

Milk fatty acid composition in France: perception by the consumers and relations with dairy cow diets

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Introduction

- Diversity of milk fatty acids (FA) induces a high interest for human nutrition
- Do consumers know milk composition ?
- Do consumers know interests of milk FA ?



Introduction

Fatty acids:

=> Saturated fatty acids (lauric, myristic, palmitic, stearic, ...) 65% of FA

=> Monounsaturated fatty acids (oleic, ...) 30 to 35% of FA

=> Polyunsaturated fatty acids (linoleic, linolenic, vaccenic, CLA, ...) <5% of FA



Aim of the study

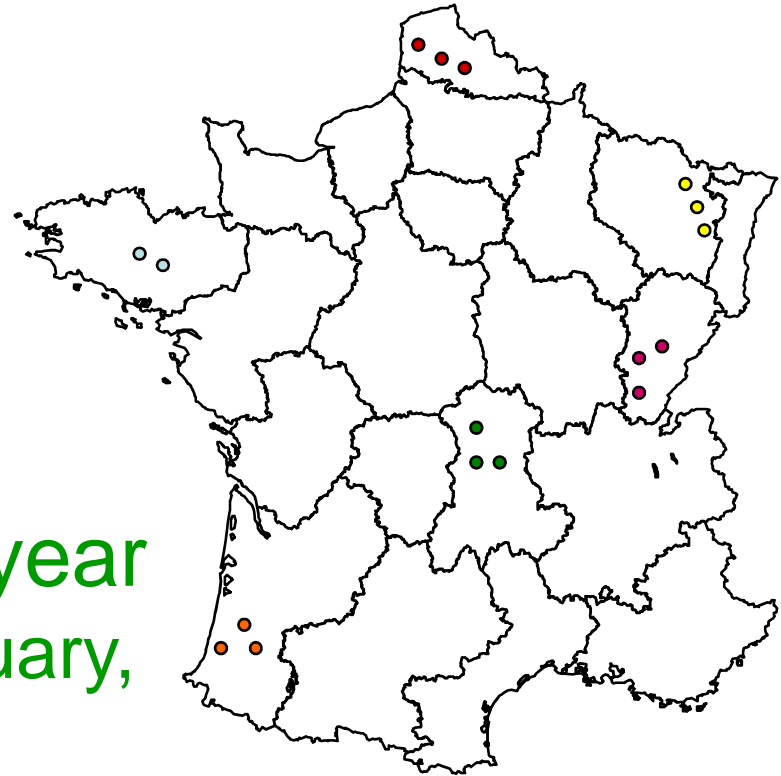
**Identify the relation between different
fatty acid compositions
of dairy cow milk
and the perception by the consumers**





