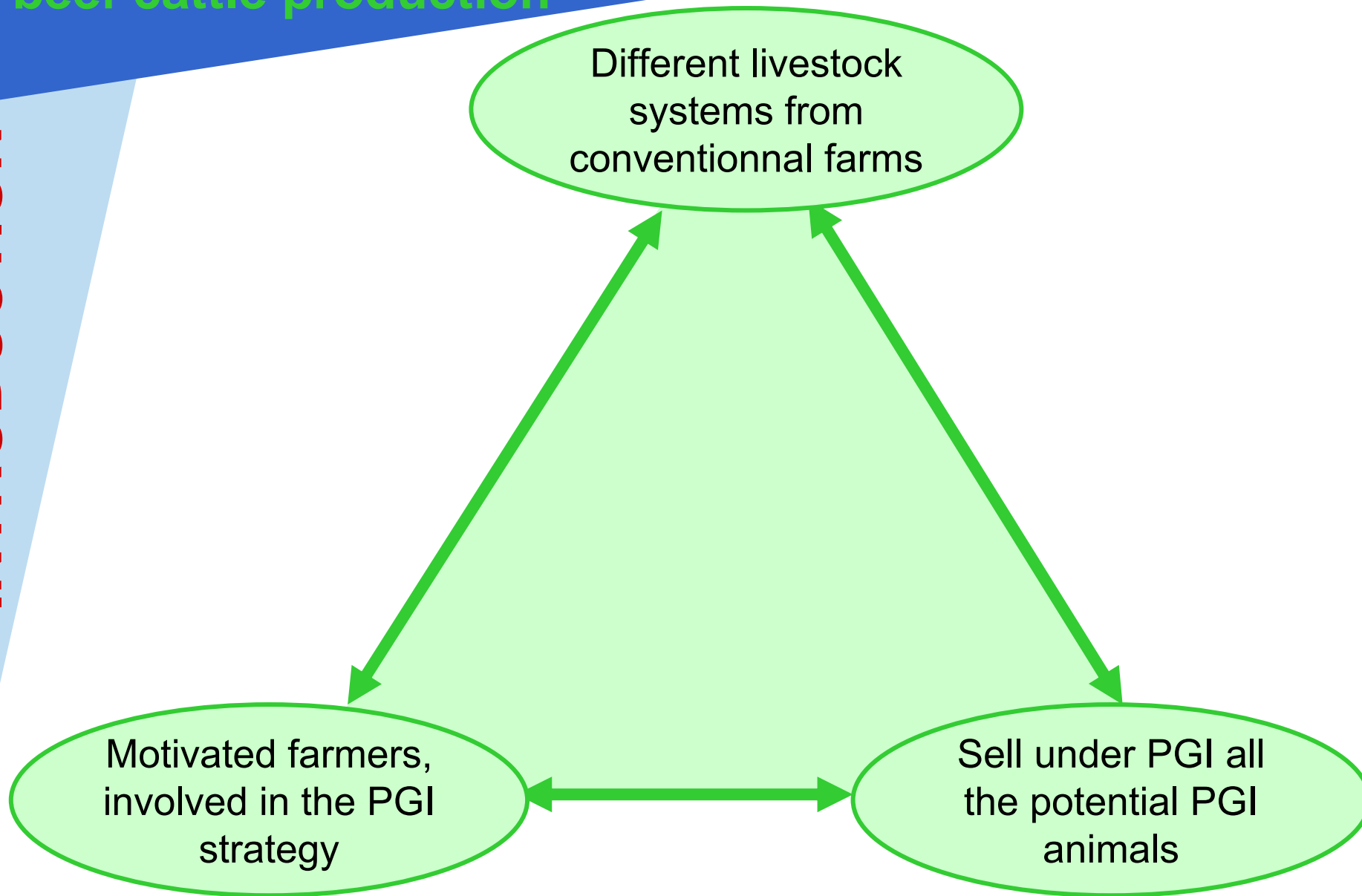# Characteristics and dynamism of Boeuf du Maine Protected Geographical Indication beef cattle farming systems

