

NUTRITIONAL VALUE AND SAFETY OF AQUACULTURE PRODUCTS IN UKRAINE

Alexander Bavyko^{1*}

¹Department of Entrepreneurship and Trade, Educational and Scientific Institute of Economics and Entrepreneurship, Donetsk National University of Economics and Trade named after Mykhaylo Tuhan-Baranovskyi, Tramvaynaya Street 16, 50005 Kryvyi Rih City, Ukraine

*e-mail:alex-1105@ukr.net

Abstract

Modern aquaculture technologies allow to make the period of commercial ripening of fish 2 - 3 times shorter. At the same time there is an urgent problem of preserving nutritional value and hygienic safety. The study has a comparative analysis of relevant indicators of production at fish farms that are engaged in growing carp according to three most common in Ukraine technologies: pond, pasture, and closed cycle.

There have been used: materials of the State regional laboratory of veterinary and sanitary examination in Dnepropetrovsk, technological information of fisheries, information of Food and Agriculture Organization. The results of author's researches using the methods are presented: high performance liquid chromatography, gas chromatography, atomic absorption analysis.

The best indicators of the nutritional value are inherent to the products that have been grown according to pasture technology. The content of protein is 18.34 g, of polyunsaturated fat is 0.455 g in 100 g of the product. Products of the closed cycle are characterized by a high content of protein - 19.41 g and saturated fat - 0.425 g. In the products of pasture and pond technologies there has been found the permitted content of the maximum levels of heavy metals: Pb - 1.0 mg/kg, Hg - 0.6 mg/kg and pesticides: DDT and its metabolites - 0.3 mg/kg, thiazone - 0.5 mg/kg. Exceeding the permissible norms of antibiotics and hormonal drugs have been revealed in 27% of the samples of a closed cycle.

Keeping the revealed indicators in mind, the consumption of the investigated products by adults should be limited to 1 - 2 times per month, and children should be forbidden to consume these products. Contamination by pesticides requires some measures to be introduced in pasture and pond technology, as well as restoring the cancelled in Ukraine state veterinary control of technological processes for aquaculture.

Key words: *Aquaculture, Aquaculture technologies, Nutritional value, Hygienic safety.*