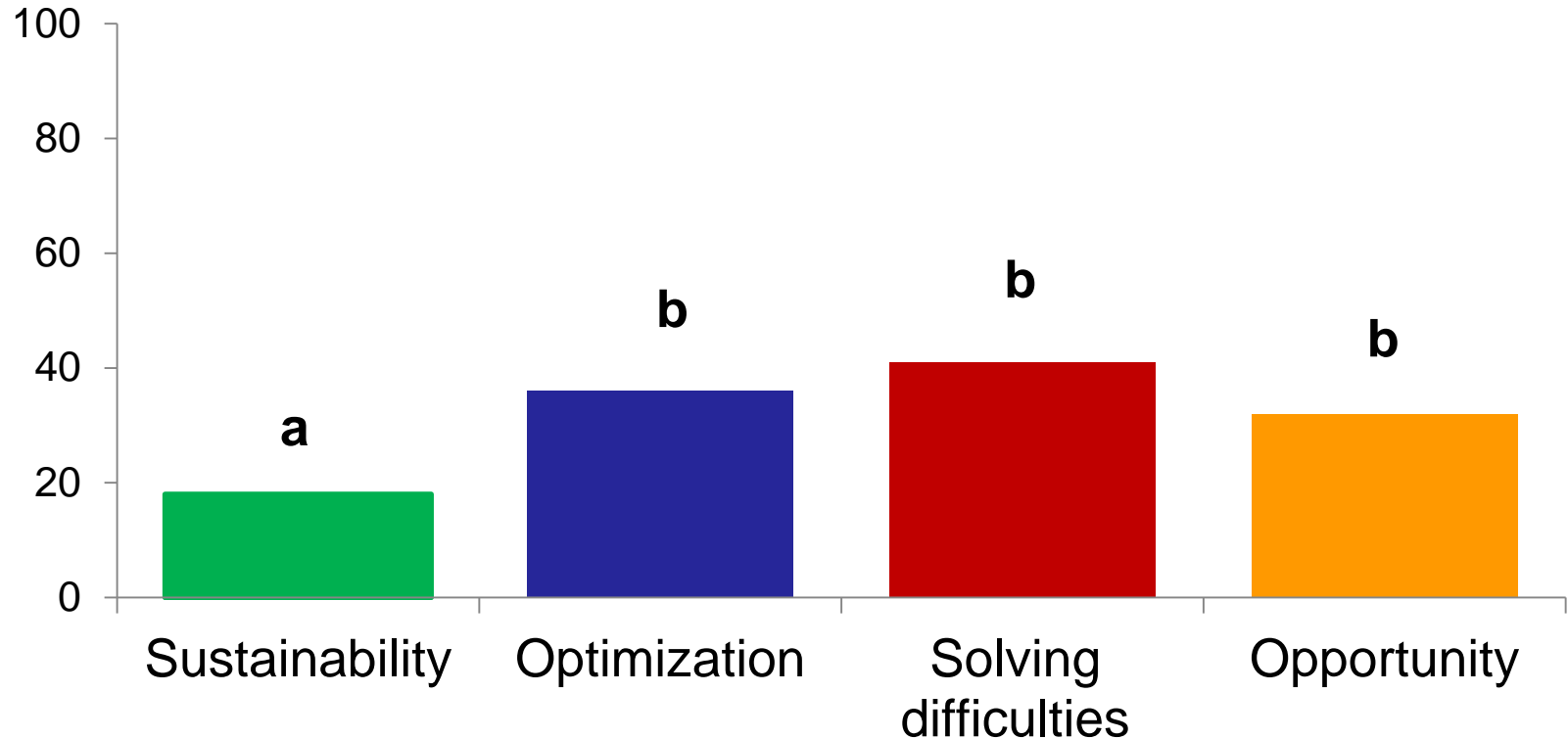➡ On the surface,
motivations not depending on farming structures

Motivations x Structures

Percentage of maize area for each group

% Maize/MFA

a, b : P<0,05

➡ Part of maize in grassland area significantly lower in "Sustainability" group
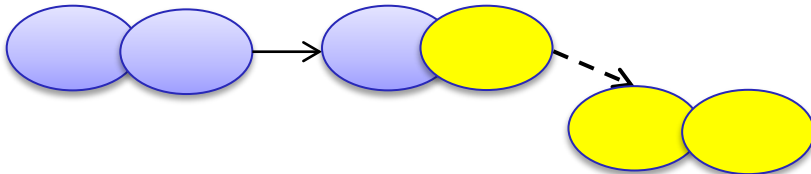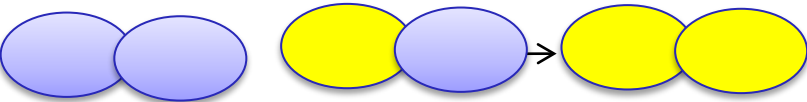
Discussion/Conclusion

S=system
B=breed

**Change of cattle breed
2 perceptions of breed by farmers**

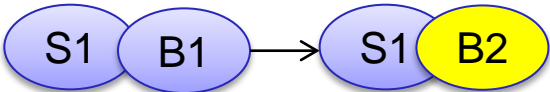Farming SYSTEM   Technical traits

G1 Sustainability
farming SYSTEM more
sustainable

G3 Better technical traits to solve
difficulties
to improve herd management

Thought

S1 B1 → S1 B2

G2 Optimization
farming SYSTEM more
profitable

Acknowledgments

Farmers
OS Simmental
OS Montbéliarde

Thank you for your attention