



Gembloux Agro-Bio Tech group project

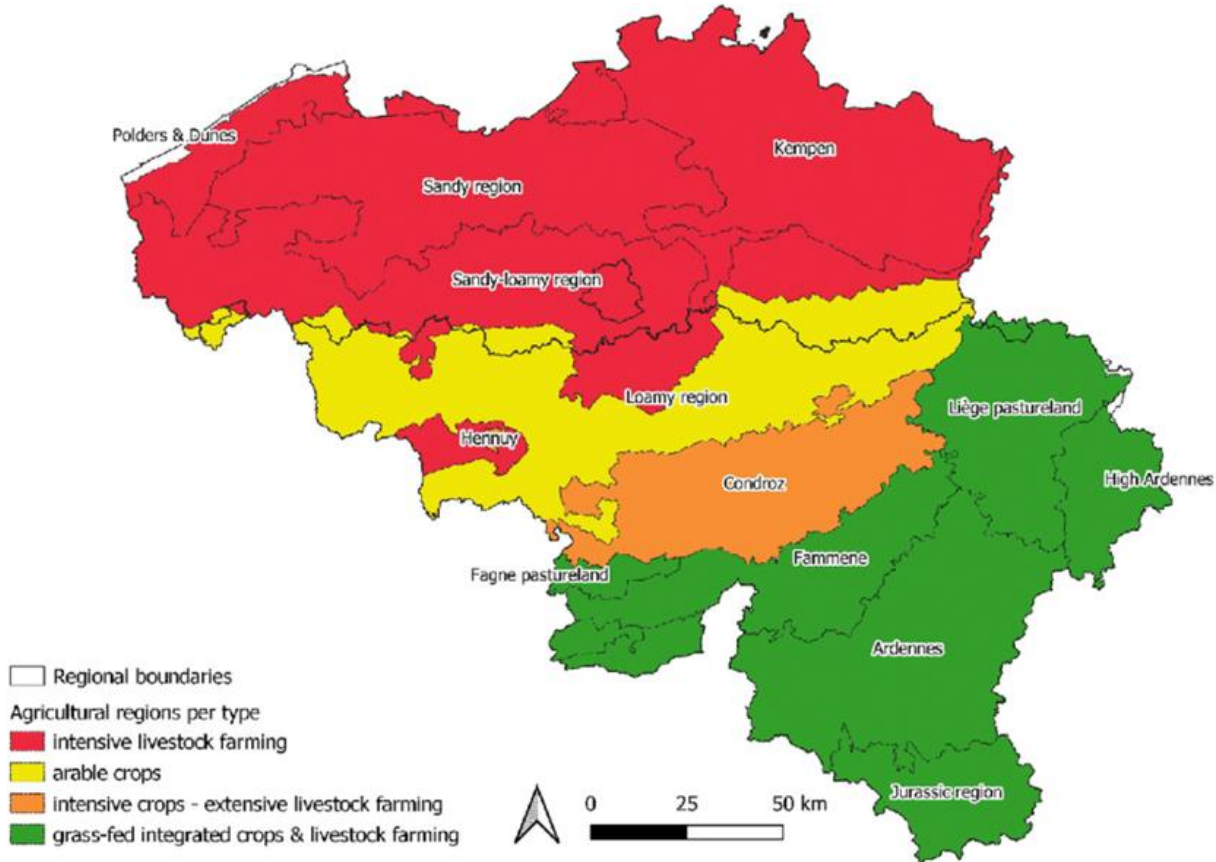


# Agriculture and Animal husbandry in Belgium: A case of the dairy