Introduction

The Fisheries Technology and New Opportunities Program (FTNOP) provided assistance in 2008 to the Centre for Aquaculture and Seafood Development (C ASD) of the Fisheries and Marine Institute, Memorial University of Newfoundland to develop and deliver a short Northern Shrimp (Pandalus borealis) sensory and analysis course.

Background

The shrimp industry is a major contributor to the economy of Newfoundland and Labrador. In order to be competitive in the world market, products from this province must meet or exceed international standards.

In the United Kingdom, it is a requirement that all quality personnel involved in shrimp processing be trained in shrimp sensory analysis. It is, therefore, essential for shrimp processors who are trying to access European markets to ensure all quality personnel complete this training. Since most front-line workers in this province do not have formal sensory and analysis training, several shrimp processors requested the Fisheries and Marine Institute develop a Northern Shrimp Sensory and Analysis Course.

Methodology

With assistance from FTONP, the Centre for Aquaculture and Seafood Development directed the non-degree program committee to develop the course.

Course development included creating a curriculum, a course syllabus and conducting controlled spoilage to attain samples of varying degrees of quality. The curriculum of the two-day course focused on practical product assessment, sensory theory and recognition of pass/fail quality based on appearance, odor, texture and flavor of raw and cooked-and-peeled shrimp.
Shrimp Sensory and Analysis Course

Results

During Phase I of this project, the Shrimp Sensory and Analysis Course was developed and promotional materials were distributed to 13 shrimp processors in this province. From December 2008 to March 2009 four course sessions were conducted at the Fisheries and Marine Institute. Participants included 29 industry personnel, one out-of-province consultant and five fisheries inspectors.

The program of studies focused on developing practical skills related to:

- Understanding and knowledge of the field of sensory science.
- Understanding and knowledge of necessary criteria to conduct sensory evaluation.
- The ability to detect tainted, decomposed and unwholesome products.
- Practical procedures that can be used in the sensory evaluation of Northern Shrimp.

As a part of the course, individual participants were required to evaluate the sensory quality of shrimp samples followed by participation in a group discussion about the quality of each sample. This process has been determined to be most effective in calibrating individuals to the same sensory standard.
During Phase II of this project, FTNOP provided assistance to the Fisheries and Marine Institute to deliver the Shrimp Sensory and Analysis Course during March 2010. In preparation for the delivery of the course, CASD conducted controlled spoilage runs to obtain varying degrees of shrimp quality and promoted the course to shrimp processors in Newfoundland and Labrador.

As a result of participant recommendations from Phase I of this project, the course was conducted over a three-day period rather than two. Ten front-line industry workers successfully completed the program.

**Conclusion**

To ensure that shrimp products processed in this province meet international standards, a Shrimp Sensory and Analysis Course was developed and delivered by the Fisheries and Marine Institute. Participant feedback was very positive.

Studies have shown that refresher courses are recommended to ensure practical product assessments do not drift from the sensory standard. To train new industry personnel and to recalibrate previously-trained workers, it is recommended that the Shrimp Sensory and Analysis Program be offered annually prior to the start of the shrimp fishery.

The success of this program has prompted the Fisheries and Marine Institute to consider developing similar sensory analysis courses for other commercially important species such as Snow Crab.

The Fisheries Technology and New Opportunities Program (created under the Fishing Industry Renewal Strategy) provides support for innovative and competitive harvesting, processing, and marketing initiatives to increase the overall viability of the Newfoundland and Labrador seafood industry to be a major economic contributor to the provincial economy. For more information please contact us.