

SMEthane

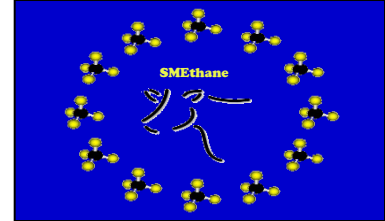
Technological platform to develop nutritional additives to reduce methane emissions from ruminants

FP7-SME-2010-1 262270

1st workshop

21-22 September 2011

National Motorcycle Museum, Solihull, UK



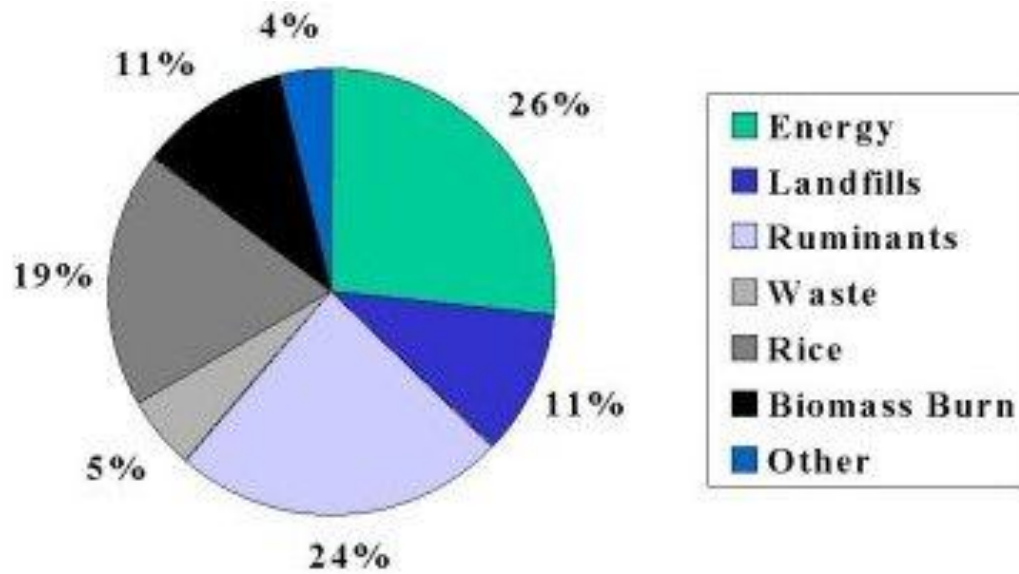
The context

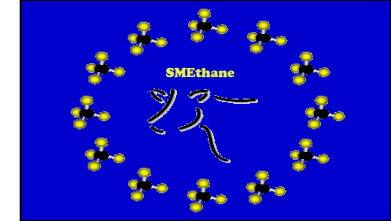
The problem

The opportunity

The constraints

CH₄ - 6%



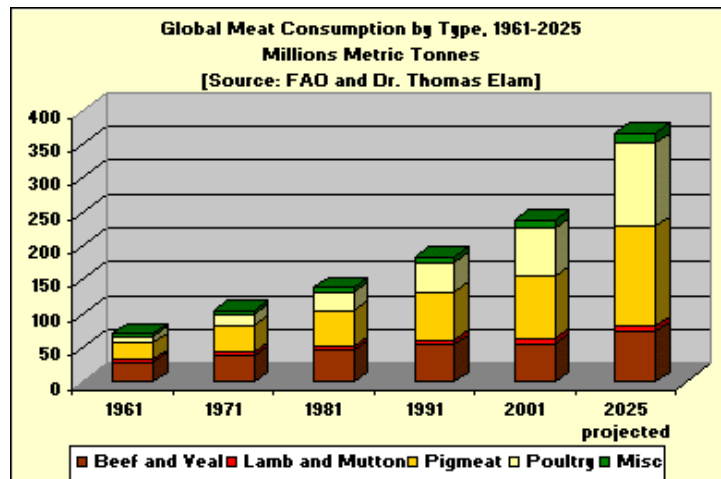


The context

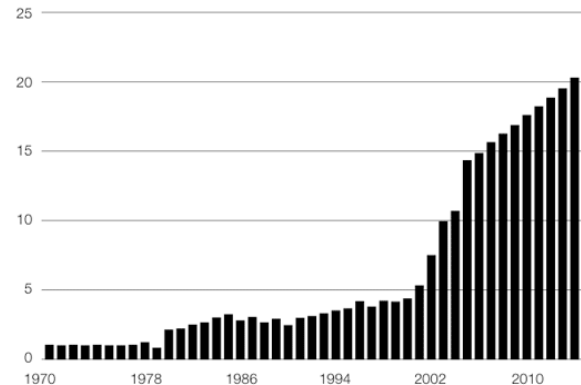
The problem

The opportunity

The constraints



MILK CONSUMPTION, CHINA
kgs per capita

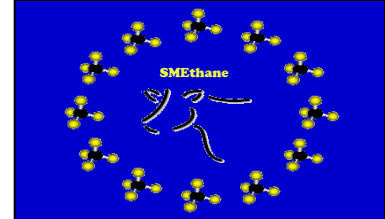


Source: OECD 2008 (2006 - 2015 are estimates)

