

## Fish residue valorization: application in the quail diet and study of effects in the eggs

Seibel, N. F. - **Fish residue valorization: application in the quail diet and study of effects in the eggs.**

Rio Grande/RS, 2002 [Dissertação de Mestrado - Fundação Universidade Federal do Rio Grande – Departamento de Química].

The use of fish industrialization residues is small in the southern part of Rio Grande do Sul State, Brazil. These residues are generally: accumulated in tanks without receiving any type of treatment, discarded in the vicinity of the industries or taken for low quality fish flour preparation. A simple and cheap alternative for its use is the production of chemical silage. When it is produced in good conditions it can be added in the ration of birds, in a percentile maximum of 10%. In this present work took place a study for the use of the residues under this form, using its solid fraction in the quails ration and evaluating its effects on the physical-chemical characteristics, microbiological, and the sensorial profile of the fatty acids of the eggs. The accomplished analyses were: Haugh Unit; yolk index; relationship albumen/egg, yolk/egg and peal/egg, according to Souza and Souza (1995) and volume of the yolk and albumen; proximal composition, according to A.O.A.C. (1995), and for proteins Micro Kjeldahl's method was used, for lipids the acid hidrolises and for ashes and humidity was used gravimetric method; determination of fatty acid through

gaseous chromatography; sensorial analysis of scent and flavor, through structured scales and evaluation of mesofilos microorganism and psicofilos, according to ABNT (1995), norm MB-3462 Novembro/91, using the plaquement method in depth and in surface, respectively; these analyses were accomplished with samples stored in different times from 0 up to 30 days. The found results demonstrate that was possible the use of residues under the form of chemical silage, that proved to be a stable product; in the quail eggs the physical-chemical characteristics are modified along the time, mainly due to the humidity changes; the sensorial terminology of the scent and flavor of the eggs was gathered in four groups: sweetened, penetrating, oleaginous and farinaceous; the diet has influence in the sensorial characteristics, when the silage didn't contain antioxidant; the storage temperature has great influence in the physical properties of the eggs; at the end of the 30 days of storage the eggs didn't show microbiological contamination; there was a change in the profile of the fatty acids of the quails eggs, in function of the modified diets.

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