

Aller Aqua and the Kundelfingerhof – a success story built on mutual trust

Over the last ten years, a supplier relationship between the producer of premium aquaculture feed, Aller Aqua, and the aquaculture business, Quellpark Kundelfingerhof, has developed into a partnership. Both sides have worked hard together, and today, we can look back on a joint success story.

Kundelfingerhof, Switzerland, is a multi-business operation comprising a fish farm, a restaurant, a smokehouse, the largest farm store in the area, several fishing lakes and, if not enough, a fish processing plant. It is an ideal destination for both business and pleasure trips. The Kundelfingerhof has also played host to several television productions on Swiss television and thus achieved national fame. This success has much to do with the close cooperation with the feed producer Aller Aqua and the trout farm.

In the Thurgau municipality of Schlatt, close to the world-famous Rhine Falls, at an altitude of around 400 meters above sea level, lies the Kundelfingerhof with its springs. Since 1915, fish have been bred here in a classic flow-through system. Although the site had potential, there were always setbacks. Over the years, achieving stable and sustainable trout production was impossible. Over the entire growth period of the fish, the losses were around 50 % on average. In 2012, the estate premises, including the fish farm, were taken over by the current owner, Riccardo Polla, who had recognized the location's potential. The new owner pursued the vision of a functioning trout production integrated into an agricultural experience with gastronomy, a farm store and their factory. The same year, Martin Bernauer, an experienced farm manager from another trout farm, was recruited. He had worked closely and successfully with Aller Aqua as a feed supplier for many years. Building on this good relationship, the decision was made to continue the collaboration at Kundelfingerhof. The team of experts from Aller Aqua offered their support for the new fish farm planning. Together, the vision of a new start has developed over the years that followed.

The new owner and his farm manager knew that in order to keep fish farming production stable and disease-free, serious restructuring was necessary and rebuilding the historic facilities was out of the question. Hygienic aspects and an increase in the annual production volume from 30 to 100 tons led to the fish farm being redesigned from scratch. The Aller Aqua team of experts and a planning office developed the conceptual work. The now-retired former Aller Aqua sales manager, Alexander Tautenhahn, shared his many years of experience in the field of trout production and plant planning. Later, the company received additional technical support from Krzysztof Grecki from the Dabie Hatchery in Poland.

The construction of the new Kundelfingerhof fish farm began in the middle of 2017. It quickly became apparent that the amount of water available was insufficient, as the consulting hydrogeologists assumed. Therefore, it was necessary to redesign the plant as a partial recirculation system to utilize the available volume of spring water efficiently. At the same time, it includes various purification stages. The entire construction of the new fish farm took about five years and involved several phases. From an outdated, classic flow-through system, a state-of-the-art partial recirculation system with a tank volume of almost 1,900m³ has been created. The annual production capacity has been increased from 30 tons to over 300 tons.

However, when the new system was put to work, and the owners started getting the first numbers, it became clear that the loss rates in the different growth stages of the trout were too high. Losses were caused by cold water bacterial diseases such as flavobacteria, furunculosis and redmouth disease.

Thanks to the cooperation with Aller Aqua and its Research Centre located in Busum, Germany, an idea was born to use functional feed to strengthen the fish's endogenous resistance and thus minimize the losses caused by classic trout diseases. Hence, The Kundelfingerhof became a test farm of the "Support" feed concept from Aller Aqua. As early as during the first field trials at the Kundelfingerhof fish farm, it was noticed that the loss rates decreased after a short time. When other feed was used, the problems returned quickly.

"The "Support" concept consists of a range of natural, functional additives added to selected Aller Aqua feeds. These additives have been researched in the laboratory by microbiology specialists and successfully tested in real fish farming conditions. The mechanism of action is the selective inhibition of pathogenic germs in the fish intestine to shift the intestinal flora in favour of beneficial bacteria. Feeding with "Support" leads to a significantly lesser probability of bacterial disease outbreaks, as the fish are more vital and resistant due to a lower germ pressure. Fish fed with "Support" show a higher growth rate and a lower feed conversion ratio, compensating for the additional financial costs.

However, the central area of application in trout farming remains a lower probability of outbreaks of cold water disease in young fish and furunculosis, as well as redmouth disease in larger fish, which can otherwise cause considerable losses.

As disease outbreaks of a bacterial nature are difficult to anticipate, continuous feeding with "Support" is recommended. Neither side effects nor habituation effects have been observed. Best and sustainable results are achieved with good farm management and strict hygiene. Both can complement the feed concept but by no means replace it.

Another essential advantage of the Aller Aqua feeds is their particular suitability for intensive fish farms. Especially when the Kundelfingerhof facility was adapting to the low water volumes (300 tons of production at *35-40 l/s), removing the fish faeces as wholly as possible utilizing a drum filter was essential. Due to the use of Aller Aqua Premium feed, exceptionally high usability of the feed and optimum faeces quality was possible. Due to the excellent stability of the faeces, they hardly disintegrate and can be moved quickly to the drum filter without floating.

The discharge of sinking and suspended matter, as well as phosphorus, nitrogen and C.O.D., has been significantly optimized. It improves the water quality of the run-off water and reduces the CO₂ footprint.

Nowadays, work at the Kundelfingerhof fish farm is mainly problem-free. The

Survival rates in the hatchery have been improved through management and the use of Aller aqua support feed. Survival rates in the hatchery have gradually improved so that there are no significant losses anymore.