# Fipronil in eggs

In this Greek study **(J. Chromatography, 1129, 22)** a sensitive and reliable modified QuEChERS method proposed by the European Reference Laboratory for animal origin products has been validated and applied to the residue analysis of fipronil and its metabolites in chicken eggs and other egg products by LC-MS/MS and GC-ECD analysis.

Results from both systems were in agreement: out of 11 samples analysed, four samples showed measurable residues of fipronil sulfone with three samples exceeding the MRL limit.

## Eggshells under the influence of a strong magnetic field

In Iran, it was concluded that the presence of eggshell samples in the magnetic field increases the shell's resistance to failure, but samples that are immersed in sunflower oil had a lower failure than those which are not immersed in sunflower oil **(Poult. Sci. J. 7 101-108)**.

It can be concluded that with the presence of eggs in a high-power magnetic field, we can see an increase in the resistance force to the shell failure.

## Development of a whole liquid egg

To ensure accurate and reliable measurement results, a whole liquid egg certified reference material (CRM) retaining the resemblance to real samples was first developed in China for improving measurement quality of enrofloxacin residue in eggs **(Food Chem., 309, 29)**.

The certified value was assigned to be 30.6μg/kg with expanded uncertainty of 3.1μg/kg for enrofloxacin. In addition, homogeneity, long-term stability at -70°C for one year and short-term stability at -18°C, 4°C and room temperature for nine days were assessed.

## Selected inorganic compounds in eggs from organic and battery cages

The results of this German research **(Arch. An. Breeding, 62, 431-436)** indicate that eggs from organic farming systems have a richer chemical composition in terms of the content of nutrients, such as calcium, magnesium and zinc, compared with eggs obtained from caged hens.

Therefore, consumers purchasing eggs should consider the system in which the hens were reared, as eggs can be a valuable source of these elements in the diet.

## Short cold exposures affect performance and quality

In this UK experiment **(Poult. Sci. 99, 857-868)** cold stimulation during egg incubation was reported to limit the occurrence of ascites in broilers subjected to cold temperature after 14 days of age. The study revealed that the thermal environment is a major component of the quality and sustainability of chicken meat production.

## Properties of Zagorje turkey meat quality

The aim of this Croatian study **(Meso, 22, 68-74)** was to determine physical and chemical properties of meat quality of Zagorje turkeys raised in semi-intensive fattening systems. Researchers found a significantly higher value of parameter a* in male turkeys and a significantly higher value of the parameter b* in female turkeys.

## Different levels of RDDGS on performance

This Indian study **(Indian J. Ani. Nut., 37, 172-178)** was conducted for five weeks to study the effect of different dietary inclusion levels of rice distillers dried grains with solubles (RDDGS) on performance of boiler chickens.

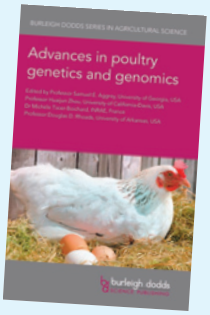
Birds fed a diet with 10% DDGS gave the best response in terms of net profit per kilogram of body weight. It is therefore concluded that RDDGS can be incorporated at 10% level in broiler feed.

## Supplemental pine needles powder on broilers fed linseed oil-based diets

This Turkish study **(Poult. Sci., 99, 479-486)** was proposed to examine the effects of pine needles powder (Pinus brutia) supplementation on growth performance, breast meat composition and antioxidant status in broilers fed linseed oil-based diets. Results suggested that pine needles powder supplementation to broiler diets could be a viable option to improve the animal antioxidant status and meat oxidative stability. However, supplementation of Pinus brutia needles powder up to 1% in broiler diets was not sufficient to efficiently curb the fat-induced oxidation in meat. Further investigation is needed to determine the full antioxidant potential of pine needles powder supplementation in poultry by comparing different pine species, evaluating the bioavailability of their active compounds and determining the most effective dietary concentration for broiler meat production without any adverse effects.

# Book Review

## Advances in poultry genetics and genomics




With some 100 titles in their agriculture series, which started in the arable field, and almost 50 books encompassing livestock, the Burleigh Dodds scientific series has now produced one of its best poultry titles yet. With each chapter dedicated to a topic, it was pleasing to see such a good spread of authors, academics and researchers, including a good representation from the global breeders.

After considering the domestication, genetics and physiology of poultry, the first part of this book looks at the molecular identification of major morphological mutations in poultry and then the genetic basis of pigmentation before concluding with an interesting look at the physiological challenges in poultry breeding.

The second part of this book takes a relatively detailed look at the genetics and genomics of complex traits with individual chapters focusing on the impact of this topic on the subjects of meat quality, egg production, feed utilisation, behaviour and welfare, immunity and disease and skeletal traits. The fourth part of the book then focuses on issues that are emerging as future challenges. These include breeding for sustainability, the use of nutrigenomics and epigenomics and the use of genomic editing in poultry breeding.

This book gives a good overall review of the advances that have recently occurred in the fields of poultry genetics and genomics, but the reader needs to have a basic understanding of the subject if they are to gain the most from this book.

However, the one thing that really struck me about this book was the calibre of the editorial team and the international range and expertise of the contributing editors and authors. With over 550 pages this book is well worth its place on the bookshelf of anyone who is interested in poultry breeding and genomics.

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