



➤ MODULE 11 12 AND 13 | APPLIED DAIRY NUTRITION

WEDNESDAY 15 JUNE, THURSDAY 16 JUNE AND FRIDAY 17 JUNE

Ration composition and nutrient contents have a great impact on the health and production performance of dairy cows. Variation in roughage and diet quality can have a large impact on this performance and can be used to manipulate production level. Better knowledge of the effect of dry cow nutrition gives you the tools to reduce the incidence of metabolic diseases and to improve health and fertility. Optimal levels of for example phosphorus and nitrogen help to reduce environmental impact of dairy production.

Learning objective

- Learn about optimal feeding strategies in transition period to reduce the incidence of metabolic diseases and improve fertility and health.
- Learn about the prevention of subacute rumen- and hindgut acidosis.
- To obtain further knowledge how to improve young stock rearing.
- To obtain further knowledge how to reduce the environmental impact of dairy cow husbandry.
- Further understand effect factors that influence forage quality.
- To learn about the impact of feeding management on feed intake and milk production.
- To understand CowSignals® as tool for improvement of feeding management and increase production fertility health and longevity.
- To be able to optimise nutrient composition of diets and meet animal recommendations using ration calculation software.

Welcome and introduction

Optimal transition cow management to reduce metabolic disorders

The transition period in dairy cows is important to reduce the incidence and severity of metabolic diseases. In this presentation the relationship between nutrition in dry period and hypocalcaemia and ketosis is explained. Newest insight in feeding strategies to reduce problems in energy balance and mineral status are presented.

Subacute rumen- and hindgut acidosis, effects on the health of the cow and prevention

In diets for high yielding dairy cows there is an increased risk for (subacute) rumen acidosis and problems in the gut. Rumen acidosis does not only have a direct negative impact on animal production, but also on the immune system, fertility and locomotion. The effect of feeding strategies on the occurrence of LPS in rumen, hindgut and blood is proposed as mechanism behind those problems. Also feeding strategies to reduce these problems are presented.

Calf and heifer rearing

Young stock is an important part of dairy farming because calves and heifers are the future dairy cows. Feeding strategies affect rumen development, growth, maturation and, health of calves. Recent research on the effect of intensive milk replacer scheme's on growth and development will be discussed. Also, the impact of starter feed on rumen development and early nutrition on performance of dairy cows is presented.

Feeding strategies to improve fertility

In this presentation the relationship between nutrition and health and fertility is described. The direct and indirect effect of nutrients on the hormone system is described and an overview of nutritional strategies to improve fertility is presented.

Nitrogen and phosphorus efficiency and methane emission

The dairy industry has an important contribution to methane and ammonia emission, and nitrogen and phosphorus excretion to the environment. This presentation will focus on dietary strategies to reduce the environmental impact of ruminants. Focus will be on improving nitrogen efficiency and reducing ammonia emission, feeding low phosphorus diets and the strategies to reduce the excretion of methane by ruminants.

New insights in forage quality: effects of harvesting method and additives

In this presentation the results of recent research toward forage quality are presented: the effect of chop length and harvesting method of corn on feed intake, digestibility and milk production, the effect of additives during the ensiling process and the effect of storage time on forage quality.

Feeding management and CowSignals®

In this presentation the importance of understanding cows and their signals is explained by showing practical examples. Understanding the cow and her interaction with the farmer and the impact of the housing and feeding conditions will help improve production, reduce diseases and increase fertility and longevity. The motto of this presentation is happy cow, happy farmer, happy planet.

Feeding intake regulation

In this theme the factors that affect feed intake regulation is presented. First feed intake models are discussed and then the influence of animal parameters, feeding management and environmental factor are described and quantified.

Optimising ration composition

A short introduction of the principles of ration optimisation will be presented in this section. What information is required to further use in ration calculation software and which steps need to be taken to come to a ration composition that is optimised to increase milk yield, improve milk components or health and fertility?

Ration optimisation: case studies

In this workshop the participants will work in couples on different case studies to optimise dairy cow rations using the Feed Expert program and the SFR dairy feed evaluation parameters. The importance of forage quality and compound feed (ingredients) will be demonstrated.