farm "le Bailli"

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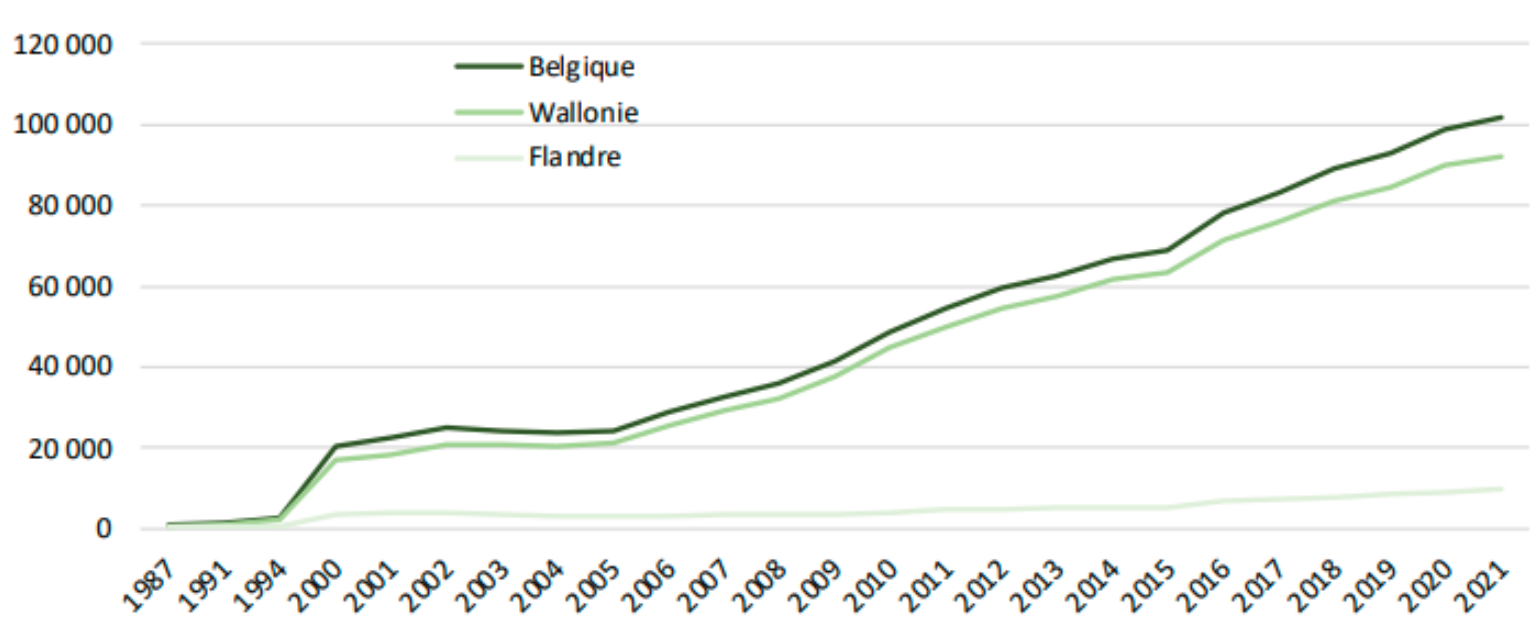
Anastasia et al., J. Environ. Manage. 2021