Market for livestock performance enhancers - 7.3 \$ billion 2011

Nutritional Feed additives represent 65 %

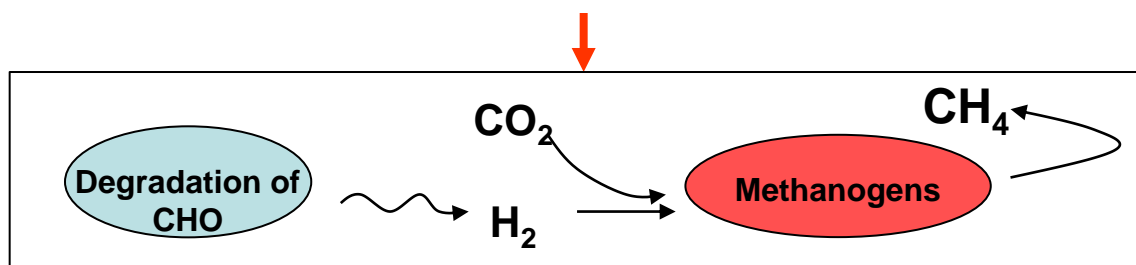
The context



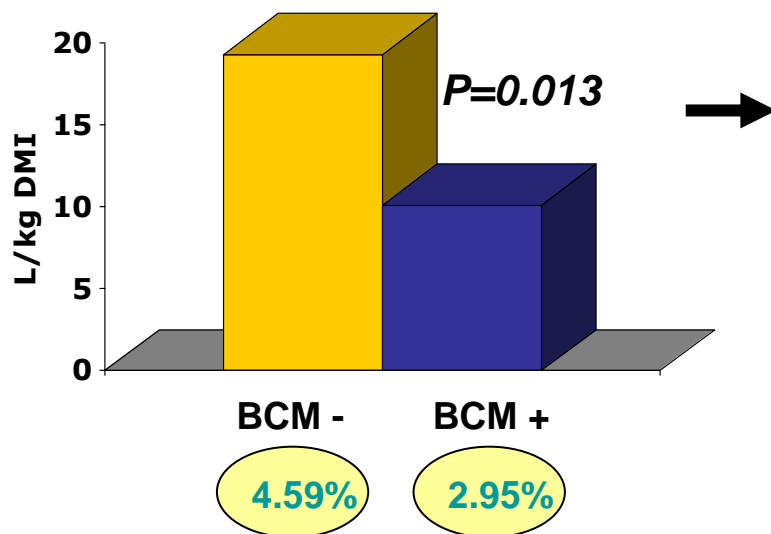
The problem

The opportunity

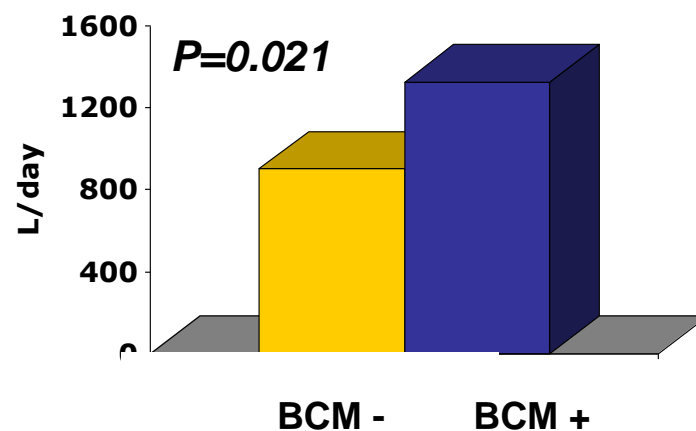
The constraints



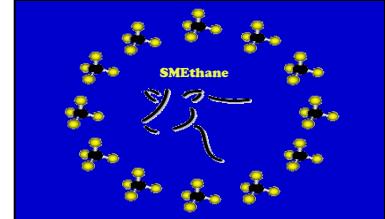
CH4 emissions



Milk yield



The context



