

## **BURBOT BACK IN THE BELGIAN KITCHEN?**

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### **Introduction**

Burbot, (*Lota lota*) has been identified as a possible candidate for diversification in cold water aquaculture (Wocher et al. 2013, Palinska-Zarska et al. 2013). In the past, burbot was found in Belgian cuisine as it was even a main ingredient of the famous fish stew “Gentse waterzooi”. But with the disappearance out of Belgian waters around the years 1960, burbot is not found on the local market. This implies that current consumers appreciation, price and market position of burbot can not be determined. For this reason, potential aquaculturists in Belgium have been hesitating to produce burbot. LotaBEL is a current project in cooperation with farmers that wants to start the supply of burbot to the market. In this study burbot produced in small quantity on Belgian troutfarms will be commercially sold. With the results of consumers inquiries we will be able to evaluate the consumers acceptance of the burbot based on characteristics like taste, smell, appearance and price. In order to generate more revenue from burbot culture, the market potential of burbot can be increased by creating added value through derivatives such as smoked burbot and liver paste. Research into the feasibility of processing and the sensory evaluation of the final products will therefore also be performed in this study. The burbot fillet, smoked burbot and liverpaste will be analyzed by a sensory panel. Linking data from this sensory panel with the consumers inquiries will give us a first glance on burbot market position.

### **Materials and methods**

Burbot fingerlings were supplied to Belgian troutfarmers by Aqua-ERF. These farmers are growing the fish and will sell them directly to consumers and restaurants. Inquiries will be taken from those consumers and analysed with Qualtrics software.

For the purpose of evaluating the possibility of making a qualitative spreadable liver paste based on burbot livers, latter were obtained from an aquaculture farm (Basis57) in Switzerland. These livers, stored in a freezer at -20°C after removing them from the fish, were transported on dry ice to the Research Group for Technology and Quality of Animal Products for further processing. Livers were first analysed on salt content, fat content, protein content and fatty acids profile before preparing different recipes. First a recipe was generated that delivered a spreadable liver paste that had the desired texture. Afterwards, different recipes were tested from which two were withheld for further sensory analysis. Trained staff of the Research Group for Technology and Quality of Animal Products participated in the Quantitative Descriptive Analysis (QDA) for the liver paste. Different descriptors are tested: color, odor intensity, spreadability, taste and texture.

Smokehouse “Le Cheneau” will try different smoking protocols and deliver smoked burbot that will be submitted to a Quantitative Descriptive Analysis together with commercially available smoked trout and smoked mackerel. Burbot fillet and other commercial fish of high standard will also be submitted to a Quantitative Descriptive Analysis.

## Results

At current moment the production cycle is still running with burbot to be sold at the end of spring. Results of the inquiries will be gathered and analyzed. The values obtained from lab analysis concerning salt content, fat content and protein content for burbot liver are displayed in Table 1:

Moisture (%)	Fat content (%)	Protein content (%)	salt content (%)
41,66	17,61	5,11	0,13

Table 1: Composition of burbot liver.

The results of the Quantitative Descriptive Analysis for burbot fillet, smoked burbot and liver paste will be shown at the conference.

## Discussion and Conclusion

Although burbot samples were very appreciated by different restaurant chefs, we still have to wait on the results of the consumer inquiries to estimate the potential of cultured burbot on the Belgian market. Results of the QDA, where burbot and its derivatives will be compared with commercial products, will give us the possibility to determine the market segment of these burbot products. In this way, farmers will be able to obtain an indication of selling price. This can then be applied in a more accurate cost benefit analyse of commercial burbot culture, which will determine the final decision to invest or not in this species.

## References

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