

Bruk av Grander i et oppdrettsanlegg

Et anlegg i Bayern, Tyskland



Life in an Aquaculture

Feedback

1. Soon after the installation of the BRDZ in the well, fish larvae have swum towards the inlet of vitalized water. Their overall **constitution** is now remarkably **better**.
2. The fish eggs are **more resistant** against fungal infestation.
3. In general, the **water temperature is more constant**, just as its oxygen content (→ less oxygenation).
4. The indoor building is **cleaned every 3-4 weeks** instead of several times a week as before.
5. The required **cleaning of trays** and troughs is performed at **longer intervals** than before.
6. **Sediments** in the outdoor ponds have **almost no smell**, when ponds are depleted for cleaning.
7. In general, **fish are healthier** and of better vitality, thus need less antibiotics.
8. Customers report on the good quality of the fish from this aquaculture.

Better off Using Grander®Water Revitalization



Well water



In usual well water, the fish are swimming around in a “confused” way and seem to be weak.



1 hour later: well water
using Grander



In Grander-revitalized water, the fish are swimming towards the water inlet and seem to be **livelier** than before

Indoor Situation Using Grander®Water Revitalization



With less dirt in the hatching trays and easier cleaning, the owner has more time, which he can use for his hobbies.

However, at first he has not been convinced to be able to profit from Grander®Water Revitalization.



Benefits for the Environment



Since Grandeur, an **oxygenation** has **rarely** been necessary, thus **saving** several **fillings** of the tank.

The official analysis regarding the purification plant water shows **no exceeding threshold values** even though faecal matter have to be decomposed.

Summary (1)

Description:

- Breeding of rainbow, salmon and brook trouts, and Alsatian samlets from spawn to adult weight.
- Water supply for the 32 ponds from a weir basin and groundwater from the private water well.

Problems:

- Decrease of water-oxygen content in the ponds
- Loss of fish eggs due to fungal infestation
- Stress-induced mortality caused by temperature variability
- High demand of antibiotics coupled with exceeding threshold values of the final effluent

Targets:

- Better water quality (temperature and oxygen level)
- Reduction of mortality amongst fish eggs and adults
- Enhanced breeding conditions in the hatching trays and troughs (regarding oxygen content, temperature, and algae)

Summary (2)

Results:

- Remarkably better water quality
→ less fungal infested fish eggs in the trays result in a higher survival rate
- Less cleaning effort of the hatching trays and troughs
- Visibly enhanced vitality of young fish (indoor) and adults (in outdoor ponds)
- More constant water temperature and little variation of the water oxygen content from the first to the last pond.

Application: Indoor and outdoor aquaculture

Device: 4 DZKG in different depths in the weir-basin
1 DZKG in the private well

Installed: in 2007

Se du fordeler for ditt anlegg for vill- eller tamfisk?

- Ta kontakt, så diskuterer vi mulighetene.
- Naturteknologi as
- Bjørn Baltzersen
- +47 400 16 390
- Natur-t@online.no