COUVREUR S., SCHMITT T. and LAUTROU Y.
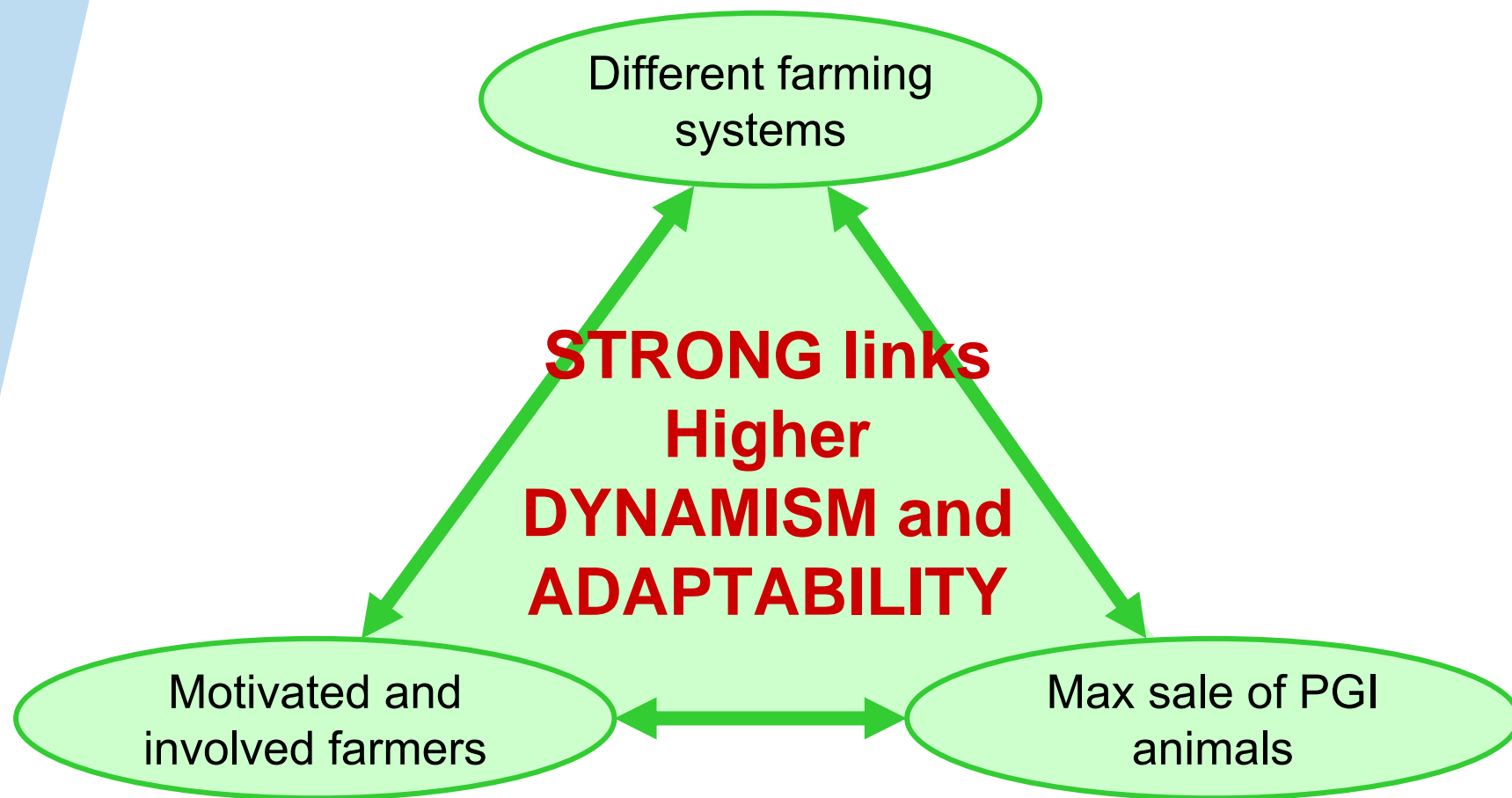
Laboratoire de recherches sur les systèmes d'élevage
ESA angers

EAAP Annual Meeting
Barcelona 2009

Objectives of a PGI farm system in beef cattle production

Different livestock systems from conventionnal farms

Motivated farmers, involved in the PGI strategy

Sell under PGI all the potential PGI animals

Couvreur et al., EAAP Annual Meeting, Barcelona 2009

TODAY = Economic instability (prices and consumption volatilities, evolution of the CAP,…)

