USE OF OLIVE POMACE IN THE BISARA BREED FEEDING. EFFECT ON PROCESSED MEAT PRODUCTS SENSORY QUALITY

Rodrigues, S., Vasconcelos, L., Leite, A., Ferreira, I., Pereira, E., Teixeira, A.

1Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

2Laboratório Associado para a Sustentabilidade e Tecnologia em Regiões de Montanha (SusTEC), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

1. Introduction

The olive oil extractive industry produces large amounts of by-products, with a high negative environmental impact, the most relevant being olive pomace. There are different types of bagasse, depending on the type of extraction, which can be ecologically harmful. Among the alternatives to use this by-product and alleviate its impact, there is animal feed, namely pigs.

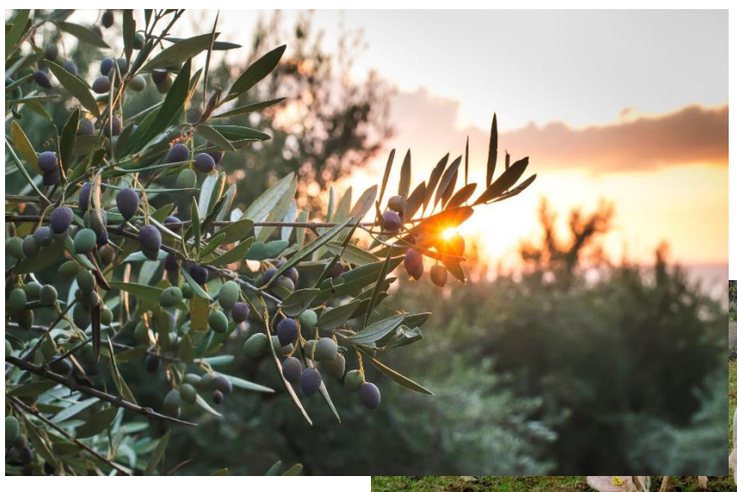
2. Objective

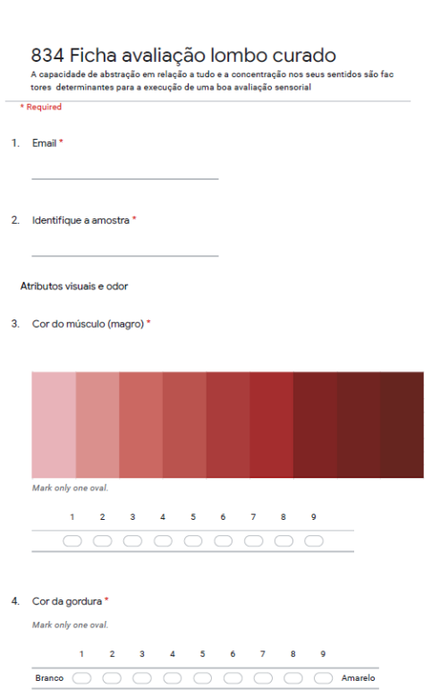
This work aimed to evaluate the effect of feeding animals with olive pomace on the sensory characteristics of Bísaro pork transformed products: dry-cured loin and neck.

Five treatments were studied considering the process of obtaining the olive pomace: pressed (PoPr), centrifuged (PoCf), and extracted (PoEx and PoExOO) olive pomace, compared with the control (Ct).

2. Material and methods

Animals were fed with olive pomace for 2 weeks before slaughtering. In 4 different times, 2 animals per treatment were slaughtered, meaning 10 animals each time, 40 animals in total. Dry cured loins and necks were produced in the meat manufacturing industry Bísaro Salsicharia according to traditional practices.

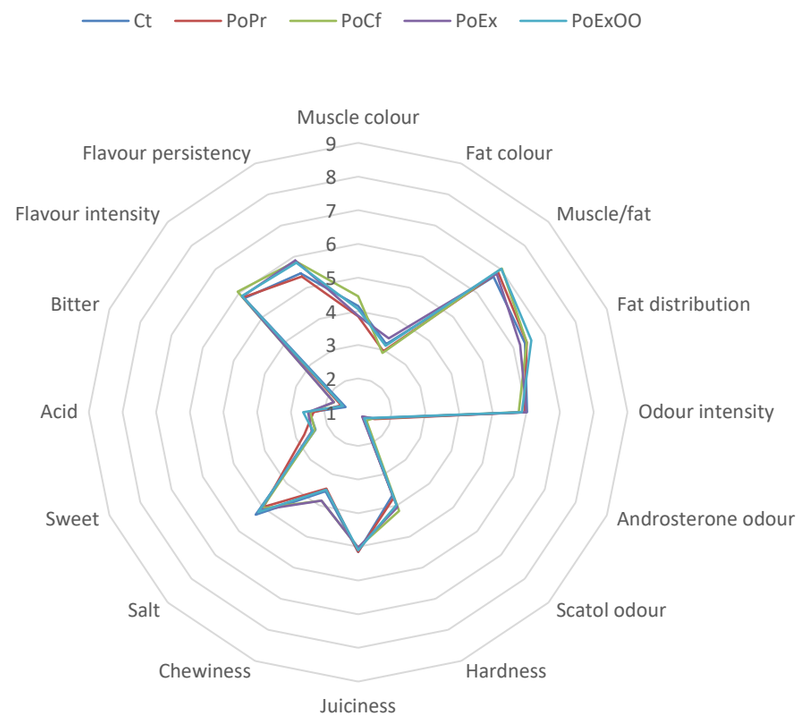




Twenty-one appearance, odor, texture, and taste attributes were evaluated by 8 members trained taste panel. All treatments were evaluated in duplicate in each of 3 sessions. A nonparametric ANOVA was performed for related samples, with pairwise comparisons by Friedman's test..

3. Results

The following graphs show the sensory profile of the cured loins (Graph 1) and necks (Graph 2) obtained from the animals submitted to the 5 different treatments.



Graph 1 – Sensory profile (quantitative sensory attributes means) evaluated in the cured loins obtained from Bisaro pork submeted to the studied treatments.

Graph 2 – Sensory profile (quantitative sensory attributes means) evaluated in the cured loins obtained from Bisaro pork submeted to the studied treatments.

Results showed no significant differences between treatments for all quantitative sensory attributes evaluated in the cured loins of Bísaro pork under study. In the cured neck, there was a significant influence of the treatment on the muscle/fat ratio. PoCf and PoEx had a significantly lower muscle/fat ratio, that is, more fat than muscle than Ct, and at the same time PoPr and PoExOO were not significantly different from one or the other.

Treatment	Muscle/fat	Salt taste
Ct	5.46a	5.02ab
PoPr	5.15ab	4.54b
PoCf	4.60b	4.79ab
PoEx	4.77b	4.73ab
PoExOO	4.98ab	5.10a

Table 1: Means with different letters in the same column are significantly ($p<0.05$) different for muscle/fat ratio or salty taste

Qualitative attributes that indicate the perception of odor and specific flavor of pork, as well as the presence of condiments associated with the recipe used in the production of cured loins and necks of Bísaro pork, were sensorially evaluated.

5. Final Considerations

We can conclude that olive pomace can be used in pigs' diets with no influence on their processed meat products' sensory characteristics, adding value to an undervalued subproduct from olive oil production.

Acknoledgements

Project name: Bis+Olive: Use of olive pomace in the feeding of Bísara pork breed. Evaluation of the effect on meat quality. Project code: NORTE-01-0247-FEDER-072234

Laboratory of Technology and Quality of the Carcass and Meat