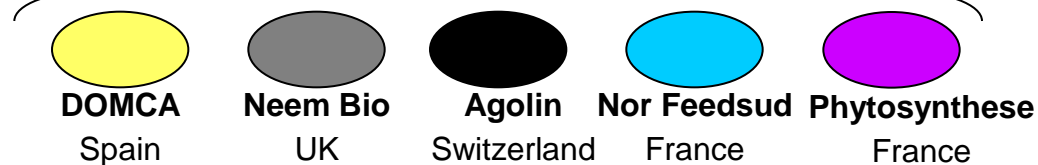
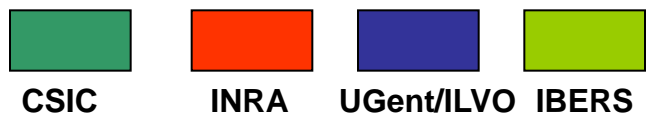
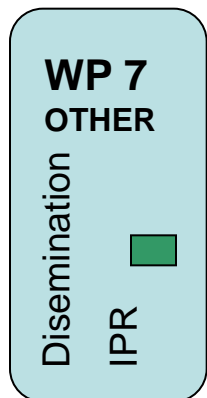
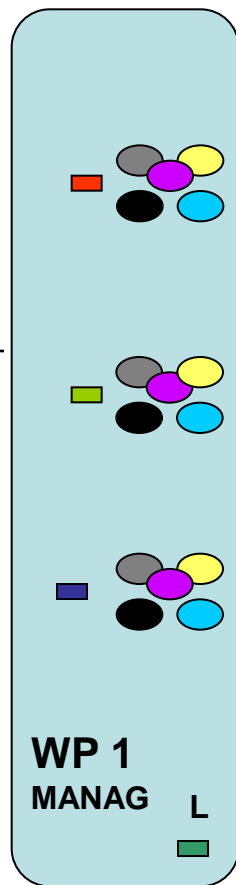
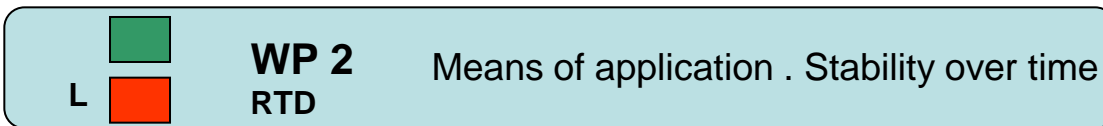
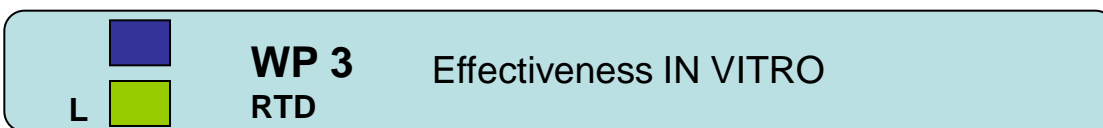
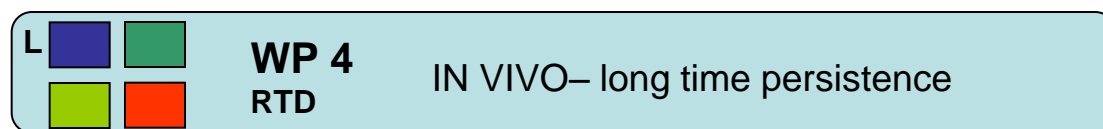
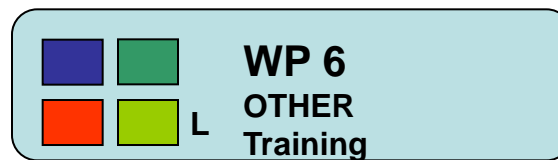
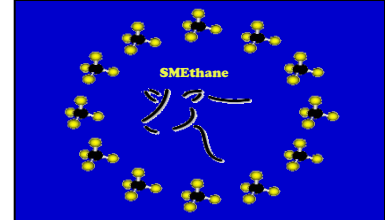
The problem

