



SETTLE

Bivalve conditioning and settlement – keys to competitive hatchery production

The Challenge

Hatchery production of bivalves during autumn and winter (outside of the natural spawning season) is a challenge, but necessary to keep market shares and ensure sufficient seed supply to European growers on a year round basis.

Flat oyster and great scallop are both highly valued and sought-after products on the European seafood market, but insufficient numbers of high quality seed severely hamper aquaculture development of this sector.

The SETTLE project will focus on conditioning and settlement as key events during the hatchery production of native European species, the flat oyster (*Ostrea edulis*) and the great scallop (*Pecten maximus*).

SETTLE will involve ten partners; five RTDs and five SMEs from four different countries.

Project Objective

The overall objective of the project is to foster year-round production of flat oyster (*Ostrea edulis*) and great scallop (*Pecten maximus*) spat in hatcheries by controlling gonad development and maximise larval metamorphosis and settlement.

Key Points

To solve the seasonal problems the SETTLE project will

- Identify environmental factors leading to successful off-season-broodstock conditioning (manipulation with feed, light and temperature),
- Reveal effects of conditioning and other biological processes on settlement
- Optimise existing culture methods and technology

Key New Knowledge Expected

- Procedure for conditioning oyster broodstock in winter
- Culture technique for maximized settlement of flat oyster
- Procedure for conditioning scallop broodstock in winter
- Culture technique for maximized settlement of scallop

EATiP Thematic Area of Relevance

TA1: Product Quality, Consumer Safety and Health

TA2: Technology and Systems

TA3: Managing the Biological Lifecycle

TA4: Sustainable Feed Production

TA5: Integration with the Environment

TA6: Knowledge Management

TA7: Aquatic Animal Health and Welfare

TA8: Socio-Economics and Management

Key Words

Oyster, scallop, bivalve, hatcheries, culture methods

Project Information

Contract number:
222043

Contract type:
Research for SMEs

Research area:
Research for the benefit of SMEs

Duration:
25 months (01/10/2008–31/10/2010)

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Potential Impacts



SME

- By extending the hatchery production season and obtaining new knowledge and technologies, the project could help the SMEs to increase the number of spat available to the market as well as strengthen the competitive position of the SMEs and increase the bivalve production in Europe significantly.



Knowledge Transfer

- The Knowledge transfer of the procedures and culture techniques to the sector is essential, but limited information has so far been distributed. Dissemination of results beyond the consortium was limited during the project duration, and will continue to be so for one year following completion of the project. However, in agreement with the SME committee a number of presentations were made at international conferences, including Physiomar in 2008, the Aquaculture Europe conferences in 2009 and 2010, and Larvi 2009. Likewise, IFREMER was granted permission to publish three scientific articles within the project period (Davenel et al., 2010; Suquet et al., 2010; González-Araya et al., in press). Later the main distribution will be in the form of scientific publications and presentation on national and international meetings.

Related Publications/Projects

REPROSEED, « REsearch to improve PROduction of SEED », is a European project conducted by partners from several countries that aim to promote the development of the mollusc aquaculture such as Spain, Portugal, France and Norway. Coordinator is Dr Jean-Luis Nicolas, IFREMER, France.