KRÜGER VEOLIA

Swiss Alpine Fish

– Sustainable salmon production using RAS2020™ recirculation

Aquaculture | Case Study

Client:

Swiss Alpine Fish AG

Facts

Location: Lostallo, Switzerland

Annual production capacity 600 tons

- Building footprint including waste water treatment and quarantine unit 2,338 m²
- Tank volume 2,500 m³
- Maximum daily feeding 2,000 kg feed /day
- New water consumption:
- 10 - 15 m³/h or
- 120 l/kg feed/day
- Extreme high discharge water quality

Species: Salmon (*Salmo salar*)

Project completed ultimo 2016

The client's needs and wishes

To produce certified sustainable salmon from its landbased salmon farm in the Swiss Alps, Swiss Alpine Fish must have control of its water consumption and discharge. Therefore, Swiss Alpine Fish has invested in the RAS2020™ aquaculture system from Krüger.

This technology ensures that as much as 99.5 percent of the water is treated and recirculated in a land-based system. In this way hardly any discharge reaches the local water environment.

"Environmental restrictions are exceptionally stringent at our location and we are the first company in Switzerland to farm sustainable salmon. Without a water treatment system of this type, we would not be able to do it," says CEO Julian Connor.

Julian Connor explains that the demand for sustainable and locally farmed fish – salmon, in this instance – is high in Switzerland, and the Swiss are willing to pay a higher price per kilo than consumers on the international market.

"This has enabled us to build an efficient, first-class plant in which we use the best feed. We do not use medication and the reduced discharge is treated to comply with the restrictions of the site. The Swiss focus very much on sustainability and a clean water environment," says Julian Connor.

Our solution

The compactness of the RAS2020™ design means that the same volume of fish can be produced in half the area taken up by a conventional system.

The RAS2020™ has no underground piping reducing the risk associated with pipes embedded in concrete and reducing the construction costs.

The circular design in which water circulates with adjustable velocity ensures the optimal velocity in relation to fish size. The outer circle with the larger fish has higher water velocity flow than the inner circle with the smaller fish sizes. The tanks are separated by grids through which the water flows.

A central platform in the circular system from which the fish are handled ensures a short distance to the seven tank sections in the inner circle of the plant as well as the seven tank sections in the outer circle. New fish are added to the inner circle every other month where they are graded by size as they grow. When the salmon reach a certain size, they are moved to the outer circle where they stay until harvest size. Prior to harvest, the fish will be moved to a purge tank with its own independent water system for depuration to obtain a high quality product. Here, the salmon live in completely clean water until they are led directly to the abattoir.

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