

Ornamental Carp Breeding in Yamakoshi

The Yamakoshi area of Nagaoka is known for breeding and raising *nishikigoi*, multicolored ornamental carp considered beautiful enough to be called “living jewels.” Of more than 150 *nishikigoi* breeders in the Nagaoka region, approximately 90 commercial and hobby farms are based in Yamakoshi. Each year, many people visit to buy carp from breeders dedicated to the highest standards of care and quality. The koi were historically raised in water-filled terraced rice paddies on the steep slopes of the valley, and they are still kept in some of the terraced ponds in summer. Farmers and breeders put great effort into the maintenance and conservation of the traditional terraced scenery, which can be admired from locations such as Nikoniko Hiroba or Yakushi no Oka. The views are particularly impressive in early summer when colorful sunsets reflect off the water in the fields and ponds.

The History of Nishikigoi Breeding in Yamakoshi

The residents of Yamakoshi began breeding *nishikigoi* (literally “brocaded carp”) approximately two centuries ago. Before that, they had raised plain black *magoi* carp as food for the winter, as it was difficult to hunt or travel to procure provisions during periods of heavy snow. *Magoi* eggs were placed in flooded rice paddies in the spring, where the fish would spawn and mature among the rice plants. Once the carp reached a certain size, they were moved to dedicated terraced ponds. Before snowfall, the fish were transferred to easily accessible household ponds, where they became a ready source of protein. It is said that a fish with a red pattern was found among the black carp sometime in the early nineteenth century, and instead of eating it, the farmers decided to breed it to produce more colorful koi. Since then, scientific research and selective breeding have resulted in approximately 100 different color variations of decorative *nishikigoi*.

The *nishikigoi* of Yamakoshi became known throughout the country after the Tokyo Taisho Exhibition that took place in 1914. In 1916, hybrid crossbreeding replaced pure strain breeding and was used to produce an even greater variety of color patterns. Over time, Yamakoshi *nishikigoi* gained a following among buyers and koi hobbyists abroad, and Yamakoshi breeders were among the first in Japan to sell their carp internationally. In 2004, the Chuetsu earthquake in Niigata Prefecture caused extensive damage in Yamakoshi, ruining koi ponds and forcing residents to evacuate. Despite the setback, *nishikigoi* breeders managed to rebuild in just three years and revived their businesses with the assistance of other breeders and koi enthusiasts across the country. Today,

Yamakoshi *nishikigoi* are prized additions to fish ponds throughout the world. During the selling season, the mountain village becomes a bustling marketplace as potential buyers arrive from across the globe to choose their own “living jewels.”

A Year at a Nishikigoi Farm

The breeding season begins in April and May, when selected *nishikigoi* are paired off with the hope that they produce offspring with the desired color patterns. Although the exact approach may vary by breeder, the typical method involves having the fish deposit eggs on artificial aquatic grasses in breeding pools. The eggs are then moved to a different pool to hatch safely with the other fry. In the following months, the fish undergo periodic culling based on pattern, state of health, and other criteria. Of the approximately 200,000 carp spawned, only 500 to 1,000 make it to adulthood.

Throughout the summer, farmworkers make sure that each koi gets the proper amount of food, is free of worms or parasites, and is protected from scavenging animals. Each farm maintains multiple ponds to separate young fry and adult fish by size or color pattern, and farmers must regularly inspect the ponds to ensure that the koi remain healthy as they grow.

In October and November, the *nishikigoi* are transferred to more protected greenhouse pools for the winter, and until April they are raised indoors. During this time, potential buyers visit to select carp and breeders enter their best specimens in trade shows and contests. Specially designed boxes are used to ship the purchased *nishikigoi* inside bags of cold, oxygenated water that keeps the fish calm. When spring comes, the remaining carp are released back into outdoor ponds to continue growing, and the spawning cycle begins again for a new generation of *nishikigoi*.