



## SAZAN is ancestor of domestic CARP.

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### ABSTRACT

One of the main reasons hindering the intensive development of domestic fish farming is the lack of high-quality fish stock. In many ways, this is a consequence of the violation and, to a certain extent, the imperfection of the applied technologies for growing young, including larvae. Currently, an alternative to traditional pond rearing is a relatively new method of rearing larvae of cyprinids under controlled (factory) conditions

However, information about them is far from sufficient for success in rearing, despite the significant number of works devoted to this problem (Baranova, 1979; Brett, 1983; Vlasov, 1985; Konstantinov et al., 1990; Zentazius, 1984; Meske, 1985 Hasan, Macintosh, 1993 and others). Thus, the effect of light conditions on the growth rate and viability of larvae of cyprinids 1 has been studying, the effect has not been sufficiently studied; temperature: on the efficiency of utilization of feed, differing in the content of lipids in them. But, the most important, defining: an element of factory rearing, in our opinion; is the feeding of the larvae. Moreover, due to the low efficiency of the process of cultivating or catching live food, the problem of replacing it with dry: compound feed is very relevant. Despite the fact that it is fundamentally solved for the larvae of cyprinids (Dementiev and Sklyarov 1980; Ostroumova et al. 1984; Kanidiev et al. 1984; Dabrowski 1984; Bergot et al 1986), numerous publications indicate that: starter feeds are still inferior in their effectiveness to live feeds and, at best, provide; only satisfactory result

#### Keywords:

cyprinid fish larvae, Asian strain, Domesticated carp, multicycle system

**Introduction:** If we translate from the Kazakh language "saz" - silt (dirt), "an" - a living being (animal). For this reason, "carp" is a fish that prefers the bottom with a lot of silt. In the Land of the Rising Sun (Japan) - carp is considered a wise fish and is called the father of fish, and they say about a witty person: "Smart as a carp."

Among long-lived fish, carp stays closer to the leaders, and due to the fact that they are omnivorous and quickly increase in weight, carp is considered a heavyweight in amateur fishing, as it can reach 20-30 kilograms of live weight.

**Material and method:** The main objects of research were the larvae of carp *Cyprinus carpio* G. and silver carp *Hypophthalmichthys molitrix* Val. in separate experiments, larvae of bighead carp *Aristichthys nobilis* Rich grass carp *Ctenopharyngodon idella* Yal. and silver carp hybrids. Experiments with them started from the stage of mixed nutrition, i.e. from the beginning of the consumption of external food. All studies were carried out in fish breeding shops with water supply from settling ponds.

**Discussion:** The purpose of the research is to assess the influence of individual environmental and nutritional factors on the

growth rate and survival of larvae of cyprinids (carp, silver carp) and to improve on this basis the factory method of rearing them.

Research objectives:

- to carry out a comparative assessment of the growth and survival of larvae of various species of cyprinids during rearing;
- to study the influence of temperature conditions on the growth and survival of larvae;
- evaluate the significance of different light regimes in the factory rearing;
- to determine the optimal level of lipids in the starter feed for carp and silver carp;
- to conduct research on improving the protein nutrition of larvae of cyprinid fish;
- to establish the influence of the process of microencapsulation of starter feeds on the efficiency of factory rearing.

The dorsal fin is long and dark grey. The tail is relatively small, brown in color with a reddish tint. The lower ventral fins are grayish purple. There is a solid ray in the anal and dorsal fins. The head is small with golden eyes, the mouth is in a lower position, the upper lip has a small antennae.

Sexual maturity occurs by the 4th year of life. The fish grows quite quickly. The largest individuals are single. The meat of this large fish is white, tender, with excellent taste. It is a commercial species.

The original habitat included the fresh waters of the Caspian, Azov, Black Seas, Lake Issyk-Kul and the Amur basin. Currently acclimatized and artificially bred in the waters of Central and Western Siberia, Central Asia.

Carp loves quiet, warm, heavily overgrown ponds with stagnant or low-flowing water. Avoids rocky bottoms, preferring muddy and clayey areas. It prefers steep ridges and snarled places next to overgrown shallow water.

The body is elongated and somewhat compressed. Lips are thick. Two pairs of antennae in the corner of the mouth, shorter on the upper lip. The base of the dorsal fin is long with 17-22 branched rays and a strong toothed spine in front; The contour of the dorsal fin is concave forward. Anal fin with 6-7 soft rays; posterior margin of 3rd spine of dorsal and anal fins with sharp spines. In the lateral line

from 32 to 38 scales. Pharyngeal teeth 5:5, teeth with flattened crowns. Color changeable, wild carp are brownish-green on the back and upper body, fading to golden yellow below. The fins are dark, with a reddish tint below. Goldfish are bred for decorative purposes.

Carp was a luxurious food in the middle and late Roman times, and in the Middle Ages it was consumed during fasting. The Romans kept fish in storage ponds ("piscinae") and later in fish ponds built by Christian monasteries. In this European practice, carp were kept in monoculture. The largest individuals were selected as queens. From the 12th to the middle of the 14th century AD, unintentional artificial selection took place, the first steps towards domestication. Controlled semi-natural pond rearing and rearing of carp fry began in the 19th century in Europe. Cyprinids have been bred in China for over 2000 years, where they were kept in endorheic ponds. The ponds were regularly stocked with fry from the rivers. A polycultural cultivation technology based on natural products was applied. Semi-domesticated carp races developed in this system. Recently, domesticated carp have been raised in most carp growing areas. In Europe, there are about 30-35 species of domesticated common carps. Many strains persist in China. There are some breeds of Indonesian carp that have not yet been scientifically researched and identified.

Wild carp (commonly referred to as "carp" in this fact sheet) are found in middle and lower reaches of rivers, in floodplain areas and in shallow enclosed waters such as lakes, oxbow lakes and reservoirs. Carp mainly lives at the bottom, but looks for food in the middle and upper layers of the reservoir. Typical "carp ponds" in Europe are shallow eutrophic pools with muddy bottoms and dense aquatic vegetation on dams. The ecological spectrum of carp is wide. Best growth is achieved with water temperatures between 23°C and 30°C. The fish can survive cold winter periods. Salinity up to 5 ‰ is allowed. The optimum pH range is 6.5-9.0. This species can survive at low oxygen concentrations (0.3-0.5 mg/l), as well as at supersaturation. Carp are omnivorous, with a high propensity to eat animal food such

as aquatic insects, insect larvae, worms, mollusks, zooplankton. Zooplankton consumption is predominant in fish ponds with high stocking densities. In addition, carp feed on stems, leaves and seeds of aquatic and terrestrial plants, decomposed aquatic plants, etc. Carp breeding in a pond is based on the ability of the species to accept and use cereals supplied by farmers. Daily growth of carp can be from 2 to 4 percent of body weight. Carp can reach a body weight of 0.6 to up details

**Conclusion:** A cardinal solution to the problem of increasing the fish productivity of inland waters can be considered the widespread introduction of herbivorous fish into the polyculture. They are given a leading role in realizing the potential of water bodies through a more complete and efficient use of natural food resources and improving their sanitary condition. This is all the more relevant in the current conditions of the current policy of prices for feed, fertilizers, and energy carriers. Carp belongs to the carp family and is the ancestor of domestic carp. Under favorable conditions, carp is able to reach a length of 1 m, and gain weight up to 20 kg. It has a thick cylindrical body. The scales are large, painted in golden yellow with a black border along the edge and a speck at the base

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