

Updated description of Pilot Chain 4 (March 2011)

1) What is the main aim of the pilot chain?

The aim of the pilot chain is to verify the possibilities of using Near Infra-Red Spectroscopy (NIRS) to predict water holding capacity of pork under commercial conditions in a cutting room of a pig processing plant. The second aim is to assess the value of such predictions in logistical decision making.

2) Please explain the status quo of the activities within this pilot chain.

A new on-line NIRS technology has been tested under cold room conditions in several pig processing plants, after verification of the NIRS technology under laboratory conditions. Water holding capacity was measured on more than 1200 pork samples as drip loss % after 48 hrs in a retail package. NIRS has been proven to be able to classify pork into different quality classes. A start up has been made to investigate the logistical consequences of (additional) sorting for pork quality.

3) Which results can be expected in the further course of the project (as far as you can estimate them at this point of time)?

In addition, the effectiveness of sorting ham raw material by NIRS for optimal water holding capacity for cooked ham production (i.e. quantify increased cooking yields) will be tested and quantified.

4) How can these results be realised (e.g. which technology is used etc.)?

The NIRS technique is used and helps therefore to realise the planned aims.

5) What are the main steps which remain until the end of the project/runtime of the pilot chain?

Theoretical logistical implications of sorting for pork quality and quantification of potential cooked ham yields.

6) Which are the innovative aspects of the pilot chain compared to the status quo of the pig and pork sector?

Sorting for pork quality is implemented on a very limited scale in the pork industry with invasive technologies (like glass pH probes). Using an on-line non-invasive technology like NIRS would be new to the (fresh) pork industry.

7) Please explain the collaboration e.g. with other modules within the project.

Validation of the NIRS system has been carried out by VION in cooperation with the supplier of the NIRS technology. Research on the logistical consequences of sorting for pork quality is led by Wageningen University in cooperation with VION Food. The University of Bonn has been an excellent overall coordinator of this pilot trial with the Q-PorkChains project.

8) What are the main benefits during the daily business?

These have yet to be determined in cooperation with logistics, operations and sales & marketing. VION will start to introduce the NIRS depending on the cost / benefits and the logistically fitting into the operational structures.

9) What could have been improved in comparison to the status quo in the beginning of the pilot chain?

10) Could management decisions have been improved – if yes in which way? (advantages/disadvantages)?

A better understanding of the added value of pork quality is now possible.

11) Please explain the impact of the project in its industry or research sector.

When implemented it will be a major step forward in producing better / optimal quality pork, by being able to assess special pork quality traits.