

The calibre effect on two traditional dry-fermented sausages from Alentejo, Portugal, made from the same dough

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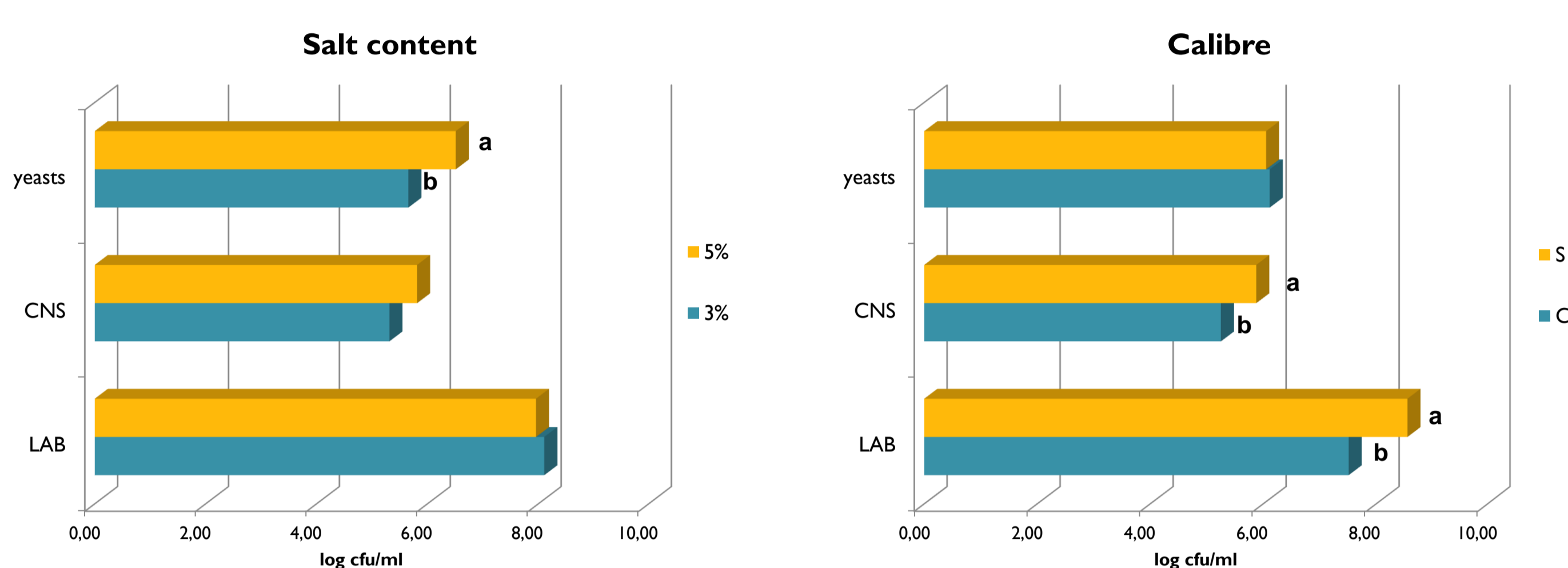
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AIMS

- The aim of this study was to evaluate the effects of calibre, genotype and salt concentration on the microbiological, physicochemical and textural parameters, as well as on sensory acceptability, of “catalão” and “salsichão”.

