

## Temperature loggers helping to increase shelf-life

Researchers from the South Australian Research and Development Institute have been working with the Australian Oyster Industry in an Australian Seafood CRC funded cool-chain evaluation project, to improve food safety and quality of transported live oysters.

As a result of this work a simple method using data loggers has been developed. This will help Australian growers identify and address storage temperature issues which can assist in increasing the shelf-life of oysters.

The Seafood CRC project 2007/700: "A Critical Evaluation of Supply-Chain Temperature Profiles to Optimise Food Safety and Quality of Australian Oysters" aimed to improve food safety and quality of transported live oysters.

To achieve this, the project:

- planted temperature data loggers (iButton®) with sample stock before shipment;
- analysed results compared to ASQAP storage temperature requirements;
- tested spoilage rates of Pacific Oysters and Sydney Rock Oysters at different temperatures; and
- trialed storage temperature stability in a number of different packaging and storage alternatives.

The most severe temperature abuse was found in long and complex transport and was generally associated with cold abuse.

Growers are reminded to achieve adequate cooling between harvest and collection for transport to meet regulatory requirements.

Differences between states and species were found, with SA having the longest and most complex transport chains and NSW the shortest involving the least refrigeration.

Temperature loggers used in this study were DS1921G ThermoChron® iButton® temperature recorders (Maxim, California, USA) purchased from <http://www.homechip.com/catalog/>. The software can be freely downloaded at [http://www.maxim-ic.com/products/ibutton/software/tmex/download\\_drivers.cfm](http://www.maxim-ic.com/products/ibutton/software/tmex/download_drivers.cfm).

Seafood CRC members can download the full 2007/700 report at [www.seafoodcrc.com](http://www.seafoodcrc.com) (Members section). Alternatively non-members can purchase the report from the Seafood CRC bookshop.

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