The opportunity

The constraints



- need to **standardise** and report the concentration of active component
- **stability** of the compounds in practical conditions
- **persistence** of the effects/adaptation of the rumen ecosystem
- lack of in vivo data over a range of **livestock production systems**
- effect of extract on the perceived quality of **milk** products
- a lack of production data on which to base calculations of **market prices**

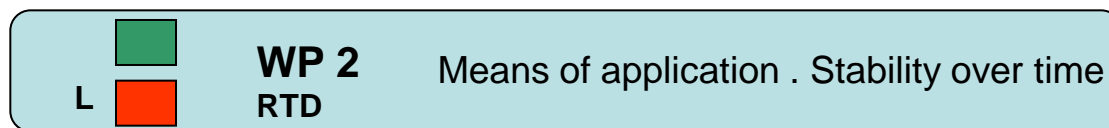
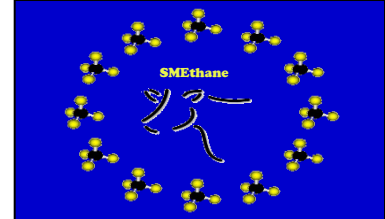


RTD

- 0, 1 and 3 months
- 4, 15 and 30 °C



GC-MS
HPLC

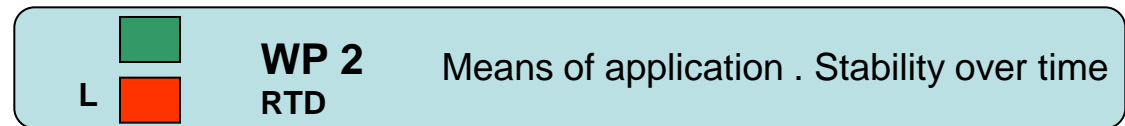
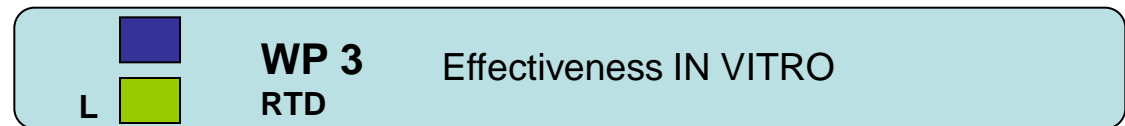
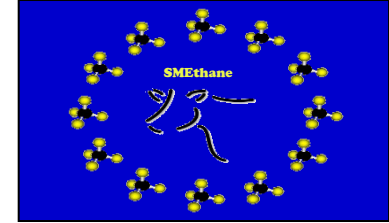