Different farming systems

STRONG links Higher DYNAMISM and ADAPTABILITY

Motivated and involved farmers

Max sale of PGI animals

Couvreur et al., EAAP Annual Meeting, Barcelona 2009
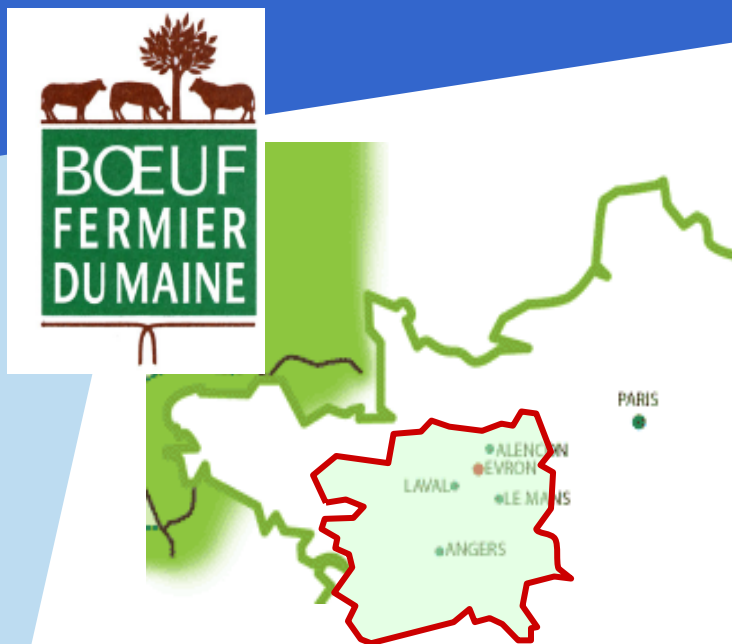
Bœuf du Maine PGI

1986 : French legislation => Label Rouge

1995 : Bœuf du Maine PGI (BM)

2006 : 683 farmers

2007 : 450 farmers : 1 BM animal min., 3700 BM animals

Main specifications for Bœuf du Maine PGI :

-**Animals :** beef cattle breeds, heifers (max. 1 calving) and steers
-**Management :** Grasslands >0.3 ha/LU, Livestock density < 2 LU/ha of forage crops, grazing period > 7 months/year
-**Feeding :** Fattening = 100-120 days, Linseed, no GMO
-**Carcass :** > U=, Fattening score = 2-3, minimum weight

Couvreur et al., EAAP Annual Meeting, Barcelona 2009

Couvreur et al., EAAP Annual Meeting, Barcelona 2009

Characterize the different BM livestock farming systems

Evaluate the level of involvement of farmers in producing BM animals (strategies to sell males and females)

Study the level of motivation of BM farmers

Couvreur et al., EAAP Annual Meeting, Barcelona 2009

MATERIAL & METHODS

85 farms (/683)

Selection criteria :
- at least 1 BM animal sold in 2006 & 2007
- at least 15 beef cows

Questionnaire

Farm → **Motivation/Perception of the BM PGI**

Crop and grassland management
(Proportion of permanent/temporary grasslands, Crop area, Grazing system, Forage management)

Beef cattle management
(Reproduction, Breeding, Feeding, Animal sales)

