

P-15 Proximate composition and fatty acids profile of egg yolk of three hen genotypes fed with local cereals and forages

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A significant number of small and medium-sized poultry farmers produce and market chicken eggs under free-range production system in the Canary Islands. This sector is especially sensitive to variation of prices of feedstock in international markets, due to its strong dependence of importation considering its outermost region status. Thus, the commercial feed for poultry has increased around of 50% respect to the last year. Therefore, priority should be given to look for alternative feeding resources in order to alleviate the current crisis that the poultry sector is going through. The objective of this study was to evaluate the proximate composition and fatty acids profile of egg yolk of three hen genotypes (Lohmann White, Franciscana and Canaria). One group of 20 animals of each genotype was fed with commercial feed for laying hens and another group with a mixture of local cereals and forages (40% wheat, 22% barley, 15% corn, 10% barley, 5% teder) during 4 months under free-range conditions. For the analysis, 120 egg yolks were collected the wk 12 and 16 of experimental period. One-way ANOVA was used to analyze the statistical differences due to diet factor. The results showed that there were no significant differences for proximate composition due to diet and breed factor. Thus, the moisture varied between 52.80 and 56.75%, and the ashes between 1.55 and 2.00% for the different experimental groups. Furthermore, the fat and protein percentages of egg yolk for control diet was 24.98 and 15.32%, and for the experimental diet was 24.93% and 14.78%, respectively. Regarding the fatty acids profile of the egg yolks, there were also no significant differences for the fraction of saturated, monounsaturated and polyunsaturated fatty acids between both groups. Finally, further studies are necessary to evaluate the use of alternative diet in long-term periods.