

INNOVATIVE OFFSHORE MUSSEL FARMING IN THE BELGIAN NORTH SEA

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Problems in the Belgian fisheries sector due to low fish prices, limitations in landings and high fuel costs, are putting pressure on the fishermen to look for other and more sustainable production methods, with the emphasis on diversification. Aquaculture might be a solution for at least a part of the problems. However, the short Belgian coastline is already used intensively for recreation, nature conservation and harbour activities, making coastal aquaculture almost impossible. Recent developments in offshore or open-ocean shellfish culture were a challenge to start aquaculture in the rough North Sea. Culture experiments with blue mussel (*Mytilus edulis*) started in 1998 at the Buiten Ratel and later in the D1-area. Natural spat is collected on suspended ropes and grown over a period of 14 months to marketable size mussels. Preliminary experiments show that mussels from offshore areas have lower pesticide, PCB, heavy metal, and parasite (Buck *et al.*, 2005) loads than their inshore relatives, which leads to a fast growth and a healthy product. The different shellfish production areas show differences in spat fall and growth, which indicates that a feasibility study is needed to determine the productivity and specific use of the different areas.

The rough North Sea with its erratic waves and strong winds makes it hard to harvest these off-shore mussel cultures. Future research will focus on improvement of the harvesting techniques, mussel area site selection (e.g. windmill farms) and diversification towards other shellfish species such as flat oyster (*Ostrea edulis*) and scallop (*Pecten* sp.).

References

Buck B.H., D. Thieltges, U. Walter and H. Rosenthal. 2005. Inshore-offshore comparison of parasite infestation in *Mytilus edulis*: Implications for open ocean aquaculture. *Journal of Applied Ichthyology* 2:107-113.