

## ¿CÓMO ALIMENTAR A LAS PONEDORAS EN SISTEMAS ALTERNATIVOS?

Dra. Paulien Rutten (Hendrix-Genetics)

### How to feed layers in alternative production systems

The transition from cage to alternative housing systems like barn or aviary, requires careful attention to accurate feed management and nutrition.

The main difference in nutritional requirement between layers housed in a cage system versus alternative system is the level of energy spent by the hen. The energy needed for production is not different because production levels are equal. However, within a cage free system, especially in an aviary, birds are able to move freely and express natural behaviours which results in a significantly higher energy requirement for their daily activity.

The daily requirement for amino acids needed in the layer diet in a cage free system does not differ at all from a cage system diet. The reason for this is that the amino acid requirement depends on the daily egg mass produced and the amino acid concentration should be adapted to the actual observed feed intake level.

In cage free systems feed particle size is even more important because birds have more opportunities for selective eating behaviour versus a cage situation. They can move along the feed chain to select their preferred coarse feed particles. Therefore uniformity of the feed is of major importance.

Finally, the chosen feeding technique can support egg production and meet their natural feeding behaviour. In nature, birds consume their main part of the diet in the second half of the day and it is therefore recommended to provide a minimum of 60% of the total daily feed in the second part of the hens day. Before this period, in the middle of the hens day, feeders should be completely empty (for a maximum of 1.5 hour only once a day). This ensures a daily intake of all nutrients, including the fine particles like premix, calcium and amino acids and thereby minimizes the risk of nutrient deficiencies. Additional benefits from the empty feeder technique are a good body weight management, good flock uniformity and egg shell quality.

## NUEVOS CONOCIMIENTOS SOBRE LAS MIOPATÍAS DE LOS POLLOS DE ENGORDE

Dr. Massimiliano Petracci (Universidad de Bologna)

### New insights on broiler breast myopathies

**M. PETRACCI\*, F. SOGLIA, G. BALDI and C. CAVANI**

Department of Agricultural and Food Sciences, Alma Mater Studiorum - University of Bologna, Piazza Goidanich 60, 47521 Cesena, Italy

\*Corresponding author: m.petracci@unibo.it

**SUMMARY:** Nowadays most of the world's chicken meat production is merely based on intensive farming of few fast-growing hybrids reaching the slaughter weight in a very short time and having high meat yields. The shift from the sale in whole carcass to ready-to-eat and ready-to-cook products has increased importance of quality traits of both fresh meat and raw meat material used for the manufacture of products. This evolution has led to an extreme modification of the genetic background of modern hybrids which are currently used worldwide for the production of chicken meat. However, during the last decades, these evolutions have certainly favoured the occurrence of a high number of abnormalities that are increasing the meat downgrading rates for fresh market retailing and sometimes decreasing the nutritional, sensory and technology proprieties of raw meat materials used for further processing. Among these, the greater concern is currently towards occurrence of abnormalities characterized by a myodegeneration affecting breast fillets (white-stripping, woody-breast and spaghetti-meat) which seems directly or indirectly induced by high growth rate and hypertrophy characterizing modern fast-growing broilers.

**Keywords:** Chicken meat, quality, abnormalities, appearance, tenderness.

### Introduction

The development in industrialization and specialization of broiler meat production chains that took place starting from the end of World War II, has led to a worldwide remarkable increase in both the efficiency and the chicken meat production. In the recent years, the lifestyle changes have also dramatically modified the way in which the poultry meat is marketed and consumed and therefore food technologies have become part of the poultry industry, and today much of the production is marketed in the form of cut-up and processed products (Table 1).