



Animal Nutrition Group



WAGENINGEN
UNIVERSITY & RESEARCH

Animal Nutrition Group

The Animal Nutrition Group generates and transfers knowledge of the nutrition of animals to improve their production, health and welfare in a sustainable manner and improve the quality of life. We contribute to the production of safe and healthy foods for human consumption in a sustainable manner and to safeguard the health and welfare of animals. We do this through our graduate courses, research programmes and post-graduate courses.

Our activities

The Animal Nutrition (ANU) Group is one of the chair groups of the Department of Animal Sciences of Wageningen University & Research. In addition, ANU is the founding member of the Centre for Animal Nutrition, a collaboration between three internationally recognised animal nutrition groups in the Netherlands. The Centre develops fundamental and application-oriented knowledge in animal nutrition and ensures the exchange and transfer of this knowledge to government agencies, businesses, the primary animal nutrition sectors, societal institutions, NGOs and students.

Our research focuses on the following areas:

- Resource efficiency
- Animal health, longevity and vitality
- Feed and pet food technology & quality
- Animal welfare
- Nutrigenomics
- Environmental issues related to animal nutrition
- Modelling of nutritional processes

The majority of our research is conducted by our PhD candidates who publish their research in international peer-reviewed journals. In addition, our educational activities involve BSc and MSc courses, national and international post-graduate courses and an international joint degree in Animal Nutrition.



Education

Staff members of the Animal Nutrition Group provide specialised BSc and MSc courses in animal nutrition within the Animal Sciences degree of Wageningen University & Research.

Courses

Principles of Animal Nutrition (BSc) is an introductory course providing basic information on nutrients, their digestion and utilisation in various animals and feed-related issues in practice.

Feed Formulation Science (BSc) provides insight into the variation in feed ingredients, methods for formulating feeds and discusses conflicts of interest between e.g. purchasers, nutritionists and sales directors.

Animal Nutrition and Physiology (MSc) extends knowledge on digestive physiology and intermediary metabolism.

Nutrient Dynamics (MSc) focuses on the quantification of digestion and metabolism of nutrients in farm and companion animals.

Feed Technology (MSc) focuses on feed mill design and the effects of processing on nutrients and feeding value.



Post Graduate Courses

Each year, in collaboration with Wageningen Academy, the Animal Nutrition Group organises a number of national and international animal nutrition related post graduate courses such as Advances in Feed Evaluation, Pig Nutrition, Nutrition and (Hot)Climate in Poultry, Let Petfood be Thy Medicine and more.

"Improve health, welfare and longevity of pets through nutrition"

Research

The Animal Nutrition Group aims to provide a fundamental understanding of the nutritional processes and the effect of dietary compounds on the health, growth, welfare or longevity of production animals (dairy cows, calves, pigs, poultry) and companion animals (cats and dogs). We develop knowledge on the utilisation of (anti-)nutrients in feed/feed ingredients and their impact on the animal. We follow dietary nutrients as they are broken down (digested or fermented), absorbed and metabolised by animals.

Core areas of our research are feed technology, digestive processes, nutrient metabolism and requirements, sensing of nutrients, the interaction between nutrients and gene expression and mechanistic modelling of nutrient utilisation.

Depending on the animal species of interest, different research techniques are applied. Ruminant nutrition research is focused on rumen fermentation using in vivo, in sacco and in vitro methods and mechanistic modelling. Companion animal research is mainly centred around food technology and in vitro methodology. For pigs, poultry and veal calves, stable isotopes are also used to study metabolism and nutrigenomics and proteomics are used to study nutrient-cell interactions.

Our state-of-the-art laboratory facilities allow us to analyse a multitude of nutrients, biologically active components and stable isotopes and we have access to excellent facilities to conduct in vivo studies on a number of animal species.