- 3 concentrations
- Two pH
- Diet



- Fermentation
- CH₄
- VFAs



RTD



CSIC



INRA

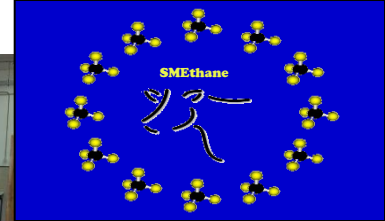


UGent/ILVO



IBERS





Long term

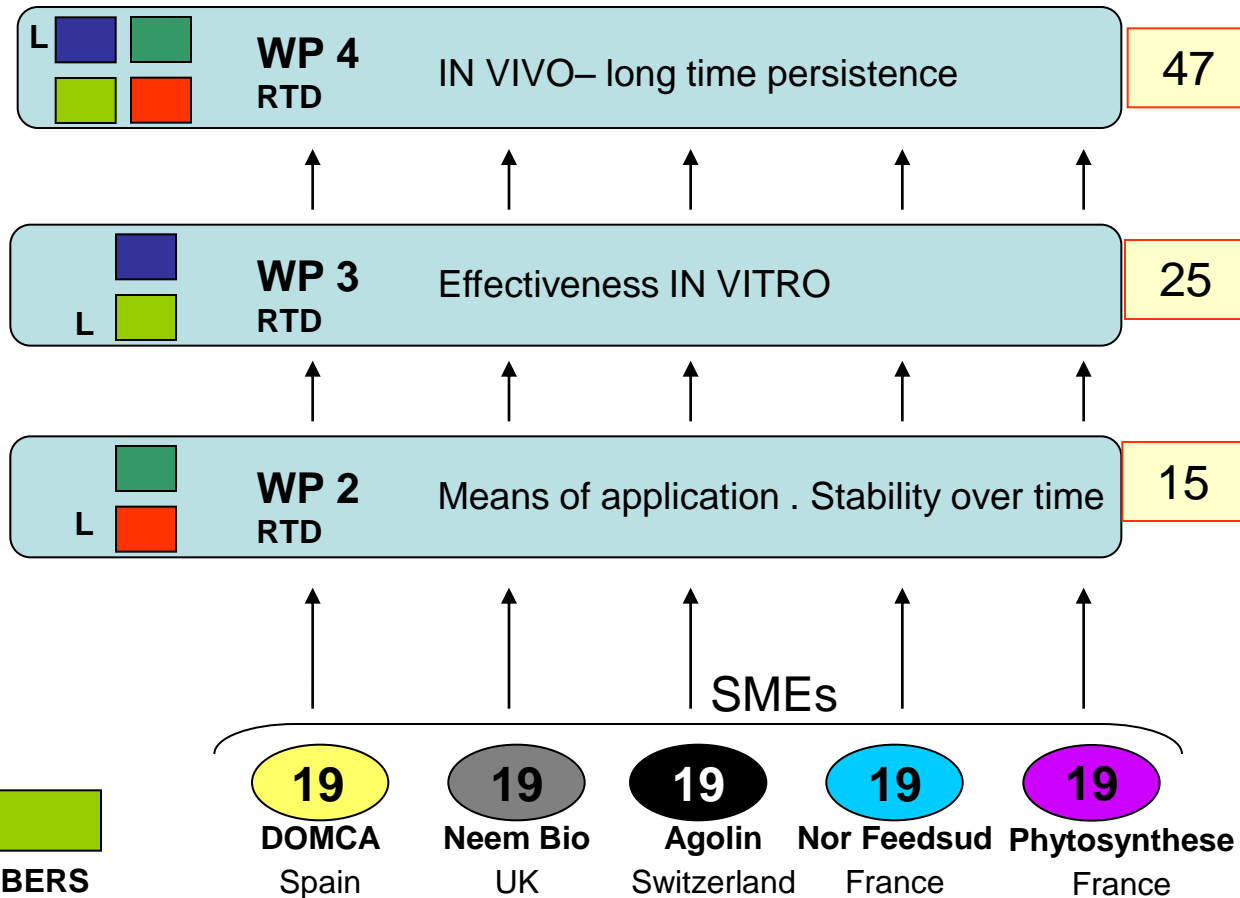
1 concentration

42 days

Short term

