

What is the landscape of artisanal cheese production in Belgium?

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INTRODUCTION

Cheese has been pointed as the cause of listeriosis outbreaks worldwide. In Belgium, a recall of Herve cheese occurred a few years ago, due to *Listeria monocytogenes* contamination. Indeed, Regulation (EC) N°2073/2005 asks absence of the bacterium in cheese leaving producer's control. Alternatively, producers can also prove that the pathogen will never reach a threshold value of 100 cfu/g during the shelf-life of the product. The goal of this project is to perform shelf-life studies in order to show that some types of cheese could take advantage of this alternative criterion. But before helping the producers, an in-depth knowledge of Belgian artisanal cheese landscape is required. The goal of this study was thus to consult the Belgian producers in order to learn about their cheeses and the way they are produced.

MATERIAL AND METHOD

A survey was performed by phone among 123 Belgian artisanal cheese producers from a list provided by the Federal Agency for the Safety of the Food Chain (FASFC), reaching a participation rate of 70%. The survey consulted thus 25 Flemish and 98 Walloon cheesemakers. All cheese factories were fitted to a Belgian map using the free software QGIS, in order to appreciate their geographical dispersion. The survey form covered all aspects of producers experience, cheese manufacture and packaging and sales channels. All data were analyzed using R language and Rstudio software.

GEOGRAPHICAL DISPERSION

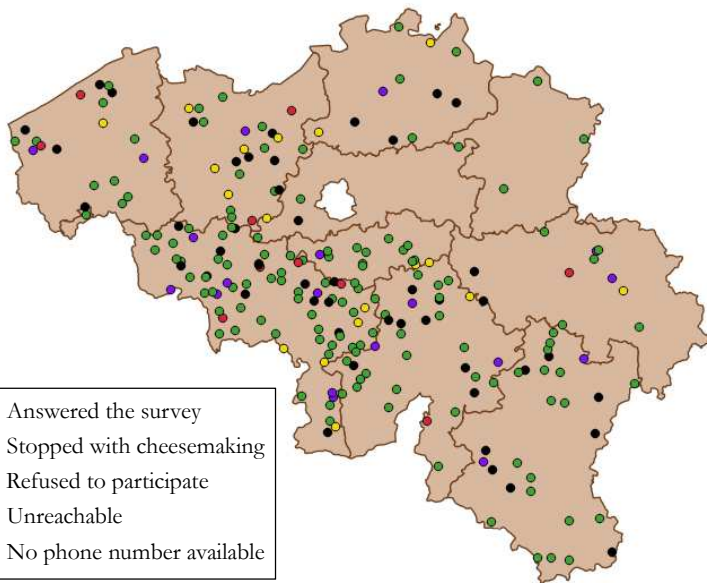


Fig. 1 – Map of the Belgian producers of artisanal cheese

LANDSCAPE OF THE TYPES OF CHEESE

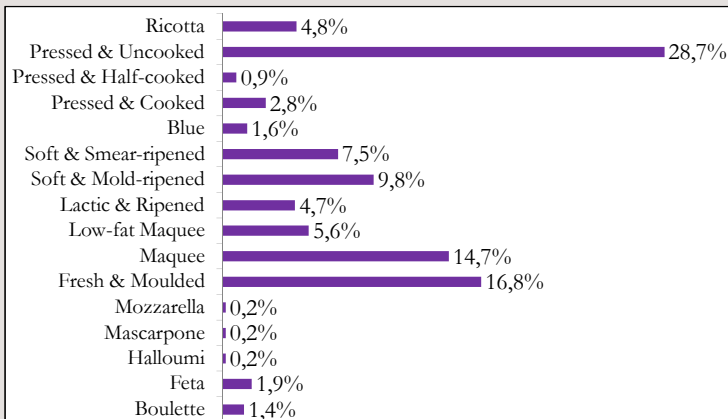


Fig. 2 – Types of cheese met during the survey (n= 424)

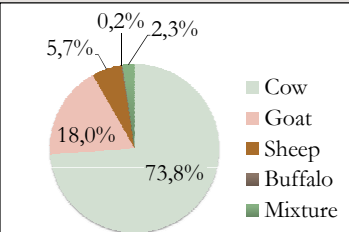


Fig. 3 – Type of milk (n=424)

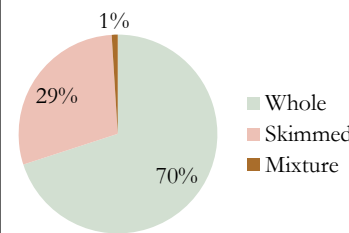


Fig. 6 – Producer's age (n=123)

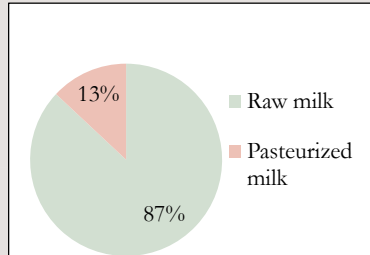


Fig. 4 – Heat treatment of the milk (n=424)

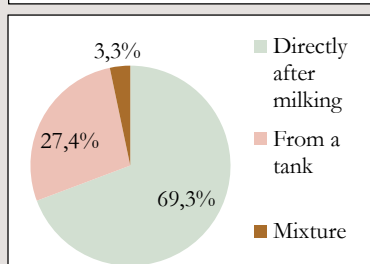


Fig. 5 – Use of the milk (n=424)

SMALL BRIEFING ABOUT CHEESE PRODUCERS

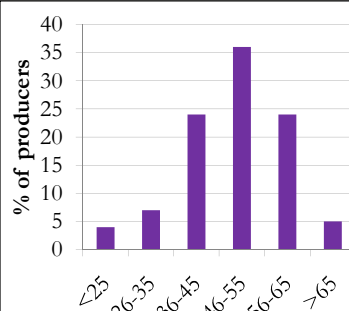


Fig. 6 – Producer's age (n=123)

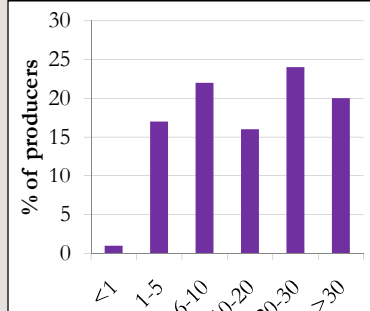


Fig. 7 – Producer's experience, in years (n=123)

CONCLUSIONS

This survey provided in-depth data on the process used for each type of cheese. However, it was decided to focus on general data on producers, cheese factories geographical dispersion and types of cheese. The majority of the cheeses are made from whole raw cow's milk. In most of the factories, the milk is directly transformed after milking, without cooling and storage in a tank. Fresh and uncooked pressed cheeses represent around 50% of Belgian artisanal cheeses. All these data will be used in order to perform a clustering, allowing to generate groups of cheeses with the same production process. A sampling plan will then be designed, containing cheeses from each group which will undergo further physico-chemical characterization.

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