

Fiber parameters for poultry nutrition

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Fiber still has a bad reputation in poultry. Fiber is suspected of diluting the diet, increasing viscosity, reducing digestibility, increasing feed consumption and disimproving feed conversion. Simply: to reduce performance.

Today, our poultry is highly specialized, but 125 years ago, chickens still needed 120 days to reach 1.5 kg in weight. They fed on plants and insects and consumed considerable amounts of crude fiber. Even if genetics has been able to increase the growth potential in an incredible way, the digestive physiology is still the same. The peculiarities of poultry digestion also suggest that the large intestine plays an important role in metabolism, which should not be underestimated when it comes to maintaining health.

Even in poultry, dietary fiber is an important factor in influencing intestinal health. When reviewing the scientific literature in detail, it quickly becomes clear that insoluble dietary fiber does not affect viscosity, but improves digestibility, especially of starch, in a dose-dependent manner. There is also evidence of positive effects on weight gain and feed conversion. Furthermore, an influence on the intestinal microbiota is shown and improvements in wet litter have been evaluated in different trials.

However, it is not possible to speak of the fiber per sé, as the various fiber sources differ greatly in their crude fiber content and other features. Feeding trials can only be compared if all the details are considered, as a change in the fiber source always has an impact on the overall ration.

Lignocellulose is a fiber source with many advantages: it is highly concentrated, insoluble, free of mycotoxins and is therefore an ideal fiber for poultry. This has been confirmed in feeding trials with lignocellulose products, revealing that lignocellulose positively influences weight gain, FCR and wet litter. Different lignocelluloses also produce different results. One kind of lignocellulose – eubiotic lignocellulose containing trunk wood and bark of various tree species – showed a beneficial influence on the intestinal microbiome.

In summary new scientific studies disprove the negative image of fiber in poultry and show that the well-considered use of dietary fiber can significantly optimize performance and economic results.