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NUTRITION OF BROOK TROUT (SALMO TRUTTA MORFA FARIO LINNAEUS)

Brook trout, also known as trout, is one of the most popular fish species that is often bred in artificial reservoirs. This fish has a peculiarity in that it is able to feed not only in water, but also on various types of insects.

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This makes it possible to ensure their nutrition and rapid growth. In these theses, we will consider the peculiarities of feeding brook trout (*Salmo trutta morfa fario Linnaeus*), as well as provide some advice on its diet and choice of feed [1].

Feeding brook trout requires special attention and knowledge. It has a fastidious taste and requirements for feed quality. The trout's diet should be varied and rich in nutrients. In this article, we will consider different types of feed for brook trout that can be used in their nutrition, as well as the optimal hours and frequency of feeding. This information will be useful for those who plan to breed or feed brook trout, as well as for anyone interested in fish farming and want to learn more about the specifics of feeding this interesting fish [2].

Brook trout (Salmo trutta morpha fario) is one of the most common and economically important aquaculture species. It is a freshwater fish found in rivers and lakes in Europe, North America, and Asia. The annual cycle of brook trout has a number of features that determine its behavior and nutrition.

The first feature of the brook trout's annual cycle is its migration. During spring and autumn migration, trout move to the upper reaches of rivers or lakes to spawn or search for food. Spring migration usually occurs after winter, when water temperatures rise and the food supply increases. Autumn migration occurs before hibernation, when trout look for places with warmer water and more available food.

The second feature of the annual cycle of brook trout is their diet. Trout is a predatory fish and eats a variety of foods, including airborne insects (50–55%), fish fry, crustaceans and other zooplankton. In summer, the

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The second feature of the annual cycle of brook trout is their diet. Trout is a predatory fish and eats a variety of foods, including airborne insects (50-55%), fish fry, crustaceans and other zooplankton. In summer, the trout feeds actively due to the increased water temperature and the increase in food objects. In winter, brook trout reduce their feeding activity.

The third feature of the brook trout's annual cycle is its increase in linear and weight indicators. Under optimal conditions, trout grows rapidly, namely in the first year it reaches linear dimensions of about 10–15 centimeters, then growth slows down to about 10 cm for several years. However, the growth rate of trout is directly dependent on the availability of food and water quality. If the amount of food and oxygen is insufficient, trout may stop growing and even lose weight.

The fourth feature of the brook trout's annual cycle is its reproduction. In spring and early summer, trout begin the spawning season, when females lay eggs and males fertilize them. Trout usually choose quiet and sandy places to spawn, where the eggs are more or less protected from predators. Within a few weeks, the eggs develop and turn into larvae.

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Based on the above, the annual cycle of brook trout has many features that determine its behavior and nutrition. Migration, feeding, growth and reproduction are key aspects of the life cycle of these fish. Understanding these characteristics of brook trout helps professionals develop more efficient methods of brook trout farming.

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Brook trout is a species of fish that lives in freshwater bodies of the northern hemisphere. This fish is known for its bright colors and has special nutritional needs.

Young brook trout actively feed on insects and freshwater crustaceans such as mosquitoes and mayflies, and on the larvae of mayflies. They can also feed on plankton and other small organisms that live in water bodies. As trout increase in length and weight, they begin to consume fry of other fish species, including fry of other fish.

However, plant foods also play an important role in the diet of brook trout. In nature, they feed on aquatic plants, algae and detritus. Plant foods can be especially important for trout in winter, when the availability of other foods is limited [3–6].

The nutrition of brook trout in artificial cultivation has its own peculiarities. Trout in aquaculture usually receive specially formulated feeds that contain all the necessary nutrients for different age groups of brook trout. Such feed usually consists of proteins, fats, and carbohydrates.

References

- Barylo, Y. O., Loboiko, Y. V. (2018). The comparison of qualitative composition of the muscle tissue of brown trout, rainbow trout and brook trout. *Biol Tvarin*, 20 (1), 16–22.
- Estay, F. Javier, Noriega R., Ureta J. P., Martin, W., & Colihueque, N. (2004). Reproductive performance of cultured brown trout (Salmo trutta L.) in Chile. Aquaculture Research, 35 (5), 447–452.
- Lee. C. S., Donaldson, E. M. (2001). General discussion on Reproductive biotechnology in finfish aquaculture. Aquaculture, 197 (1), 303–320.
- Barylo. Ye. (2018). Extenor and weight characteristics of age-1+ brown trout (Salmo trutta Linnacus, 1758), rainbow trout (Oncorhynchus mykiss Walbaum, 1792) and brook trout (Salvelinus fontinalis Mitchill, 1814). Fisheries Science of Ukraine, 1 (43), 43-53.
- Tepe, Y (2009). The effects of feeding level and slocking density on the growth and feed efficiency of Himri barbel fry, Barbus luteus (*I Icckel*, 1843). *Turk. J. Vet. Anim. Sci.*, 33. 21 25.
- Kocaman, E. M., Bayir, A., Sirkceioglu, A.N., Bayir, M., Yanik, T., & Arslan, II. (2009). Comparison of hatch-ery performances of rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo truna fario*) and brook trout (*Salvelinus fontinalis*) under the same environmental conditions. J Anim Vet Adv., 8 (7), 1429–1431.