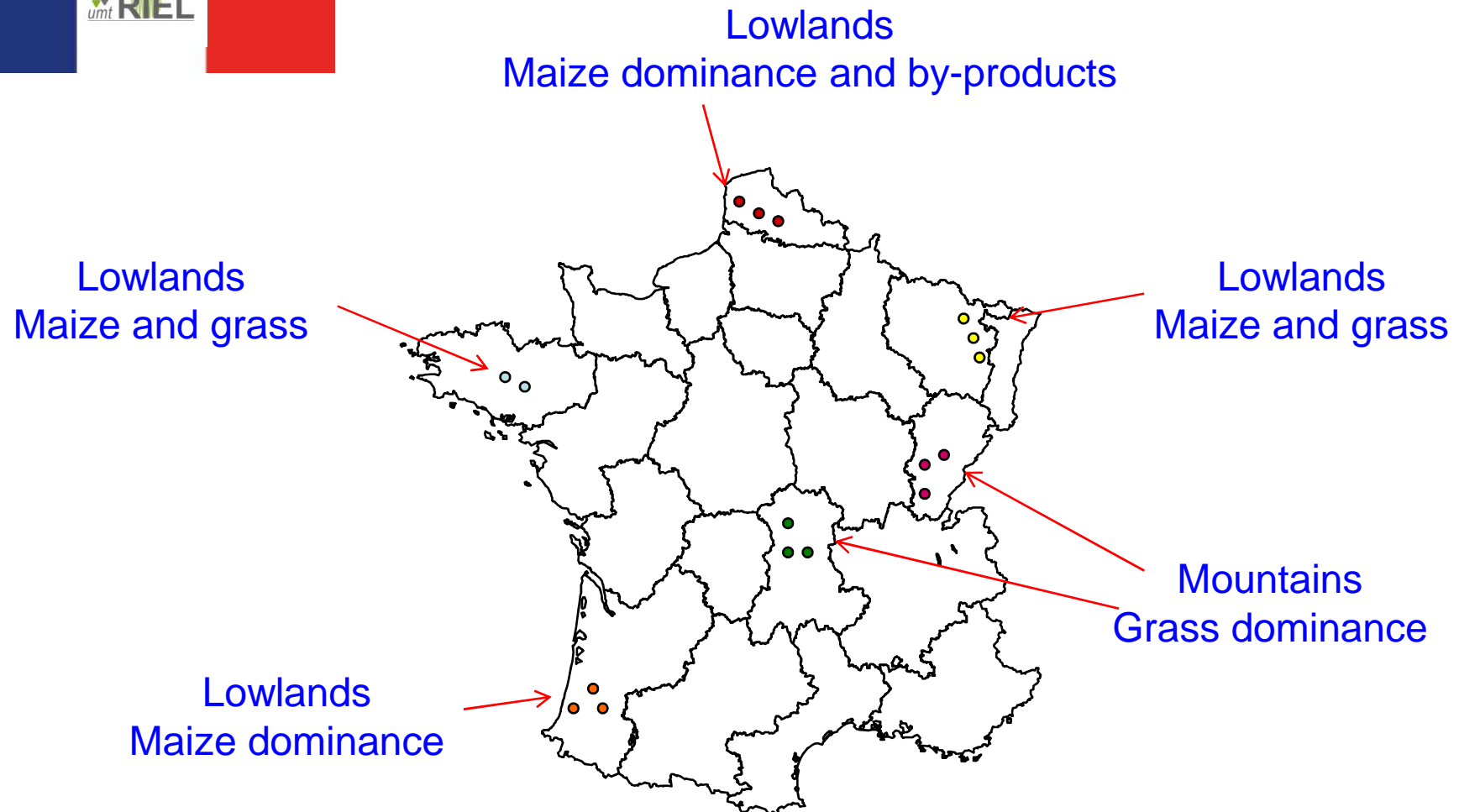
Materials and methods

- 17 farms located in different regions
- 5 milk samples over a year (May, July, September, January, February)
- Description of the dairy cow diet for each milk sample