≈ 2.4 million head of cattle  
46% in Wallonia

≈ 480 000 ha of permanent  
grassland  
65% in Wallonia



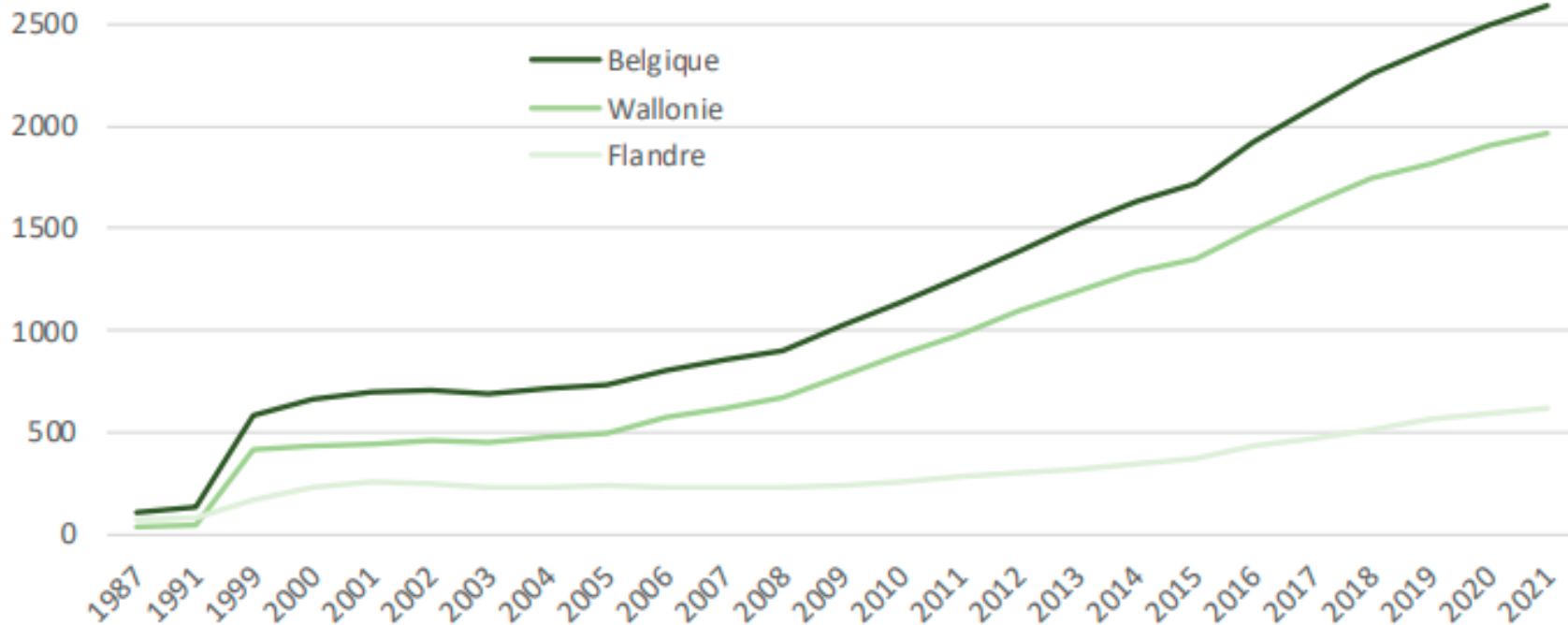
## Evolution of the organic agricultural area in Belgium (ha)



<https://www.biowallonie.com/wp-content/uploads/2022/07/Chiffres-du-bio-2021.pdf>



## Evolution of the number of organic farms in Belgium



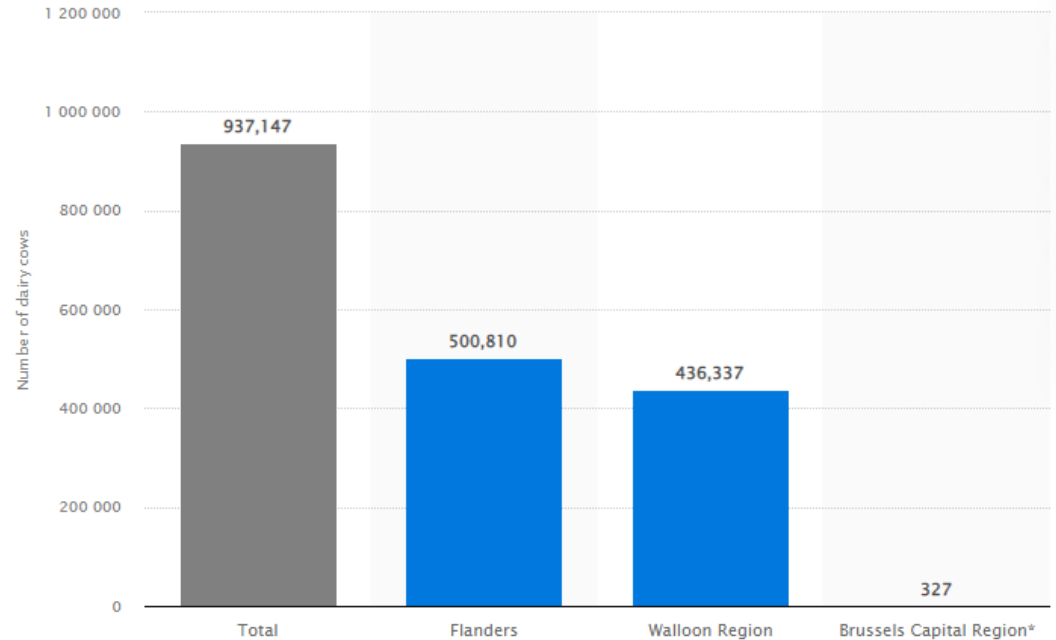
<https://www.biowallonie.com/wp-content/uploads/2022/07/Chiffres-du-bio-2021.pdf>



