P144 Comparative study on selenium sources bioavailability during early chick's development.

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Form hatch to 7 days of age, broiler chicks are facing strong oxidative challenges due to adaptation to aerobic life. During this early growing period, digestive functions are still under development and the essential trace nutrient assimilation is depending on the form supplied. This study aimed to compare different selenium sources and their respective selenium muscle deposition during early growth. 720 day-old chicks were allocated in 5 treatments with 8 replicates of 18 birds each. Each treatment differed by the dietary selenium sources with a fixed dose of 0.2 mg Se/kg feed. Treatments were as follow: T1: control without selenium (CON), T2: sodium selenite (SS), T3: Selenized Yeast 1(SY1), T4: Selenized Yeast 2 (SY2) and T5: Seleno-hydroxy-methionine (SO). After only 7 days, the breast muscle selenium concentration was significantly affected by the treatments. CON, SS and SY1 significantly decreased tissue selenium concentration, whereas SY2 allowed to maintain muscle selenium content. Only SO dietary supplementation was able to significantly increase muscle selenium concentration at D7 by 40% compared to D0. These results suggested that muscle selenium concentration rapidly decreases following hatching and that the choice of the dietary selenium source to maintain anti-oxidant potential is really important. Our results also underline differences between seleno-yeasts.

P145 Performance traits and egg composition in genotypes of pure bred laying hens diverging in production efficiency

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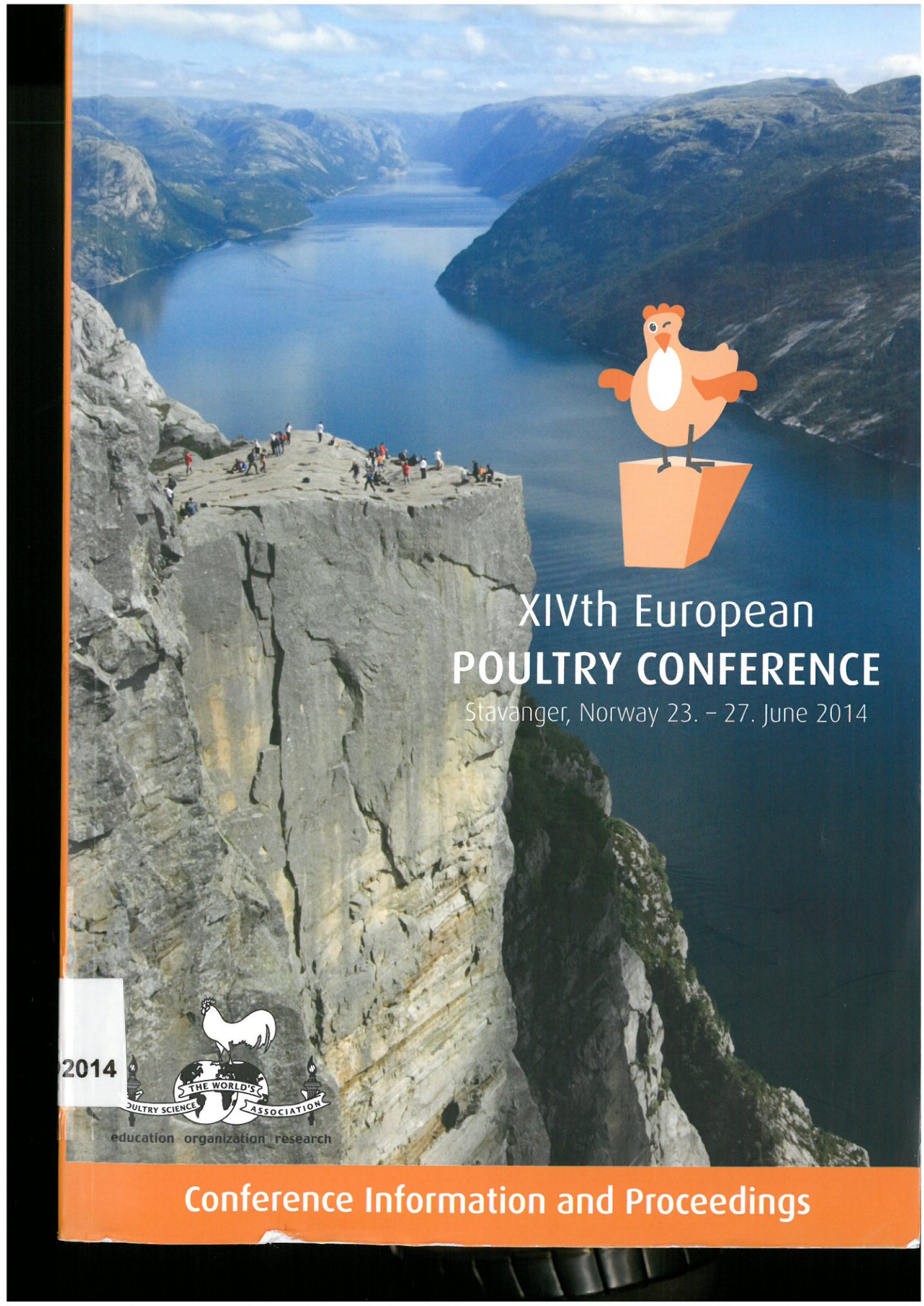
High-performing white (WLA) and brown (BLA) pure bred laying hens were compared with low-performing White Leghorn (R11) and New Hampshire (L68) hens maintained as non-selected conservation flocks. The aim of the study was to determine the effect of selection for production efficiency on laying performance and egg composition. Methods: 48 hens of each genotype were kept individually in cages. Data collection started at the 22nd week of age and lasted for 13 laying months. Number of laid eggs per hen was recorded daily and feed consumption weekly. Feed and water were provided ad libitum. The diet was formulated to meet nutrient requirements according to recommendations of the NRC (1994) and GfE (1999) for high-performing hens. Results: WLA and BLA had significantly higher laying intensities than R11 and L68. BLA showed highest feed intake, egg weight and daily egg mass. Mean egg weight and daily egg mass production did not differ between WLA and BLA but were significantly lower in R11 and L68. WLA showed also most efficient feed conversion ratio. WLA and BLA eggs had significantly highest proportions of albumen and shell, while eggs of R11 and L68 showed highest yolk proportion. Conclusion: WLA and BLA showed significantly higher production efficiency than R11 and L68. It can be hypothesized that low-performing genotypes fully exploited their performance potential due to an excess of nutrients by feeding a diet which met nutrient requirements of high-performing hens.



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