Couvreur et al., EAAP Annual Meeting, Barcelona 2009

RESULTS
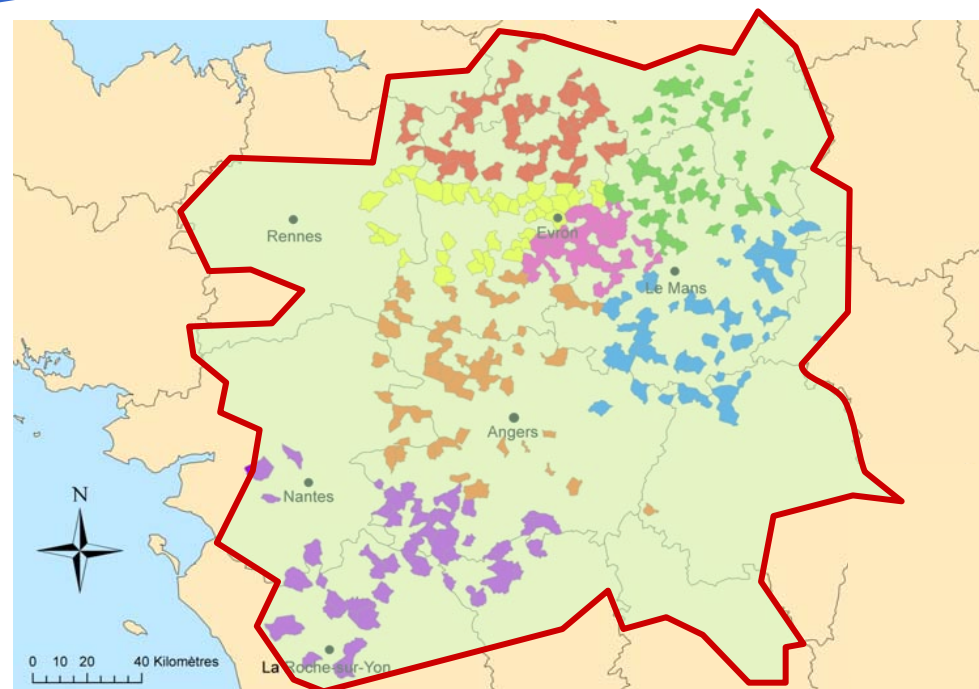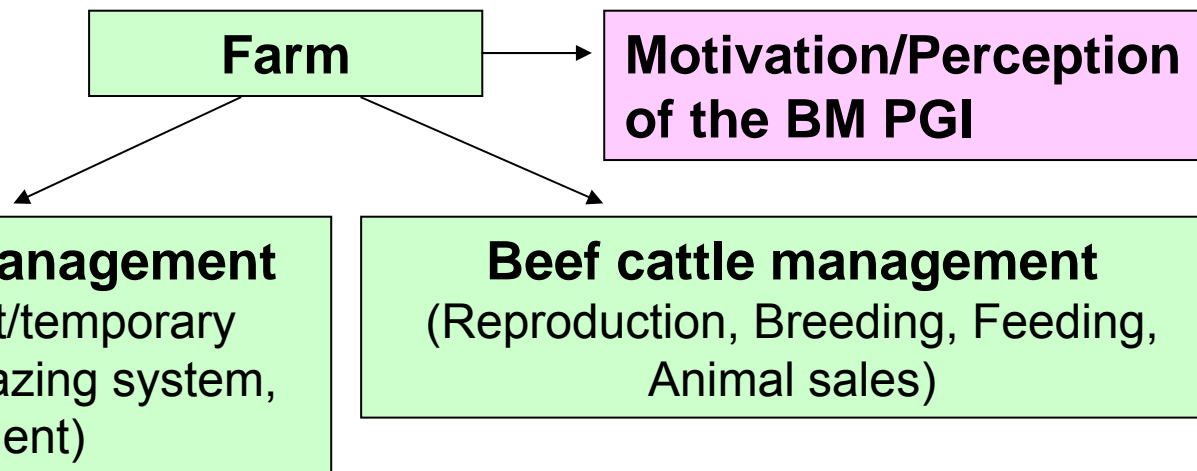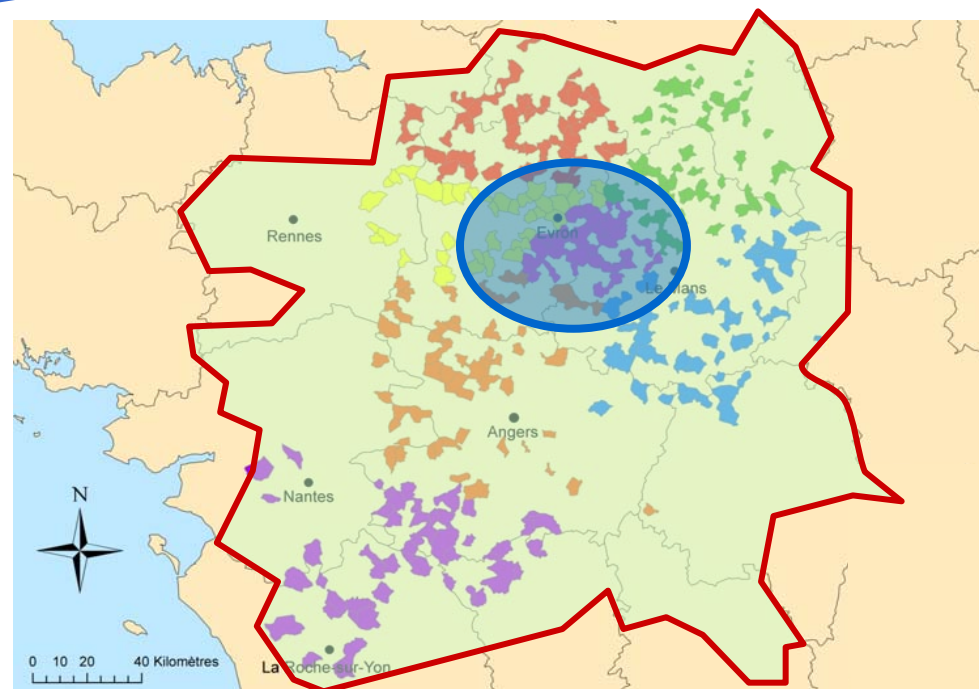
On average (2007-2008):

