

## Sustainability of meat production

(coordinators: Angela Trocino, Enrico Sturaro)

The animal production industries in Italy and Europe has faced important sustainability concerns that have strongly compromised farm economy. In contrast at a global level, the forecast concerning the increase in population and income implies an increase in meat consumption and thus, production, with important consequences at different levels.

Innovative strategies should be adopted for diversification and integration of animal production with environmental sustainability, animal health and welfare, and social and economic equity with regard to the delivery of high-quality meat products, which are suitably valued by consumers.

The present teaching project aims to provide the students with basic knowledge about meat production systems and their sustainability by a multidisciplinary approach and a 'system thinking' view (e.g. animal performance, health, and welfare; meat quality) which includes the consumers' perception and considers the potential of different production systems (e.g. European-Australian; intensive-extensive) in addition to their environmental impact.

The added value of the project relies in the collaboration with the University of Sydney and the presence of international teachers which will open the view on a global perspective.

Specific supervised activities developed by the students will enrich the learning experience with generic competences about critical thinking, communication and team work.



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA



DEPARTMENT OF COMPARATIVE  
BIOMEDICINE AND FOOD SCIENCE

**DAFNAE**

Dipartimento di Agronomia Animali  
Alimenti Risorse naturali e Ambiente



THE UNIVERSITY OF  
SYDNEY

**Ph.D. ANIMAL  
COURSE & FOOD  
SCIENCE**  
UNIVERSITY OF PADOVA

**Time:** July, 10-16, 2017

**Location:** Campus of Agripolis, Legnaro (Padova), from Monday to Saturday. On Sunday, technical visit at Malga Juribello (Trento).

**Participants:** maximum 20 participants among young researchers, PhD students, bachelor and master students.

**Final examination:** multiple choice test with score (6 ETCS for the students of the School of Agriculture and Veterinary Medicine, University of Padova).

**Presentation of candidature:** from May 23 to June 18.

Send your CV to [angela.trocino@unipd.it](mailto:angela.trocino@unipd.it)

**Selection criteria:** *curriculum studiorum* and English level.

**Publication of results:** [www.bca.unipd.it](http://www.bca.unipd.it) and mail to selected candidates within June 20.

**Information:** for any request, please contact [angela.trocino@unipd.it](mailto:angela.trocino@unipd.it), [enrico.sturaro@unipd.it](mailto:enrico.sturaro@unipd.it)

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Pathology Arthropoda AQUATIC Microbiology Myosin  
Bony-fish Molecular Genetics BIOSTATISTICS  
Breeding Ethology Applied Bovine  
Genomics ENVIRONMENTAL Comparative  
actors Toxicology PATHOLOGY Marine  
Anatomy Behaviour Food Chemistry  
FEEDING Quality - Food Dru  
marker Animal Phyloge  
ells Veterinary Toxicology Safety  
HEAVY Evolution Chain  
Avian Activity Rabbit Brain  
Nutrition Neuroanatomy NUTRITIONAL  
Growth Conservation Bacterial Welfare  
Biosensors Biotechnology Products Authenticity  
COMMUNITY Biological

**SUMMER**  
**July 10-15, 2017**

**SUSTAINABILITY  
OF MEAT PRODUCTION**

University of Padova

|             | July, 10   | July, 11   | July, 12   | July, 13   | July, 14  | July, 15   | July, 16                           |
|-------------|--|--|--|--|---|--|------------------------------------|
| time        | Monday   | Tuesday  | Wednesday  | Thursday   | Friday  | Saturday   | Sunday                             |
| 8.30-9.30   | Registration and welcome coffee  | Ruminant production and concerns for sustainability in Australia<br><i>Melanie Smith</i>                               | Alternative feed ingredients for sustainable meat production: insects protein and oils<br><i>Laura Gasco</i> | Revision of pain physiology and indicators of Pain I<br><i>Peter White</i>   | Ecological indicators for the assessment of sustainability for meat production<br><i>Enrico Sturaro</i> | Marketing and retailing of products of animal origin: the role of consumers in driving quality changes in animal products<br><i>Luca Panzone</i> | Technical visit to a mountain farm |
| 9.30-10.30  | Opening  |  |  |  |   |  |                                    |
| 10.30-11.00 |  | Coffee break   | Coffee break   | Coffee break   | Coffee break  | Coffee break   |                                    |
| 11.00-12.00 | Sustainability of meat production: current state and future outlook and challenges<br><i>Anne Mottet</i> | Ruminant production and concerns for sustainability in Europe<br><i>Enrico Sturaro</i>                                 | Poultry meat quality and emerging issues (myopathies)<br><i>Angela Trocino</i>                               | Indicators for pain II, Pain relief and experience from Australia<br><i>Peter White</i><br><i>PhD students, Sidney</i> | Principles for Life cycle assessment computation<br><i>Enrico Sturaro</i>                               | Marketing and retailing of products of animal origin: the role of consumers in driving quality changes in animal products<br><i>Luca Panzone</i> |                                    |
| 12.00-13.00 |  | Swine production and concerns for sustainability in Europe<br><i>Luigi Gallo</i>                                       | Stress mechanism and indicators in livestock<br><i>Daniela Bertotto</i>                                      |  |   |  |                                    |
| 13.00-14.00 | Lunch  | Lunch  | Lunch  | Lunch  | Lunch   | Lunch  | Lunch                              |
| 14.00-15.00 | Agro-ecology and meat production<br><i>Alberto Bernués</i>   | Poultry production and concerns for sustainability in Europe<br><i>Alessandra Piccirillo</i><br><i>Giovanni Ortali</i> | Young scientists session: meat quality issues and round table<br><br>Supervision<br><i>Melanie Smith</i>     | Young scientists session: welfare case studies and round table<br><br>Supervision<br><i>Peter White</i>                | Case studies: Life cycle assessment computation<br><br>Supervision<br><i>Enrico Sturaro</i>             | Consumers' purchase intention towards ecological beef<br><i>Samuele Trestini</i>   | Technical visit to a mountain farm |
| 15.00-16.00 |  | Alternative species for meat production in Australia<br><i>Melanie Smith</i>   |  |  |   | Consumers' willingness to pay for food products<br><i>Mara Thiene</i>  |                                    |
| 16.00-17.00 |  |  |  |  |   | Final test and Farewell cocktail   |                                    |

### Teachers

**Alberto Bernués**, Centro de Investigación y Tecnología Agroalimentaria (CITA), Zaragoza, Spain

**Anne Mottet**, FAO, Global Livestock Environmental Assessment Model (GLEAM), Livestock Policy Officer, GLEAM coordinator

**Luca Panzone**, Agriculture, Food and Rural Development, Newcastle University, UK

**Melanie Smith**, The University of Sydney

**Peter White**, Sydney School of Veterinary Science, The University of Sydney

**Daniela Bertotto**, BCA-University of Padova

**Luigi Gallo**, DAFNAE-University of Padova

**Laura Gasco**, University of Torino

**Giovanni Ortali**, AIA - Agricola Italiana Alimentare

**Alessandra Piccirillo**, BCA-University of Padova

**Enrico Sturaro**, DAFNAE-University of Padova

**Mara Thiene**, TESAF-University of Padova

**Samuele Trestini**, TESAF-University of Padova

**Angela Trocino**, BCA-University of Padova

### Learning outcomes

At the end of the path, the students are expected to be able to:

- identify the main differences in meat production systems in Europe and Australia;
- to identify problems linked to animal welfare and propose suitable solutions;
- to assess the environmental impact and services of meat production systems;
- to get awareness about the consumers' aptitude towards products of animal origin.