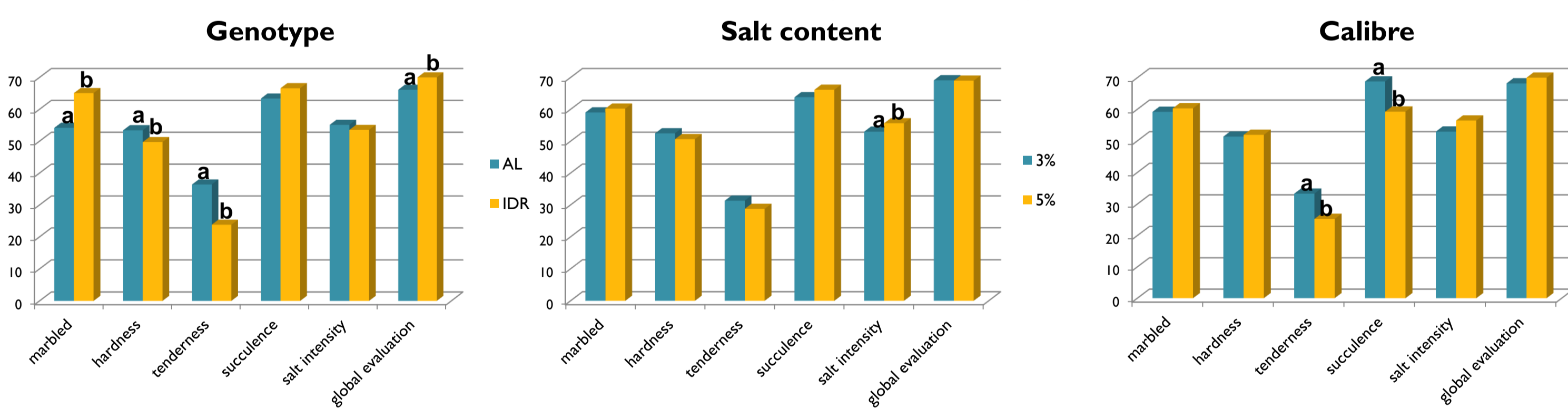
RESULTS

Microbiological analyses



- The number of yeasts was higher in 3% sausages ($p < 0.05$).
- Different numbers of lactic acid bacteria (LAB) and coagulase negative staphylococci (CNS) were observed between the two calibres ($p < 0.05$).
- No significant differences were observed between the two genotypes.
- No contamination with *Salmonella* spp., *Campylobacter* spp. and *Listeria monocytogenes*, nor Enterobacteriaceae or *E. coli* in particular, was detected in the analysed products.

Sensory Analysis



- Differences were sensed between the two genotypes regarding the attributes marbled, hardness, tenderness and global evaluation. Hybrid genotype sausages were globally preferred by the panelists.
- Salt differences were noted by panelists, but have minor impact on other studied parameters.
- Concerning the sensorial analysis, the calibre effect was sensed in the attributes succulence and tenderness ($p < 0.05$).

CONCLUSIONS

- Food safety is generally not affected by the reduction of salt content.
- Consumers tend to prefer large calibre sausages manufactured with hybrid pork meat.
- Overall, the calibre effect was the most distinctive one, followed by the effect of genotype.

Acknowledgements

This work was supported by national funds through project PRODER 13.021 (QREN/PRODER/Medida 4.1), Fundação para a Ciência e a Tecnologia (FCT) through project PTDC/AGR-ALI/119075/2010 and under the Strategic Project PEst-OE/AGR/UI0115/2014 and co-funded by FEDER Funds through the COMPETE Programme. The authors thank PALADARES ALENTEJANOS Lda., Q-Staff, Consultoria, Lda., A. Oliveira, G. Pias and R. Bicho for their collaboration.

INTRODUCTION

Traditional food products are an important part of European gastronomy and it has been long empirically known that traditional fermented foods are vital to a good digestive health. However, and also due to health concerns, an extensive evaluation of food quality and safety parameters is crucial.



MATERIALS & METHODS

Two low-salt dry-fermented sausages were manufactured from the same dough with two different casing calibres (small-“Catalão”/large-“Salsichão”) using two pig genotypes (Alentejano (AL)/Iberian x Duroc (IDR)) and two NaCl concentrations (3%/5%). Three independent batches with replicates were prepared. Analyses of variance were performed considering calibre, genotype and salt concentration.

Microbiological and physical parameters

- Microbiological analyses according to the ISO standards
- aw and pH measurements according to the Norma Portuguesa NP-3441