### Distribution of the value of animal production in 2021

- Milk 32%
- Pigs 26%
- Cattle 24%
- Poultry 15%

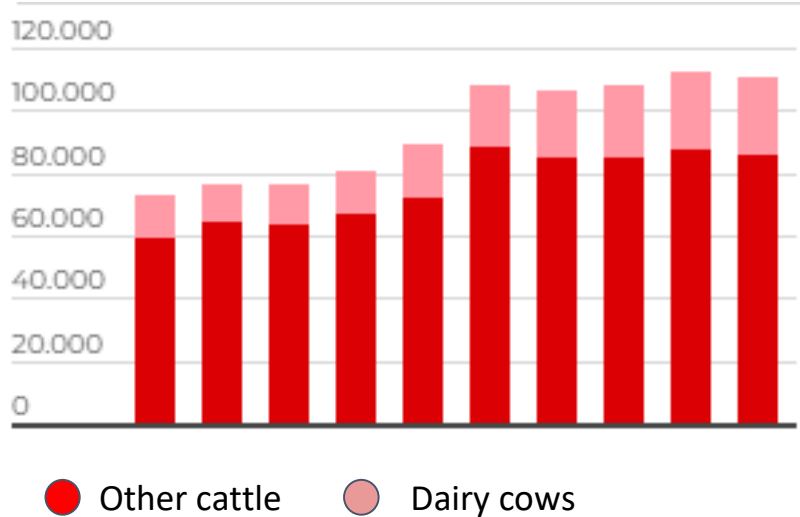
### Number of cows in Belgium in 2021, by region



<https://www.statista.com/statistics/771362/total-number-of-cows-in-belgium-by-region/>



## Organic cattle herds (head)



Density of livestock -2020



- Higher livestock density in the northern provinces: Pigs and poultry are particularly over-represented.
- 9.9% of the Walloon cattle population is organically produced

<https://statbel.fgov.be/fr/chiffres-cles-de-lagriculture-2022>





Farms go digital :  
Connected collar  
Software to predict  
biomass  
(29/03/2023)

Smart Farming: when  
the agriculture of the  
future arrives in  
Wallonia  
(22/03/2023)



<https://www.rtbf.be/article/smart-farming-quand-lagriculture-du-futur-debarque-en-wallonie-11171021>

<https://www.rtbf.be/article/collier-connecte-pour-les-vaches-logiciel-pour-predire-la-quantite-d-herbe-les-fermes-aussi-se-numerisent-11175183>





# PART 2: Introduction of the farm “le Bailli”

## The farm “le Bailli”

*Dairy farm in Soignies, Belgium*



An advertisement for 'Le Bailli' farm. The top part features a hand-drawn illustration of a farm building and the name 'Le Bailli' in a cursive font. Below this is a photograph of a black and white Holstein cow standing in a field. To the right of the cow is a display of various cheeses, including round wheels and wedges. Text on the advertisement includes: 'Visitez notre site www.lebailli.be', 'Naturellement riche en CLA et oméga-3', 'Elevage de vaches Pie-Noire Holstein', 'Fromage de ferme au lait cru', 'VENTE À LA FERME OU À DOMICILE GROS ET DÉTAIL', and 'Hubert et Martine Devroede - Degreève, Chemin des Théodosiens, 126 - 7060 Soignies - Tél(067) 33 28 92'. There is also a small logo for 'NATURMAGIS'.

# PART 2: Introduction of the farm “le Bailli”

Three generations  
since 1960s

1960s

Grandparents managed mixed herd, producing milk and butter.

1970

Shift towards specialized dairy production, importing 20 Holstein heifers from Canada.

1981

Expansion as parents joined, doubling herd and farm size.

2009

Growth continues as our new generation joined.

2014

Construction of new dairy barn and cheese dairy.

Le Bailli Farm aims to deliver an authentic, diverse farm-to-table experience through high-quality, artisanal dairy products, with animal welfare and sustainable farming as top priorities.