Materials and methods





Materials and methods

- 85 samples analysed by gas-chromatography



- Statistical analysis
 - Principal component analysis
 - Variance analysis



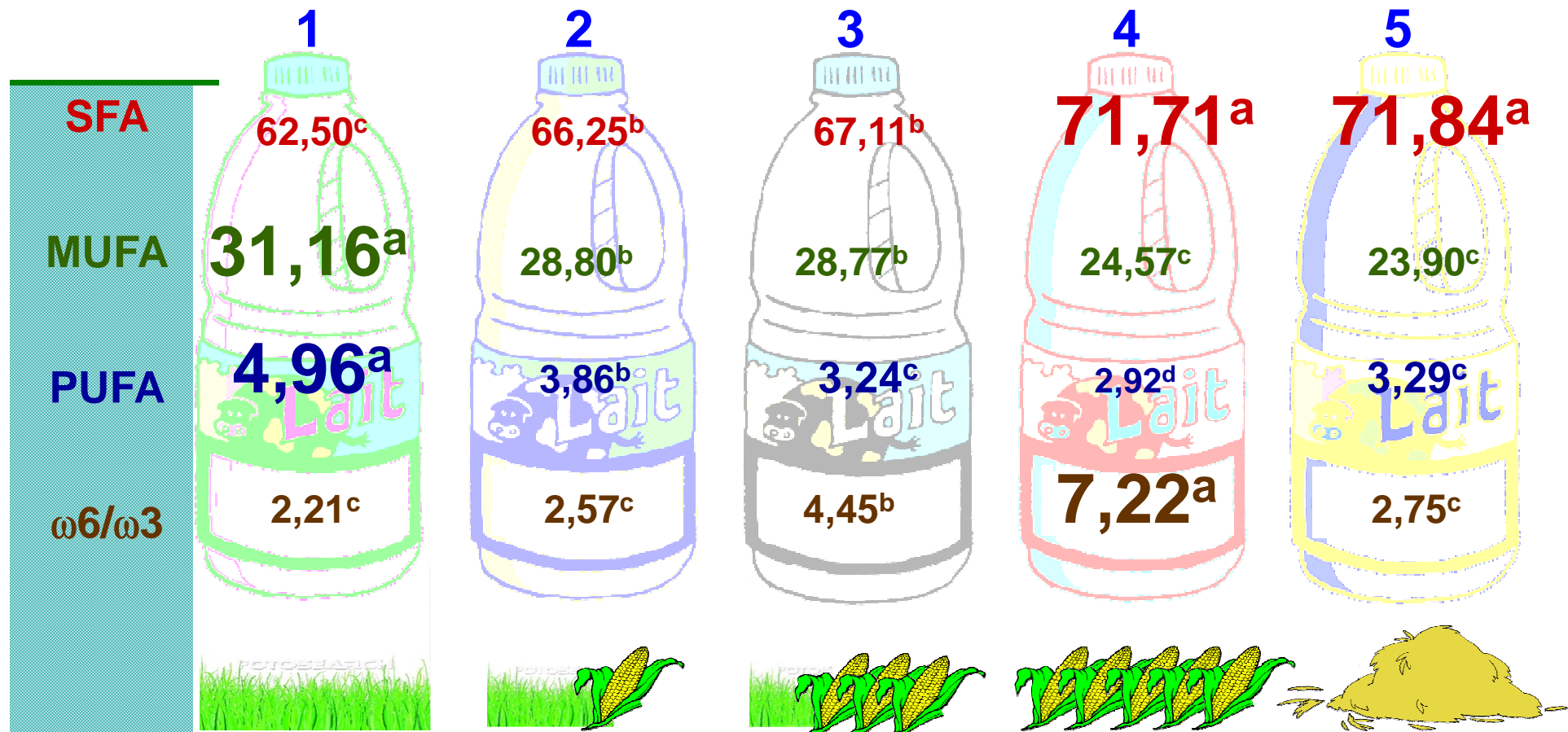
=> From milk fatty acid composition to dairy cow diet



=> Relations with consumer's point of view

Five milk classes identified

Milk classes



a,b,c,d: $P < 5\%$. Results in pourcentage of total FA (ANOVA)



Consumer's opinion

- Consumers want « good » products but « good » has a lot of different meanings: texture, taste, flavour, health, ...
=> already the case for milk and milk products!
- Consumers do not always know what a fatty acid is (except maybe for $\omega 3$ = marketing)



Consumer's opinion

Consumers think that « milk is milk » i.e. only one quality of milk

=> 5 milk classes were identified in this study with only 17 commercial farms!

Important lack of knowledge on milk FA

=> Education of the consumers is as important as communication toward milk producers: mutual benefits



Conclusion

- Milk produced from pasture diet best fits to human nutritional requirements
- Diversity of milk fatty acid composition in France
=> different milks
- Dairy cow feeding is a fast, reversible and efficient way to improve milk FA profile



Conclusion

Three goals must be reached to improve the image of milk and milk products:

- Explaining the diversity of milk FA both to consumers and farmers
- Communicating on the nutritional and sensorial benefits of milk fat
- Showing the diversity of milk and the technical advices available to modify the FA profile



Thank you!

Any questions?

