

The production of biosilage from trout (*Oncorhynchus mykiss*) waste and the economic justification of the product

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Abstract

Trout wastes produced from in processing plants are between 47 and 53 percent. The waste is not a good substrate for the conversion into fish meal because it has a very low quality and shelf life. Hence, manufacturers do not show any interest in using it to become fish meal. One of the proper methods for recovery and use of fish waste is the production of silage using a microbial method (lactic bacteria). In this study, the production of biosilage using lactic bacteria has been investigated and after qualitative analysis, its price was compared with Kilka meal. The results showed that produced biosilage had high protein (65.51%), and the proteins had high digestibility. The product produced by acid pH has a high shelf life and can be used as a substitute for fish meal in the aquatic diet. The final price of the produced biosilage is 27500 rials, which is lower than the fish meal.

Keywords: *Oncorhynchus mykiss*, biosilage, Lactic Acid Bacteria, fish wastes, economic justification