

# FEEDS AND NUTRITION COURSE 2019

ZAANDAM | THE NETHERLANDS | JUNE 3 - 7, 2019

'The course is specially designed for animal nutrition specialists'

## MODULE 7 | PRINCIPLES OF MONOGASTRIC NUTRITION

**A nutritionist is the person in a feed mill that is responsible for making diets that fulfil the nutritional requirements of an animal. To be able to fulfil these requirements it is important to know which nutrients are essential for an animal and how and where these nutrients are digested in the intestinal tract. To understand nutrient dynamics it is important to have knowledge on the physiology of the intestinal tract and understanding the differences between to monogastric species (swine and poultry) will help with that.**

### Learning objectives

- Refreshing the principles of monogastric nutrition as a preparation to understand nutritional feeding strategies which will be discussed in module 9 Applied poultry nutrition and module 12 Applied swine nutrition.

### TUESDAY JUNE 4

#### 7.1 Welcome and introduction

#### 7.2 Physiology of the gastro-intestinal tract

Swine and poultry are both monogastric animals. Their intestinal tract shows many resemblances but also many differences. Getting insight in the similarities and differences will help in understanding digestion and nutrition of both species.

#### 7.3 Nutrients and nutrient digestibility

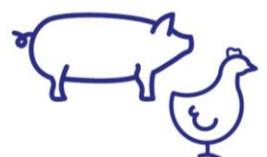
Nutrients are the substances that an animal needs in order to live, grow and produce. They deliver energy, are building blocks and regulate body processes. In this presentation the characteristics and digestion of protein, fat, carbohydrates will be discussed followed by an introduction to energy evaluation. Furthermore, essential vitamins and minerals for swine and poultry production will be described. Water is called the 'forgotten nutrient' in animal production. The physiology of water intake, water requirements during different stages, effect of nutrition on water intake and the most important factors affecting water quality will be discussed.

#### 7.4 Feed additives

Feed additives are products used in animal nutrition to improve the quality of feed and the quality of food from animal origin or to improve performance and health of the animals. However, nutritionist are often disappointed because the addition of one or more additives to a diet does not result in the expected effect or return on investment. Therefore the objective of this presentation is to explain the mode of action of different additives and give the tools on how feed additive should be evaluated in order to take the main conclusions: should I use it or not?

**Trainers:** Karin van de Belt, Roger Davin and Xandra Benthem de Grave

**Remarks:** please turn over.



**Remarks:**

- Please be aware that SFR recommendations will not be presented during the course.
- This module will focus on basic poultry and swine nutrition and is targeting starters in the feed industry. For more experienced professionals it is recommended to attend module 8 Nutrition Evaluation Poultry or module 11 Nutrient Evaluation Swine.
- For nutritional strategies it is recommended to (also) attend module 9 Applied Poultry Nutrition or module 12 Applied Swine Nutrition.

