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TRIMSCAN, making SME meat processors more competitive by using automatic in-line fat analysis in meat trimmings

Many meat processed products like hamburgers and sausages, including fresh sausages, cooked or smoked sausages (e.g. frankfurters, bologna) and dry-cured sausages (e.g. salami, chorizo) are produced from meat trimmings mainly from pork or beef or from a mixture of pork and beef. Europe is a major meat producer, and the EU accounts for over 16% of global meat production.

Trimming bins are pre-classified at slaughterhouse to a determined amount of fat with different lean/fat ratios (e.g. 90/10, 80/20, 70/30, 60/40, 50/50, etc). In some slaughterhouses this classification is traditionally carried out by experienced and trained operators who manually choose the meat from different parts of the pig/beef carcass to achieve the desired fat content. Natural variation of fat content in pre-classified meat trimmings can be up to ± 5 %. Even with carcass classification and employees with long experience, large variations in fat levels for manufacturing meat are unavoidable.

In meat processing, the control of fat in meat trimmings is of vital importance to ensure homogeneity and quality of the final product, to reduce the lean meat over-use and to comply with legislation and customer specifications. Large fat variations will produce substantial economic losses and a number of industrial problems. Excessive salt content, poor texture, hard surface, appearance and odour and product spoilage are the most common quality problems. Manual sampling, recipe adjustment, poor binding capacity and problems during slicing of the product are the most important industrial problems.

The main goal of the project is to investigate the use of a contactless technology for the in-line fat analysis in EU standard bins with accuracy better than 1.5%. TRIMSCAN project will provide SME processors and slaughterhouses a practical tool at an affordable cost to make them more competitive by reducing the expensive lean meat over-use by at least 2% and to avoid the need of time consuming sampling and recipe reformulation. TRIMSCAN will substantially improve and simplify the production processes by homogenising the quality of the final product and by reducing the percentage of rejections due to products that do not meet the legislation and/or customer of specifications. TRIMSCAN represents a real business opportunity for the SMEs of the sector.

On 22 January 2014, the kick-off meeting was held in Parma, to put forward the general reference architecture which will be the basis for the work to be carried out.

TRIMSCAN Facts:

- **Start date:** 2014-01-01
- **Duration:** 24 months
- **Grant agreement no:** 605758
- **Project Cost:** 1,435,299 euro
- **European Funding:** 1,078,999 euro

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