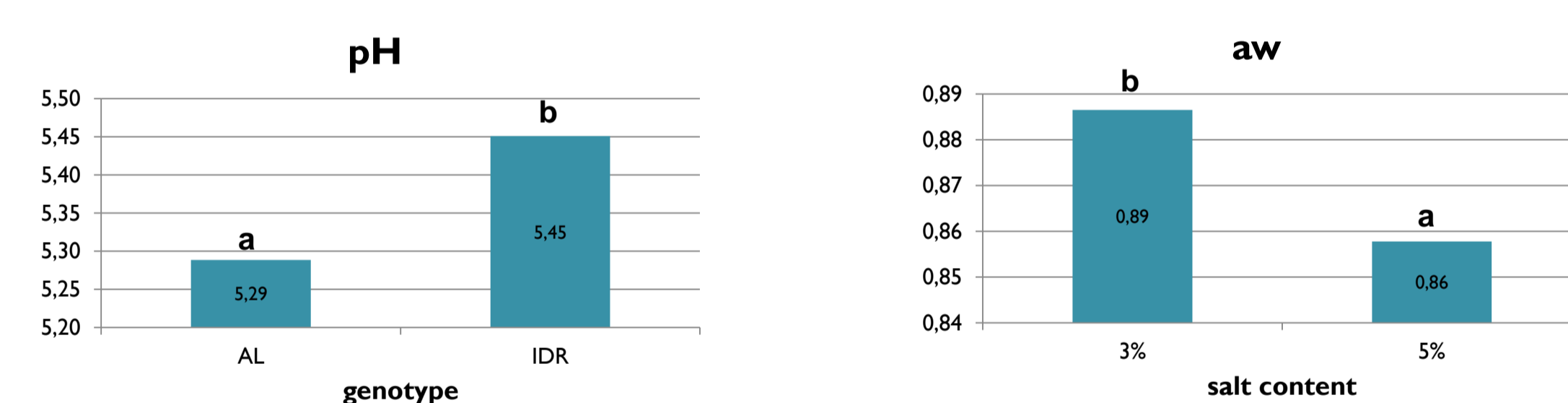
Texture Profile Analysis

- Using a Stable Micro System TA-Hdi
- Cylindrical samples with 1 cm height compressed twice to 50%
- Five units tested per formulation

Sensory evaluation

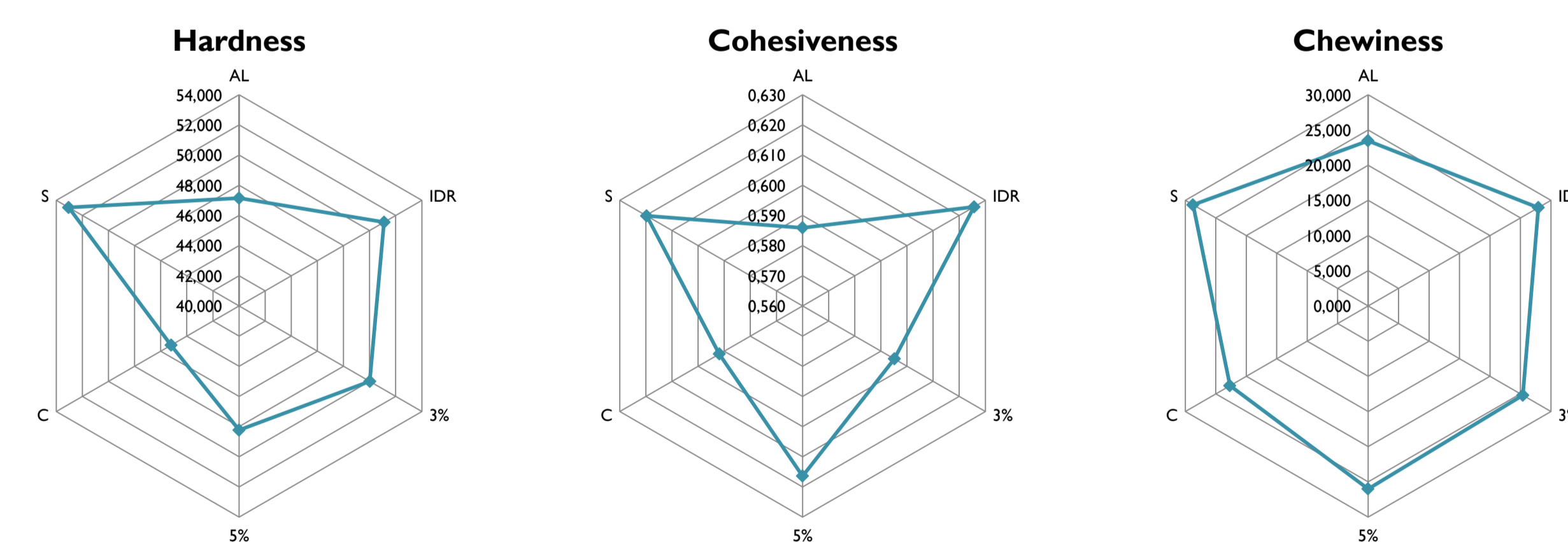
- Descriptive/quantitative analysis in a scale from 1 to 100
- 10 trained panellists

pH & a_w



- Significantly different pH values were observed between the two genotypes and the different calibres ($p < 0.05$). On the other hand, a_w values differ significantly with salt content ($p < 0.05$).

Texture Profile Analysis



- The Texture Profile Analysis (TPA) revealed significant differences between the two calibres regarding hardness, cohesiveness, resilience, gumminess and chewiness ($p < 0.05$).