

MODELLING, MEASUREMENT AND MITIGATION OF THE ENVIRONMENTAL IMPACT OF LIVESTOCK PRODUCTION SYSTEMS

Zaragoza (Spain), 12-16 December 2022

PROGRAMME

0. Welcome and Introduction (course, speakers, program) (2.5 h)
 - 0.1. Discussion based on the situation, perspectives and challenges in participants' countries
1. Livestock and climate change, sector trends, contribution to C, N and P emissions and mitigation strategies at global and regional levels GHG. Impacts and Emission sources in Livestock production systems (1.5 h)
2. C, N and P fluxes in livestock systems (2h)
3. Modelling and measuring emissions (17h)
 - 3.1. Modelling or measuring?
 - 3.2. Models to estimate emissions in livestock production systems
 - 3.2.1. Farm scale models
 - 3.2.2. System-National-Regional scale models
 - 3.2.3. Life Cycle Assessment (LCA) approach
 - 3.2.4. Practical works
 - 3.2.4.1. Estimating and comparing emissions at farm scale using models
 - 3.2.4.2. Estimating and comparing emissions at System-National-Regional scale using the GLEAM-i model
 - 3.3. Measuring nutrient fluxes
 - 3.3.1. Field scale
 - 3.3.2. Farm scale
 - 3.3.3. Animal scale
 - 3.3.4. Manure scale
 - 3.3.5. Technical visit: Measuring devices at field, animal and farm scale
4. Mitigation options. Technical and economic feasibility (5h)
 - 4.1. Feed
 - 4.2. Animal
 - 4.3. Manure
 - 4.4. System
 - 4.5. Practical work: Evaluate mitigation options at farm levels using models
5. Economic implications and decision making at farm scale (2h)
6. Conclusion and lessons learnt (1h)