Scaling up mitigation in French livestock sector

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Bioeconomy and Climate Action in rural areas
• Context of the low carbon initiatives in French cattle farms
• How cattle farmers are applying mitigation practices?
• Which initiatives are developed for disseminating practices?
• What are the conditions for upscaling?
• What institutions are involved and what are their roles?
• Transferability issues?
Context: Toward a low carbon and sustainable cattle production in France

- **2006-2013**
  - FAO Report
  - Development of methodologies
  - Evaluation of GHG emissions in cattle production systems

- **2013-2017**
  - Dissemination of the low carbon programs
  - Evaluation of mitigating practices

- **2018-2019**
  - Dissemination of the low carbon programs
  - Development of mechanisms support

- **2019**

- **2030-2050**
  - Low carbon production systems

FAO Report

Dissemination of the low carbon programs
Development of mechanisms support

Evaluation of mitigating practices
First, an audit for identifying best practices and potential gains

Methodology: In accordance with main guidelines

Certified by Ecocert
• No difference between production systems...
• but high difference between efficient and less efficient farms

3 316 dairy farms
# Carbon footprint and farm practices

## Economic & environmental efficiencies ➔ a driver for applying mitigation practices

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>TOP 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon footprint kg CO2/l FPCM</td>
<td>1.04</td>
<td>0.85</td>
</tr>
<tr>
<td>Milk yield, liter FPCM/cow/year</td>
<td>7,490</td>
<td>8,220</td>
</tr>
<tr>
<td>Age at first calving, months</td>
<td>29</td>
<td>28</td>
</tr>
<tr>
<td>Concentrate rate, g/l milk</td>
<td>166</td>
<td>146</td>
</tr>
<tr>
<td>N-fertilizer use, kg N/ha</td>
<td>145</td>
<td>122</td>
</tr>
</tbody>
</table>

Operating costs

14 €/1000 l
From GHG accounting to the SDGs
More than 40 mitigations practices

<table>
<thead>
<tr>
<th>GHG emissions</th>
<th>Carbon sequestration</th>
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<tbody>
<tr>
<td><strong>Inputs</strong></td>
<td></td>
</tr>
<tr>
<td>Pasture management, Concentrates and fertilizers, Legumes, Crops rotation</td>
<td></td>
</tr>
<tr>
<td><strong>Fuel and electricity</strong></td>
<td></td>
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<tr>
<td>No-till cultivation, Power and equipment, Working organization</td>
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<tr>
<td><strong>Crops management &amp; fertilization</strong></td>
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<tr>
<td>Legume fodder crops, Optimization of fertilizers uses</td>
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<tr>
<td><strong>Herd management</strong></td>
<td></td>
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<tr>
<td>Increasing productivity</td>
<td></td>
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<tr>
<td>Reducing number of unproductive animals</td>
<td></td>
</tr>
<tr>
<td><strong>Feed</strong></td>
<td></td>
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<tr>
<td>Feed efficiency, Forage quality and yield</td>
<td></td>
</tr>
<tr>
<td><strong>Manure management</strong></td>
<td></td>
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<tr>
<td>Time spent in shed vs pasture, Biogas production</td>
<td></td>
</tr>
<tr>
<td><strong>Cover crops</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Avoid bare soil</strong></td>
<td></td>
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<tr>
<td><strong>Agroforestry</strong></td>
<td></td>
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<tr>
<td><strong>Grassland management</strong></td>
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</tbody>
</table>
French initiatives for reducing carbon intensity and disseminating practices

Target: Reducing by 15 to 20% the carbon footprint

- **LOW CARBON DAIRY FARM**
- **BEEF CARBON**
- **GREEN SHEEP**
- **UNDER DEVELOPMENT IN GOAT, CROPS FARMS, POULTRY, EQUINE**
Institutions involved and the partnership
Mechanisms for supporting the implementation and the transition

• CAP
  • Agri Environment measures
  • Eco-Scheme
• Payments for ecosystem services
• Carbon finance (private and public funds)
• Scope concerns cattle and crop productions
• A methodology approved by the French Ministry of Ecological Transition

RÉPUBLIQUE FRANÇAISE

Ministère de la transition écologique et solidaire

Direction générale de l’énergie et du climat

Décision du 30 septembre 2019
portant approbation d’une méthode pour le label « Bas-Carbone » intitulée « méthode de suivi des réductions d’émissions en élevages bovins et de grandes cultures conforme au label Bas-Carbone »
Carbon offset projects a driver for implementing mitigation practices

• Several steps for involving cattle farmers

Information - Training

Farm assessment CAP’2ER

Carbon mitigation action plan

Monitoring

CARBON AGRI

Carbon certification

120,000 farmers

12,000 farmers

500 farmers in 2019
Role of institutions involved in carbon offset projects

- Farmers
- Project developers and advice companies
- Buyers
- Ministry of Ecological Transition
Role of institutions involved in carbon offset projects

Farmers → Project developer 1 → Advice company → Buyers

Farmers → Project developer 2 → Advice company

Farmers → Project developer 3 → Advice company

Farmers → Project developer 4 → Advice company

$\Sigma CO_2$
Transferability

- LIFE BEEF CARBON 2014-2020
  - EU LIFE SUSTAINABLE CATTLE
    (Carbon offset – project submitted)

- EU LIFE GREEN SHEEP
  (GHG Mitigation – project submitted)
Lessons learnt

• Whole farm assessment, complex but crucial for avoiding burdens transfer and to looking for a sustainable action plan

• Carbon transition, a new opportunity in farm advising, but efforts have to be done to limit or support the implementation cost

• Efficiency improvement and payment for farmers, an opportunity to lever barriers in applying mitigation practices

• The environmental co-benefits represent a value for valorizing carbon credits and communication

• A need in better sharing methodologies and considering additional carbon sequestration

• France CARBON AGRI association, an opportunity to reduce engineering costs and to merge farmers, projects developers, advisers and buyers expectations
Thanks for your attention

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