

# Organic egg quality parameters influenced by feed, hen line and forage material

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## Summary

Organic eggs make out >15% of the Danish shell egg market. Consumers buy organic eggs based on environmental and animal welfare arguments. However, there is a need for high product quality and diversity of organic eggs to increase the market share further. The overall objective was to investigate different strategies for production of organic eggs of high and differentiable quality regarding appearance (yolk colour and carotenoid composition), sensory quality, shell strength and egg albumen protein content providing more diversified eggs compared with conventional eggs.

Specific objectives were to study the effect of hen genotype (layer-type versus "dual purpose"-type), identify new protein feed sources for organic laying hens in order to improve the supply of amino acids, when using 100% organic feed in diets, and investigate how foraging material interacts with egg flavour and appearance.

The method was a complete block design with 2 genotypes, 3 standard diets, 2 forage material types in 4 replicates of each 25 hens. In total 1200 hens during 22 weeks were distributed in 48 outdoor pens with housing facilities and area following the regulations on organic egg production.

A number of selected egg quality parameters analysed during the experiment are presented.