

Description of the facility

- **Lab facility complying with EFSA guidelines (Directive 2010/63/EU) with Biosecurity Level 2.**
- All the experiments are evaluated by the ethical committee of the institution.
- Totally isolated from the rest of the farm, with independent control of the lighting, ventilation and the room temperature.
- Equipped with **36 metabolic units for piglets** (max. 2 piglets per unit) or **18 metabolic units for individually housed growing pigs and sows.**
- Feeding scheme: restricted or *ad-libitum* depending on the trial design.

Ileal Digestibility and Balance tests

In the metabolic units it is possible to collect faeces and urine from the pigs separately.

Performing experiments in metabolic units gives the opportunity to conduct high quality research for developing new products or registering them in the EU (conform to EFSA standards) such as:

- **Ileal and faecal digestibility** trials in post-weaning piglets or growing pigs in order to determine the nutrient digestibility of feedstuffs or new ingredients.
- **Nitrogen and mineral retention tests** by urine and faeces collection, using an slope ratio assay to determine for example the bioavailability of different amino acids or minerals.



Challenge studies

To evaluate the interaction between nutrition, health and immunity of different feed ingredients or feed additives, different challenge models in pigs are available:

- Escherichia coli challenge
- Streptococcus suis challenge
- Salmonella challenge
- Lipopolysaccharide (LPS) challenge.
- Sheep red blood cell or vaccines challenges
- Screening of biomarkers to monitor and evaluate the health status of pigs in commercial conditions
- Dietary challenge to disturb the gut microbiota