-Agricultural Area = 97±37 ha, Forage crop area = 64±39 ha (within 80% of grasslands)

-35±37 calvings/year, Livestock density < 2 LU/ha (⚠: young bulls)

-PGI Animals : 8±6.9 cows (n=37), 9±7.4 heifers(n=57), 8±7.0 steers (n=14)

Characteristics of the studied farms

RESULTS

	Beef cattle	Beef + dairy cattle	Beef + pig or poultry	Total
Total	32	27	23	82

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RESULTS

	Beef cattle	Beef + dairy cattle	Beef + pig or poultry	Total
Cow-Calf producer	8	5	4	17

<u>Small farms</u>

(< 50 calvings/year, small dairy cattle, small pig or poultry production)

Farms with a pig or poultry production = the more intensive pasture management

Characteristics of the studied farms

	Beef cattle	Beef + dairy cattle	Beef + pig or poultry	Total
CC producer + YB fattener (with/without buying YB for fattening)	11	8	6	25

Smaller beef cattle size in farms with a dairy cattle (34 vs 80 calvings)

Farms with a pig/poultry production: biggest YB production (buying)

RESULTS

	Beef cattle	Beef + dairy cattle	Beef + pig or poultry	Total
Specialised heifers fattener	8	10	13	31

Fattening of **bought heifers** (7 to 19)

Beef cattle farms: small farms (20 ha), old farmers (often retired)

Other farms: main production = milk or pig/poultry ; fattening on permanent grasslands often far from the buildings

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RESULTS

Effective rate of BM involvement :

$$ERI= \frac{number\ of\ BM\ animals}{Total\ number\ of\ potential\ BM\ animals}$$

	Calving-Fattening	Fattening
ERI	47% ± 33.6	80 ± 35.4
Number of BM animals	12.8 ± 10 (53% cows, 36% heifers)	12.5 ± 8.3 (93% heifers)
Objectives	Selection of the best animals (high prices) => Fattening adapted to the animals	Small groups of heifers Fattening on grasslands, by groups => Enhancing the value of pastures far from the farm

Implication of the farmers in the PGI
Original strategies

Objective	Maximise the production of PGI young females
Strategy	High replacement rate (> 40%) Heifers and young females (1 calving) => PGI ERI = 90%
Strengths	Turn-over linked to PGI sales ≈ 700 €/calving Batches of fattened heifers/females High level of fattening knowledge
Weaknesses	Breeding strategy on both growth and calving performance Batches => Pb of seasonality of sales

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Implication of the farmers in the PGI Original strategies

RESULTS

Objective	Maximise the production of PGI steers
Strategy	≈ 12 steer-batches ERI of steers > 80% Diet mainly based on grazing (seasonal activity) Slaughter age > 3.5 years, Carcass weight > 550 kg
Strengths	Turn-over from PGI animals ≈ 1000 €/calving Batches of fattened steers Enhancing the economic value of grasslands
Weaknesses	Difficulty to sell steers in France Batches => Pb of seasonality of sales

Farmers' motivations

RESULTS

Presence on the farm of another PGI production (Broiler/egg)

Motivated / involved farmers (n=24)

Support the specifications

PGI = Quality trademark

Presence at the general meetings

Harder specifications

Opportunist farmers (n=12)

Opportunist + involved farmers (n=33)

PGI = Higher income, simplification of farm mgmt

Softer specifications

PGI = Higher income

Absence at the general meetings

Critical farmers (n=17)

Do not support the specifications

The youngest: 44 years BM inscription = BSE crisis

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CONCLUSION

Different farming systems

LIMITED EFFECTS of the specifications (beef farming systems similar to those of the area

=> Increase the level of discrimination or enhance the image of the PGI on these differences

Motivated and involved farmers

Max sale of PGI animals

Renewal of farmers population
⇒Youngest are the most critical
⇒**Lost of involvement in the PGI strategy?**

Most of the farms : **individual strategies** (best animals, regular production => butchers)
High diversity of strategies => sources of adaptability and dynamism

Characterize the livestock farming systems

Different farming systems

DYNAMISM

=> Enhance the environmental value of the PGI farms, Maintain a high diversity of farms

STRONG links

WEAK point of the PGI => Develop strategies to increase the involvement of farmers

Farmers motivated and involved

Max sale of PGI animals

DYNAMISM ADAPTABILITY

=> Decrease in the motivations ?

DYNAMISM ADAPTABILITY

=> Develop market strategies

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