3 concentrations

7days



CSIC



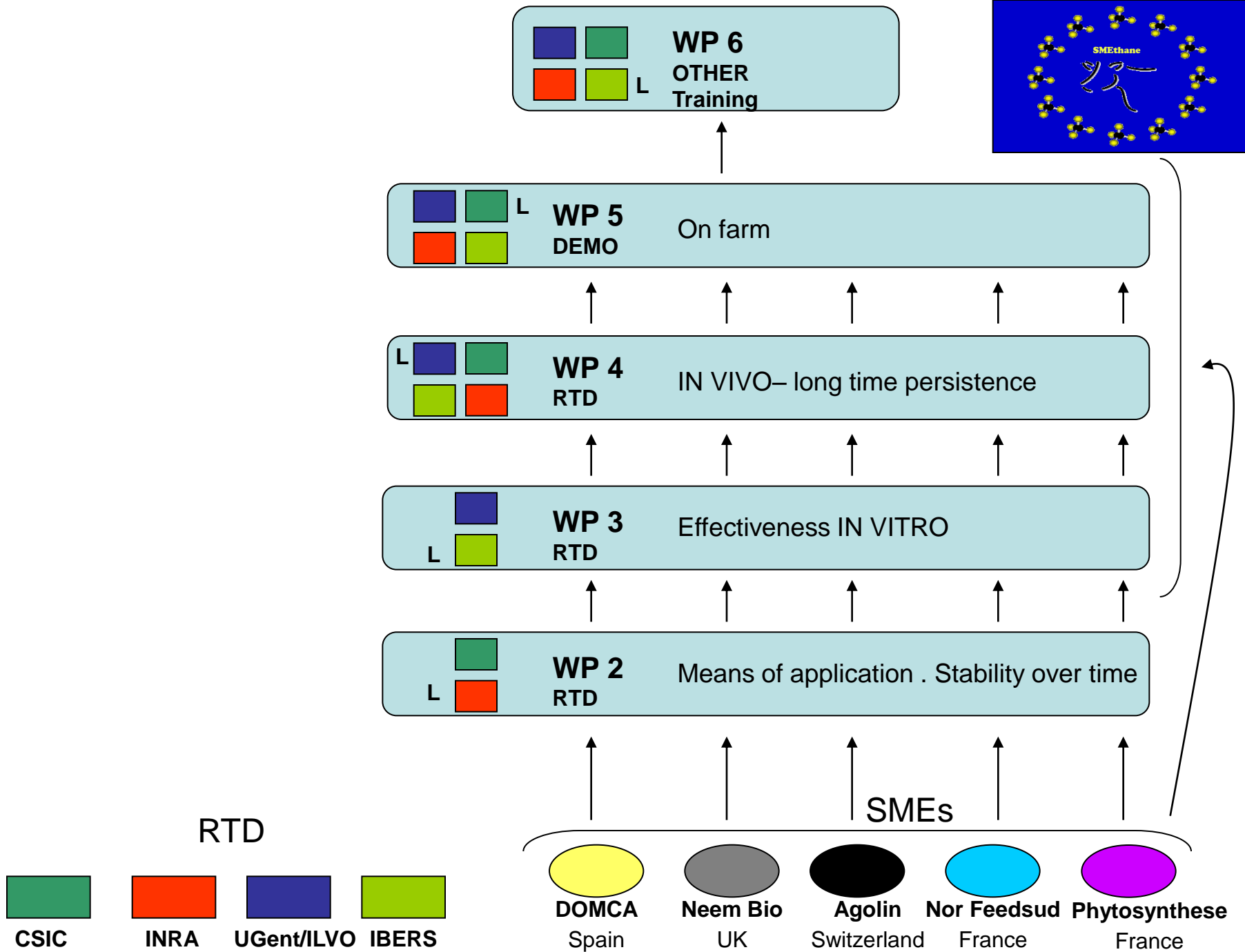
INRA



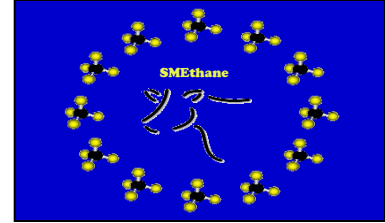
UGent/ILVO



IBERS

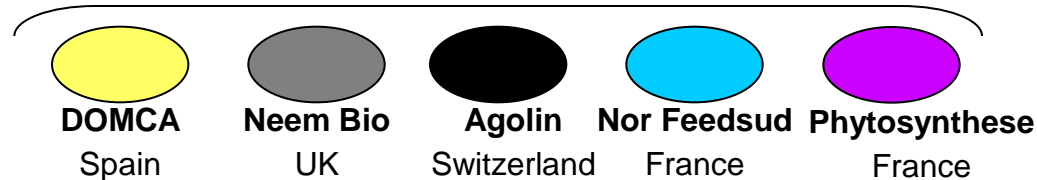
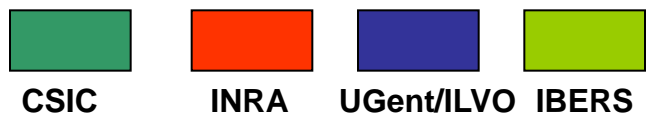
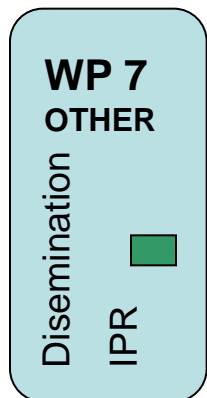