## PART 2: Introduction of the farm “le Bailli”

### Products



# PART 2: Introduction of the farm “le Bailli”

## Facilities

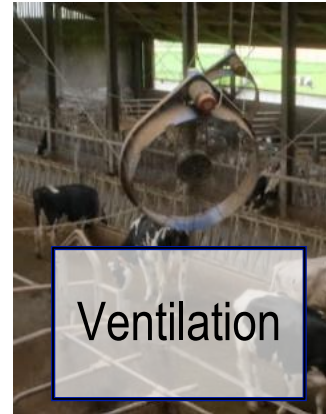
Milking robot



Brush



Ventilation



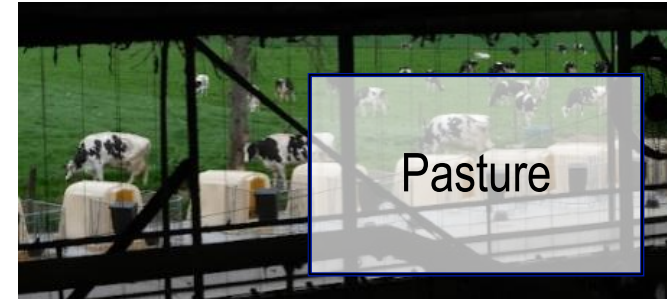
Cleaning robot



Free stall

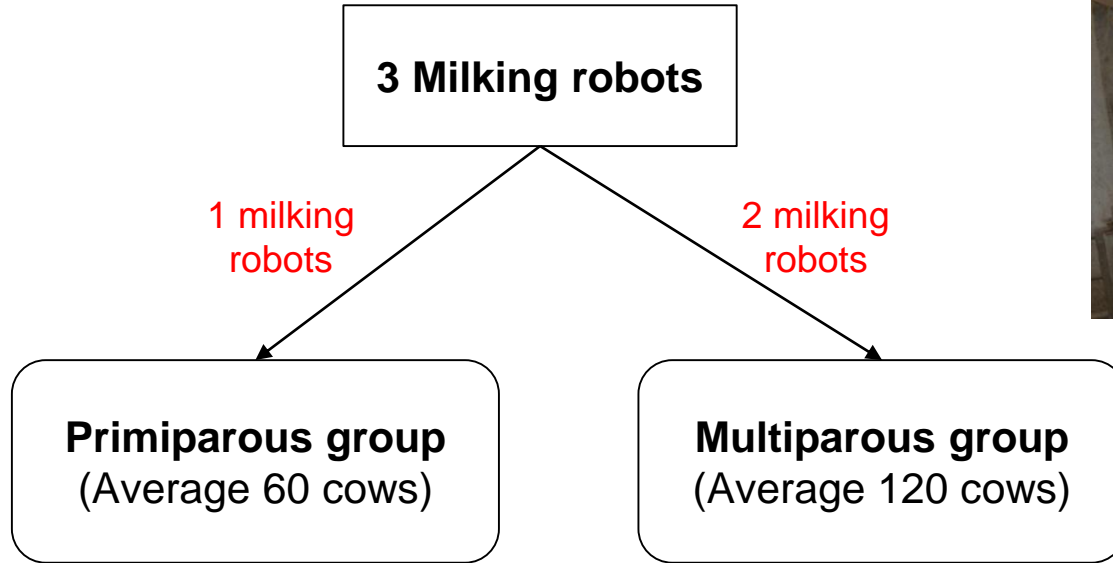


Pasture



# PART 3: Analysis of the farm “le Bailli”

Milking robots: used around 9 years



At least 1500 L of milk per day for a single robot (*DeLaval recommendation*)

