

FEEDS AND NUTRITION COURSE 2019

ZAANDAM | THE NETHERLANDS | JUNE 3 - 7, 2019

'The course is specially designed for animal nutrition specialists'

MODULE 9 | APPLIED POULTRY NUTRITION

Feedstuff composition, presentation and dietary nutrient content have a great impact on performance of poultry. The effects can differ depending on species, age and production goal. In order to achieve optimal animal performance at the farm, it is of great importance to know the relations between nutrition, animal health and technical performances. Poultry nutritionists need to combine the theoretical knowledge about digestive physiology and biochemistry of feedstuffs to formulate diets. Therefore the goal of nutrition is to provide essential nutrients to the animal for an efficient production, but also to assure animal welfare and health, and a low excretion of non-digested nutrients to the environment.

Learning objectives

- To obtain knowhow to apply theoretical and practical nutritional knowledge to improve poultry performance.
- To obtain knowhow to meet nutritional requirements of poultry, as well as how to face dilemmas like efficiency and intestinal health.

DAY 1: WEDNESDAY JUNE 5

9.1 Welcome and introduction

9.2 Intestinal Health and antibiotics

The gastrointestinal tract is a carefully balanced ecosystem, which is subject to nutritional and microbial challenges. The intestinal immune system, the most common intestinal pathogens in poultry, and nutritional factors affecting intestinal health will be discussed.

9.3 Precision feeding

Poultry nutrition aims to meet nutrient requirements of animals as accurately as possible. These requirements are affected by given conditions and specific production goals. As a nutritionist you are challenged to deal with the variation in requirements caused by many different factors. Precision feeding is the practice that helps you to make this variation insightful and helps you to deal with it.

9.4 Poultry signals

In order to better understand the health status and the welfare of chickens it is important to understand how chickens communicate. Therefore it is important to observe the chickens and find and use tools at farm level to speak the chicken's language and therefore improve performance of the farm.



9.5 Minerals

Focus on the optimum levels of sodium, potassium and chlorine in broiler diets will be given. The effect of different sources of sodium as well as the effect of dietary electrolytic balance in broiler diets will be addressed.

9.6 Egg formation and egg quality

An important issue in layer production is the reducing egg quality with aging of birds. This is not only related to nutrition, but with nutrition you might be able to support the egg shell quality. Egg formation, deviations in egg formation, and nutrients that can affect egg (shell) quality will be discussed.

9.7 Meat quality

Deviations in the breast fillet is one of the main reasons for the rejection of broiler chickens in the slaughterhouse. On which aspects are the broilers assessed and how can we respond to them with feed and management?

DAY 2: THURSDAY JUNE 6

9.8 Broiler breeder nutrition

A broiler breeder bears the genetics of a broiler (high growth rate), while it needs to produce hatching eggs with vital broiler chicks. Nutrition will affect the breeder but also the broiler chick. All these factors make broiler breeder nutrition very complicated. In this presentation these challenges will be discussed, especially the effect of protein and energy levels.

9.9 Effect of feed processing on digestion and nutritional value of poultry feeds

Producing feed is more than just making a good recipe or formula. Processing technology can have an effect on intestinal health and can improve the nutritional value, but also worsen the feed utilisation.

9.10 Protein sources in poultry nutrition

Soybean meal is the most important protein source in poultry. However, sustainable production and use of non-GMO diets makes that this protein source is topic of discussion. There are several options to reduce the level of soybean meal in poultry diets. This can be done with currently available protein sources, but there is also a lot of research and discussion on “new” protein sources.

9.11 Early feeding

There is a considerable interest in feeding of young broilers from the perspective of minimizing early mortality and getting a flock off to a uniform start. There are several hatching systems that support the provision of feed immediately after hatching. Nutritional approaches that support the physiological condition of the hatchling will be discussed, as well as the effects on early growth and mortality.

9.12 Excursion

The module ‘Applied Poultry Nutrition’ will finish with an excursion to give an impression of the Dutch poultry husbandry. This excursion will be organised together with a relevant company from the Dutch poultry industry.

Trainers: Ellen van Eerden, Laura Star, Loek de Lange, Piero Agostini and Roger Davin

Remarks:

- Please be aware that SFR recommendations will not be presented during the course.
- For starters in poultry nutrition, as a preparation to understand nutritional feeding strategies, it is recommended to attend module 7 (Principles of Monogastric Nutrition).
- More experienced participants can attend module 8 (Nutrient Evaluation Poultry), which will focus on energy, protein and calcium and phosphorus evaluation.
- To be able to apply the information from this module into feed formulation, it is suggested to attend module 10 (Practical Feed Formulation Poultry).

