

INNOVATION IN HUNGARIAN AQUACULTURE

Béla Urbányi^{1*}, Zoltán Bokor¹, Julianna Kobolák¹, Emese Bozáné Békefi¹, Szeptlana Lengyel¹, Zsófia-Tarnai-Király¹, Katalin Rákóczi², Rita Fekete³

¹Hungarian University of Agriculture and Life Sciences, Gödöllő, HUNGARY

²Innoprofit Ltd., Érd, HUNGARY

³Faculty of Agriculture, University of Szeged, Hódmezővásárhely, HUNGARY

*corresponding author: Urbanyi.Bela@uni-mate.hu

The combined Hungarian agriculture, forestry and -aquaculture national economic branch contributed 3.9% to the production of the GDP in 2021, and the gross production value of the aquaculture sector alone was 26.4 billion HUF. Within the livestock sector, the contribution of the aquaculture sector to the national gross product is constantly increasing, despite it generally being in outdated technical conditions.

On the other hand, before the regime change in Hungary, this sector produced one of the largest income values within agriculture in the field of international knowledge and technology transfer. As a result of environmental effects, the strengthening of regulations and their enforcement, as well as the Covid-19 epidemic, marine fish catches decreased by 3.8% in 2020 compared to the average of 2017-2019. In addition, the EU is a net importer of aquaculture products (68% of the aquaculture products consumed in the EU are not produced in the EU). The decline in marine fisheries offer a chance to increase the market share of the freshwater aquaculture sector. The recent increase in energy and feed raw material prices makes the situation even more complicated.

In the current economic environment, there is an increased need to respond to problems through innovation. The development of the Hungarian aquaculture sector has three objectives: i) traditional pond farming; ii) precision (intensive) fish production; iii) and modernization of fish processing are both priority and at the same time complex development areas.

We examined the main challenges of these areas and identified proposed solutions that, thanks to the recent innovation developments, can provide a solution to some of the sector's problems. It can be concluded that willingness and susceptibility to innovation are present in the sector. Excellent national and international developments have been made recently. It is a national economic task to support the actors of the innovation chain of the aquaculture sector in their renewal.