

Matre Research Station – state of the art

BY TOM HANSEN



Photos: Øivind Torslett

Since the opening in 1971 the Research Station in Matre, one hour north of Bergen, has been the core facility for the salmonid research of the Institute of Marine Research and of several national and international collaborators. In 2006, the Research Station has been totally modernised with new water supplies, new and better experimental facilities and new analytical laboratories.

Matre Research Station is designed to do both small and large-scale studies on present and future aquaculture species. The facilities are also excellent for studies on wild fish species, including climate-change studies and pollution related experiments.



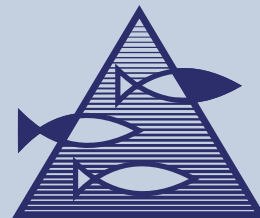
AQUACULTURE RELATED STUDIES

Fish nutrition – All tanks are equipped with an accurate feeding system and waste feed collectors.

Fish welfare studies – It is possible to study variations in parameters like temperature, salinity, water current, oxygen, carbon dioxide, feeding, photoperiod and light intensity, fish density etc. The facilities are equipped with state-of-the-art environmental control and monitoring systems.

Fish growth and reproduction – The environmental parameters can be controlled in





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What is new?

- ▶ Temperatures down to 1 °C and up to 20 °C controlled to 0.1 °C accuracy all year round. Super-cooled water (below 0 °C) and water with temperature above 20 °C can be made available for shorter periods of time
- ▶ All salinities between 0 and 35 ppt
- ▶ Photoperiod and light intensity control
- ▶ Cycles (e.g. daily, monthly and yearly) in all water quality parameters can be programmed and closely monitored
- ▶ Water flow can be regulated in litres or to give a pre-programmed oxygen level in the outlet
- ▶ Oxygenated fresh or seawater can be added to all tanks
- ▶ Other gases or fluids (e.g. carbondioxid, ammonia) can be added
- ▶ Seawater with only 60 % saturation is available
- ▶ Matre Research Station has a large quarantine section that enables work with animals with unknown health status, and are also certified for work with GMOs
- ▶ Tanks between 60 cm and 300 cm diameter (180 to 7000 L)

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experimental tanks suited for a range of fish species, in small and large groups, and also on large broodstock.

A specialised laboratory for studies on individual fish (e.g. cannulation studies) – The laboratory is fully equipped with all water qualities, photoperiod control and waste feed collection. It is also integrated with a fully equipped analytical laboratory.

FISHERIES RELATED STUDIES

The facilities are excellent for short and long term studies on wild fish species like cod, herring, mackerel and horse mackerel. Possible issues are: how environmental factors and food availability affect growth and reproduction; how climate changes will influence on these processes; and how inorganic and organic pollutants will interact with the physiological processes.



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