

## **Internship offer - MASTER 1**

Assessment of production efficiency and environmental impacts of French beef suckler systems across different scales

*The French National Research Institute for Agriculture, Food, and the Environment (INRAE) is a public research establishment. It is a community of 12,000 people with 272 research, experimental research, and support units located in 18 regional centres throughout France. Internationally, INRAE is among the top research organisations in the agricultural and food sciences, plant and animal sciences, as well as in ecology and environmental sciences. It is the world's leading research organisation specialising in agriculture, food and the environment. INRAE's goal is to be a key player in the transitions necessary to address major global challenges. Faced with a growing world population, climate change, resource scarcity, and declining biodiversity, the Institute has a major role to play in building solutions and supporting the necessary acceleration of agricultural, food and environmental transitions.*

### **WORKING ENVIRONMENT AND ACTIVITIES**

You will work in the Herbivores joint research unit (UMR Herbivores). This unit conducts research for a multi-performing herbivore breeding, mobilizing the levers of agroecology. This involves research to better understand animal functions and the impacts of breeding practices on the animal and the environment. The UMR Herbivores has 120 permanent staff, including 74 researchers and engineers, and welcomes about 60 non-permanent staff each year (including about 20 PhD students and post-doctoral positions). It is organized into 5 research teams, a support team and a management team.

You will work in the team PERAQ (Farming practices, Robustness, Adaptation and products Quality). You will interact with researchers in the team DINAMIC (UMR Herbivores) and the Animal Production Systems Group, Wageningen University and Research, the Netherlands.

Improving production efficiency through better genetics, nutrition and management at the animal scale is often suggested as a solution to address sustainability challenges in livestock farming. In France, however, despite significant progress in animal breeding and an increase in concentrate use over the past decades, the beef production sector showed neither an improvement in input use efficiency nor a reduction in environmental footprints. Insights why increased production efficiencies at the animal scale do not transfer to the farm scale are currently lacking.

*This MSc-internship topic is part of a joint WUR-INRAE project, which aims to understand the impacts of scale changes on production efficiency and environmental performances in French beef suckler systems. Four farm systems with Charolais cattle in the Massif Central, different in feed production, farm size and herd management practices, are being simulated using mechanistic models and compared in terms of production efficiency and environmental impacts at three different scales (animal, herd and farm).*

- You will be in charge of the assessment of cradle-to-farm gate environmental impacts (GHG emissions, nutrient surplus, feed-food competition, etc.) of French beef suckler systems based on results from simulation scenarios.
- Special conditions of activity: only desk-study related activity

### **TRAINING AND SKILLS REQUIRED**

- Recommended training: Master student in one of these programs: animal production, agricultural sciences or environmental sciences

- Knowledge required: livestock production systems, French beef cattle production, life cycle assessment
- Appreciated experience: evaluation of environmental impacts and global warming potentials
- Skills sought: teamwork, autonomy, R programming software, good English skills (both oral and written)

## INRAE'S LIFE QUALITY

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By joining our teams, you benefit from (depending on the type of contract):

- 2,5 days of annual leave per month of attendance;
- [sports and cultural activities](#);
- a dedicated and free public transport service;
- collective catering.

### ↘ Reception modalities

- Unit: **UMR Herbivores**
- Postal code + city: **63122 St Genès Champanelle**
- Type of contract : **Internship**
- Duration of the contract: **4 - 6 months**
- Starting date: **September 2024**
- Amount of the grant : **4,35€ per hour of actual attendance**

### ↘ How to apply

Send a motivation letter and a CV by e-mail to:

**Hieu NGUYEN-BA** – [hieu.nguyen-ba@inrae.fr](mailto:hieu.nguyen-ba@inrae.fr)

**Maguy EUGENE** - [maguy.eugene@inrae.fr](mailto:maguy.eugene@inrae.fr)

**Aart VAN DER LINDEN** - [aart.vanderlinden@wur.nl](mailto:aart.vanderlinden@wur.nl)

✘ Deadline for application: 21/07/2024