Timetable: Advanced course "Cattle breeding for low methane emissions: From farm measurement to genetic progress" Zaragoza, Spain 24 – 28 February 2025

Hour	Monday 24	Tuesday 25	Wednesday 26	Thursday 27	Friday 28
8:00-9:00					
9:00-10:00		3.1. Definition of methane phenotypes in Cattle **O. Gonzalez-Recio, C. Manzanilla-Pech**	4.1.– 4.2. Estimation of genetic parameters and genetic models for methane emission **B. Gredler-Grandl, C. Manzanilla-Pech**	6.1 – 6.2. Implementation of methane traits in breeding programs **O. Gonzalez Recio**	2.7.1 Demonstration of different devices for Methane measurement devices Sniffers/Greenfeed (Freisoro) **A. Garcia, I. Goiri, O. Gonzalez-Recio**
10:00-11:00	0. Welcome to participants, message from organisers. Programme explanation **B. Gredler-Grandl, D. Yañez Ruiz**	3.2. Practical work: Editing raw data from sniffer and greenfeed **O. Gonzalez-Recio, C. Manzanilla-Pech**		6.3. Case study: Examples of implementation methane traits in breeding programs: Australia, New Zealand, Spain	
11:00-12:00		**Coffee Break**	**Coffee Break**	**Coffee Break**	Trip to NEIKER
12:00-13:00	1. Overview of global GHG emissions and genetics developments for methane mitigation in ruminants **H. Montgomery, R. Veerkamp**	3.2. Practical work: Editing raw data from sniffer and greenfeed **O. Gonzalez-Recio, C. Manzanilla-Pech**	4.3. Discussion session: Estimation of genetic parameters and genetic models for methane emission **B. Gredler-Grandl, C. Manzanilla-Pech**	6.3. Case study: Examples of implementation methane traits in breeding programs: Canada, Netherlands	2.7.2 Demonstration of devices for Methane measurement. Respiratory chambers (NEIKER) **A. García, I. Goiri, O. Gonzalez-Recio**
13:00-14:00	**Lunch**	**Lunch**	**Lunch**	6.4. Discussion session. Implementation methane traits in breeding programs	**Lunch**
14:00-15:00	2.1 – 2.5 Methane measurement techniques **A. Garcia**	3.2. Practical work: Editing raw data from sniffer and greenfeed **O. Gonzalez-Recio, C. Manzanilla-Pech**	5.1. Overview of proxies to estimate methane emission. Mid infrared spectra **A. Vanlierde**	7. Summary and final remarks	Trip to Zaragoza
15:00-16:00		4.1.– 4.2. Estimation of genetic parameters and genetic models for methane emission **B. Gredler-Grandl, C. Manzanilla-Pech**		**Lunch**	
16:00-17:00	**Coffee Break**	**Coffee Break**	**Coffee Break**	Trip and overnight in Vitoria	
17:00-18:00	2.6. Discussion session: Common problem and solutions for measuring methane **A. Garcia, I. Goiri, O. Gonzalez-Recio**	4.1.– 4.2. Estimation of genetic parameters and genetic models for methane emission **B. Gredler-Grandl, C. Manzanilla-Pech**	5.2. Overview of proxies to estimate methane emission. Microbiome **O. Gonzalez Recio, Suzanne Rowe**		
18:00-19:00					