Less physical work

No time constraints

Working comfort

**Flexibility**

Less stressful



Data analysis work  
Technical problems

More time with family



## Highlights

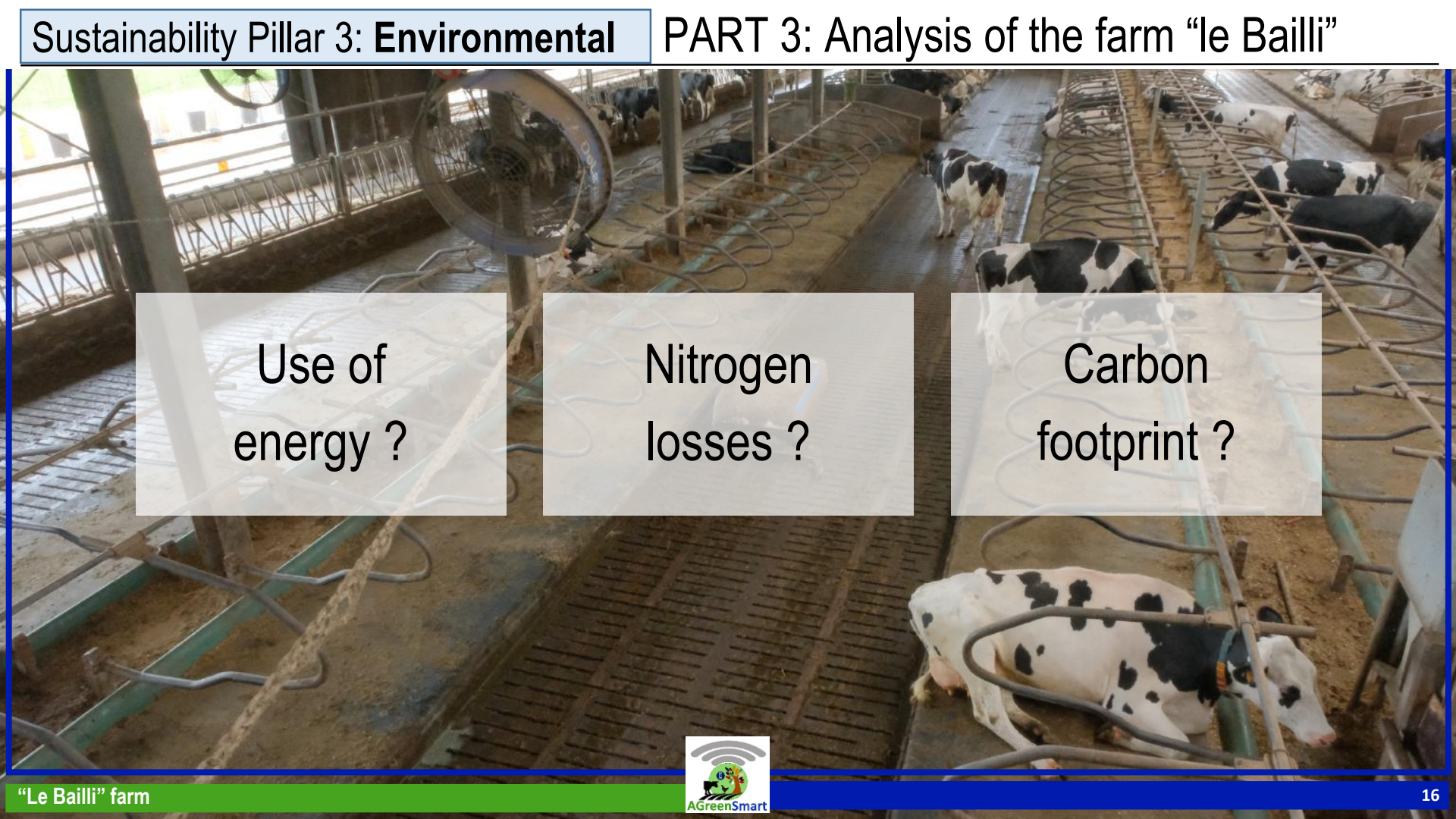
- Reduce labor cost
- Improve milk yield (around 10%)
- No change in milk quality
- Promote animal welfare (more calm)

## Challenges

- Increase cost
- Energy cost
- Maintenance cost (error in robots)
- Insurance contract (Omnium)

**Price of milk  $\Rightarrow$  depend on the market**





Use of energy ?

Nitrogen losses ?

Carbon footprint ?



# CONCLUSIONS

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Milking robots  
at the farm “le  
Bailli”



Economic pillar



Social pillar



Environmental pillar



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# THANK YOU FOR YOUR ATTENTION

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