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AQUARIUM KEEPING AS A COMPONENT OF MODERN AQUACULTURE AND ENTREPRENEURIAL ACTIVITY

Aquarium keeping is not only the art of creating harmonious aquatic ecosystems but also a scientifically grounded activity aimed at maintaining and breeding aquatic organisms under artificially controlled conditions.

It originated as a form of amateur hobby but has gradually evolved into an applied field that integrates knowledge of biology, chemistry, animal husbandry, ecology, and aquascaping.

Today, aquarium keeping is no longer merely a pastime for enthusiasts but has become a promising direction of entrepreneurial activity. It combines aesthetic, biological, and economic aspects, covering a wide range of activities – from breeding ornamental organisms to developing innovative products and services.

The development of technology, urbanization, growing demand for natural interior solutions, and the popularization of biophilic design concepts have all contributed to the establishment of aquarium keeping as a distinct branch of small and medium-sized business [1].

At present, aquarium keeping represents a diversified commercial sector that includes:

- breeding of aquarium fish, shrimps, snails, and plants;
- production and sale of equipment and feeds;
- aquascaping, maintenance, and professional consulting services;
- educational and outreach activities, as well as online content creation.

One of the most profitable areas is the breeding of ornamental fish and invertebrates. The most common species include guppies, neon tetras, mollies, angelfish, barbs, ancistrus catfish, shrimps, and snails.

The cultivation of aquatic plants (*Anubias*, *Cryptocoryne*, *Echinodorus*, mosses) forms an additional market segment, as live vegetation enhances both the aesthetic appeal and biological stability of aquariums. The products are sold through pet stores, exhibitions, online platforms, and social media networks.

A significant share of the commercial sector is occupied by the production and sale of equipment – tanks, filters, air compressors, lighting, heating, CO₂ systems, test kits, fertilizers, and decorative elements.

“Smart” control systems, which provide automation and stability of water parameters, have become especially popular.

The growing demand for high-quality equipment fosters the development of Ukrainian manufacturers and reduces dependence on imports.

Another promising segment involves the production of feeds and biological preparations. This includes live and frozen feeds, probiotics, water conditioners, and bacteria for biofiltration.

Because aquarium organisms are highly sensitive to environmental quality, there is a constant demand for such products.

Aquascaping and maintenance services are also gaining popularity among corporate and private clients (HoReCa, offices, salons, healthcare facilities, residential interiors).

These services include equipment selection, composition design, biological cycle initiation, regular maintenance, water replacement, and biota renewal.

An example of commercial success is *Maksimov's Farm* (Kyiv), which operates on a “turnkey” service model.

Online commerce has become a major driver of market development.

Selling products through websites, marketplaces, and social media reduces rental and labor costs while expanding the customer base.

Educational content—video tutorials, blogs, workshops—serves as an effective supplement that not only generates income but also builds a community around the brand.

Innovative trends are also playing a key role in the industry's growth. These include automated water-parameter control systems, remote management via mobile applications, LED lighting with adjustable spectrum, 3D decorations, and next-generation biofiltration modules.

The implementation of “smart aquarium” technologies enhances both efficiency and business attractiveness [2].

To assess the state of the industry in Ukraine, a SWOT analysis was conducted (Table 1).

Table 1

SWOT analysis of the aquarium-keeping market in Ukraine

Strengths (S)	Weaknesses (W)
Growing demand in urban and business environments	Lack of government support for small enterprises
Availability of basic knowledge and experience in fish farming	Dependence on imported equipment
Possibility to start with minimal investment	Shortage of specialists in aquascaping and commercial aquarium keeping
Opportunities (O)	Threats (T)
Entry into the HoReCa market	Currency fluctuations and increased import costs
Development of educational programs, blogging, training courses	Competition with low-cost Asian producers
Export potential of Ukrainian ornamental species	Martial law and logistical restrictions

In general, aquarium keeping is a highly promising commercial sector that integrates biological, technical, and design knowledge.

It can serve as an independent business field or as part of a broader ecosystem of biotechnological and decorative services.

The further development of this industry in Ukraine depends on innovation, educational support, the establishment of small aquaculture enterprises, and promotion within the international online environment.

References

1. Budnik, S. V., & Kolosok, A. M. (2024). *Fundamentals of Aquarium Keeping and Aquascaping: A Textbook*. Lutsk: FOP Mazhula Yu. M. 174 p.
2. *Aquascaping: A Small World in Your Aquarium*. [Electronic resource]. Available at: <https://profizoo.com.ua/blog/akvaskejpingmalenkij-svit-u-vashomu-akvariumi>