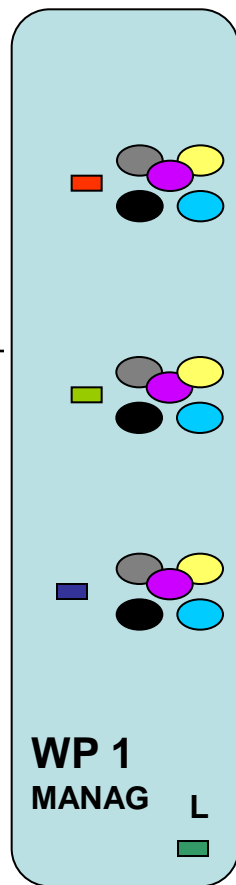
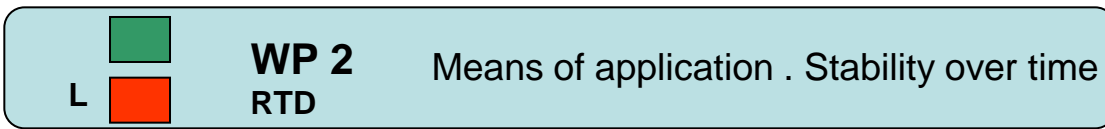
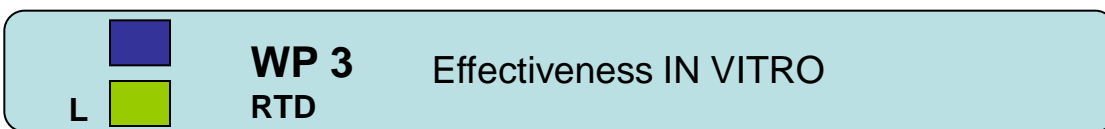
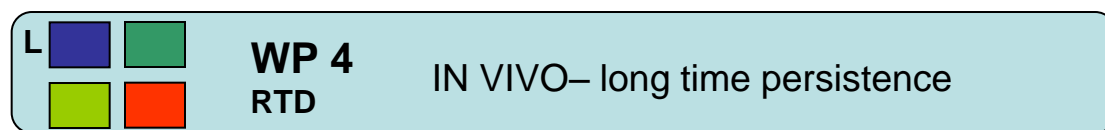
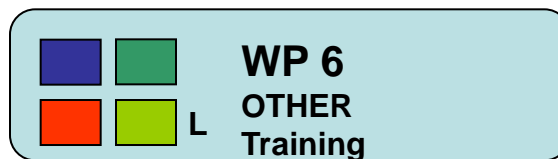
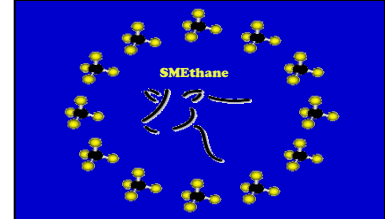


