

BREEDING AND CULTIVATION OF TILAPIA IN FISH FARMS

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ANNOTATION

This article is important for the development of industrial requirements and conditions of the Republic of Uzbekistan for ensuring the population's need for cheap and quality meat production.

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The Republic of Uzbekistan has great opportunities for the development of fish farming in inland waters. It is desirable to establish farms based on the cultivation of Tilyapiya fish species in ponds using water reservoirs. Establishment of farms based on fish breeding is one of the promising areas of freshwater aquaculture. The efficiency of breeding tilapia in ponds depends on the temperature regime of the reservoirs. Therefore, in areas with insufficient heat and low temperatures in autumn and winter, circulation systems are advantageous. Such device ensures the complete independence of the production process from natural and climatic conditions and the season.

The ability to regulate storage conditions allows any type of fish to be grown throughout the year. Fish farming is done by reusing the same amount of water, which is treated and returned to the fish tanks. As a result, water consumption and pollution of natural water bodies with wastewater from fish-consuming enterprises will be significantly reduced. Cultivating fish under controlled conditions allows maximum use of its potential productive qualities. In recent years, tilapia cultivation in industrial fish farming facilities has been widely used in many countries of the world, including our country.

In some countries, industrial cultivation of tilapia has been carried out since the mid-80s of the last century. During preliminary studies, the biological characteristics and beneficial qualities of four tilapia were studied in a fish breeding system with a water supply system. Nile tilapia was cultured in monocata and showed the best results, blue tilapia when cultured together with carp fish produced effective results. The choice of tilapia as an object of polyculture is related to the specific characteristics of its behavior and the intensity of nutrition. Being an excellent filter in the pond, blue tilapia participates in the exchange of high-level substances (food residues, excrement, active saliva), and also has an important food place in cleaning the walls and bottom of ponds from biological pollution. When cultured together, the optimal ratio of carp and tilapia is 5:1. The yield increased by 8-10% during intercropping without increasing the amount of feed. The average weight of green tea grown in polyculture was 19.5% higher than that of saiga grown in monoculture. On average, the yield of standard mass for males and females was also high.

In poly and monoculture, the growth patterns of stockfish and other groundfish production were approximately the same. However, additional production through tilapia farming allowed a 12-fold increase in total production compared to monoculture, while reducing feed costs (25).

The successful operation of closed systems in the cultivation of various fish species is possible only when using high-quality feed containing all the necessary nutrients in certain proportions that fully satisfy the needs of the fish. In addition to the complete composition of the compound feed, it must be

well digested, and must ensure the minimum consumption of contaminants in the system in the form of feed residues and dirt. Tilapia larvae can consume artificial feed, and immediately switch to active feeding after the yolk sac is absorbed. Therefore, it is necessary to know the energy and protein requirements of fish and adult fish to ensure maximum growth in industrial production.



Measuring the weight of tilapia fish during breeding.

It is believed that lipids, which are part of tilapia feed, must also meet certain requirements for fatty acid composition for other fish species. Linolenic essential fatty acid for tilapia (Kanasawa et al., 1955; Takeuchi et al., 1980). The addition of fish oil 5 to a mixed diet with a total lipid level of 9 (instead of poultry oil) provides the product with high palatability and excellent "lightness".

The carbohydrate, mineral and vitamin requirements of tilapia are similar to those of other farmed fish. Commercial compound feeds for other fish species can be used with more or less success to feed tilapia. Products of grain, leguminous and oil plant processing, various production wastes, for example, rice bran, are recommended as high productivity. The results of education largely depend on the regime and the rate of feeding. Tilapias have small, rudimentary stomachs and must be fed several times a day. In fish farming, there are two methods of supplying feed to fish tanks. Rational feeding is more widely used, in which the level of nutrition and the mode of nutrition are calculated. At the same time, the feed is set manually or with the help of automatic feeders that are fed in the required amount and in a certain mode. The second method of feeding, which is called the bionic method, means that the fish receives food when it needs it. Various types of automatic feeders are used for this.

Nile tilapia larvae were found to grow better at 45% (compared to 30, 35 and 50%) protein levels in the feed. The optimum protein level for Mozambican tilapia larvae fed with microbiosynthesis-based dough was 45%. As the fish grow, the protein requirement decreases. The best growth of Nile and Mozambique tilapia was observed with a protein content of 40.

Most researchers suggest that the optimal protein content of feed for large tilapia grown commercially is 30-35. A comparison of semi-synthetic diets with a protein content of 20 to 45% revealed the advantage of feed with 35% protein and, moreover, not only negatively affected the efficiency of using protein in the feed, but also reduced the growth rate.

The energy-protein ratio in the feed is of great importance in determining the need for protein. Many researchers agree that the energy value of the tilapia diet should be 350-400 kcal / 100 g of feed. This has been shown at protein levels of 28 to 50 for both larvae and commercial Nile tilapia [28]. The results of a study of the effects of energy levels on nutrient digestibility and growth in Nile tilapia are interesting.

Regulating the storage conditions in running water basins of the water supply makes it possible to grow any type of Tilapia year-round, regardless of climatic conditions, which opens up wide opportunities for the cultivation of new types of fish. Cultivation in natural water bodies is limited by the temperature regime. For this reason, the establishment of running water pools allows for large-scale breeding of this type of fish.

The efficiency of industrial fish farms is significantly determined by the consumption value of breeding facilities. Tilapia occupies a leading position in modern world aquaculture. In terms of production growth, tilapia farming is far ahead of other sectors of aquaculture. This is due to a number of valuable biological properties and economically useful qualities of tilapia. The resistance of tilapia to adverse environmental factors allows them to be successfully grown in specific conditions of storage: high density, constant water exchange, strong hydrochemical regime, lack of natural food. The specific characteristics of tilapia reproduction allow to obtain offspring at any time, which ensures the possibility of continuous production of the product.

As a result of this extensive research, the basis for tilapia breeding in our country was created, the most promising types of tilapia for breeding were determined, guidelines for the breeding and breeding of tilapia in fish farms were developed. In the course of the study, a highly productive breed of Mazambik tilapia was studied. The analysis of the literature, the results of the conducted research, as well as the experience of growing tilapia in the conditions of local industrial fisheries show that fish with high maturity qualities are fast maturing and fast growing, effectively blocking the given feed. lip, tilapia can become valuable objects of industrial fish farming. Widespread use of them increases the production of high-quality fish, improves the economic performance of fisheries. Studies have shown that the tilapia industry meets the highest level of fish farming requirements. The obtained information served as a basis for the development of tilapia breeding and breeding standards.

In conclusion, let's say this. The development of the tilapia industry in the conditions of the Republic of Uzbekistan is of great importance in meeting the population's need for cheap and high-quality meat products. Cultivation of this type of fish in the southern Surkhandarya and Kashkadarya regions of our country gives very good results. Because the southern regions have a relatively warm air flow.

LIST OF USED LITERATURE

1. Decision of the President of the Republic of Uzbekistan "On measures to improve the management system of the fishing network". May 1, 2017
2. Decision PQ-1047 of the President of the Republic of Uzbekistan on "Additional measures - measures to expand the production of food products and fill the domestic market". January 26, 2009.
3. The program of the Cabinet of Ministers of the Republic of Uzbekistan in 2011 "Measures to be implemented on the development of the fishing industry - activities". March 1, 2011. No. 03-35-12
4. The decision of the Cabinet of Ministers of the Republic of Uzbekistan "On measures to deepen privatization and de-monopoly in the fishing industry". Decision No. 350 of August 13, 2003.