training Workshops



- 1st workshop – **Uk** - **Sept 2011**
- 2nd workshop – **Spain** - **Feb 2012**
- 3rd workshop – **France** - **Sept 2012**

- Effects of the use of plant extracts on animal productivity in different production systems
- Financial and regulatory barriers to the use of plant extracts in ruminant livestock
- ...





SMEthane

Technological platform to develop nutritional additives to reduce methane emissions from ruminants

FP7-SME-262270



Forthcoming events

September 21-22, 2011
1st Workshop.

[The Importance of Measuring Methane Production from Ruminant Livestock – the reason why we are doing this project](#)

Contact Info



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Languages

English
 Español

Welcome



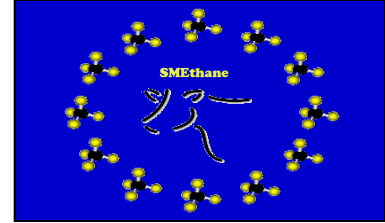
SMEthane aims to provide a technological platform for SME's to develop and progress further knowledge on the successful use of nutritional additives to reduce methane (CH₄) emissions from ruminants. CH₄ is the second most important greenhouse gas, after CO₂. At a global scale, livestock farming contributes up to 18% of total greenhouse gas emissions. The inhibition of CH₄ formation by ruminants has long been an objective of ruminant nutritionists, but a number of barriers to the development of novel dietary additives have been identified. SMEthane is designed to remove the restriction that SME's face in successfully developing and marketing novel compounds, in particular plant extracts. We will

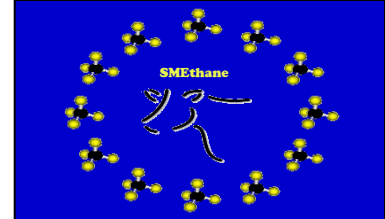
establish research and development platforms to allow SME's to determine: the means of delivery of such compounds in the diet, knowledge of the dose response curve for such compounds under different production systems, the persistence of the inhibitory effect of such compounds on CH₄ production over long periods of time and the potential 'side effects' such as change in flavour of the final animal product. SMEthane Research Consortium combines the capabilities of five major research and educational organizations from 4 European countries plus 6 enterprises with long experience in developing nutritional additives. The governance structure of the project has been established to ensure effective direction and management that maximizes the expertise and facilities available at each RTD to better meet SME's needs. Training and dissemination plan considered within SMEthane aim to provide training for the SME sector and its customer through different workshops based in key areas relevant to the development and usage of novel dietary additives to decrease CH₄ emissions. An Exploitation and Dissemination Team will be responsible for decisions on knowledge management issues such as patenting, licensing and other exploitations of the project results.

The project is coordinated by Dr. David R. Yáñez-Ruiz of CSIC in Spain and involves 10 partners:

- Aberystwyth University, United Kingdom (RTD performer)
- Agolin SA, Switzerland (SME)
- Consejo Superior de Investigaciones Científicas, Spain (RTD performer)
- DOMCA SA, Spain (SME)
- Eiden Vermoegen Van Het Instituut Voor Landbouw En Visserijonderzoek, Belgium (RTD performer)

dissemination





Thank you and enjoy the workshop