

The 2nd International Electronic Conference on Foods Future Foods and Food Technologies for a Sustainable World 15–30 OCTOBER 2021 | ONLINE

# Food Habits and Knowledge Related with Meat on a Sample of Portuguese Consumers

**Raquel P. F. Guiné** 

Anabela Gonçalves

**Edite T. Lemos** 





# Introduction



- Meat is one of the most consumed food products by the Portuguese population (National Statistics - INE):
  - Meat consumption in 2019 was 119.1 kg/inhabitant
  - □ Poultry was the most consumed, followed by pork.
  - □ Beef sheep and goat have less expression on the Portuguese market.
- The Portuguese Health Board (DGS) recommends a weekly ingestion of red meat up to 500 g (about 70 g per day), because when in excess it can increase the risk of colon cancer.
- Excessive consumption of red meat is directly related to the environment, and there is an increasing concern to reduce these impacts.

#### Nutritional value of meat



- Meat contains proteins, lipids, water, vitamins and minerals, but the composition varies according to the type of animal and production conditions, such as feed.
- Meat contains proteins of high biological value, having a large amount of essential amino acids, supplying about 50% of the human being's daily protein needs.
- White meat has a lower fat content as compared to red meat. The main lipids present in chicken are unsaturated fatty acids, around 67.3%, while in sheep meat the saturated lipids are around 57.7%.
- Meat has vitamins of B complex, while vitamins A and D are found in higher amounts in the liver.
- Meat is rich in minerals, phosphorus and potassium also containing trace elements such as iron and zinc.

# **Objective**

This study aimed at investigating the meat consumption habits and knowledge about some facts related with meat consumption and production, namely the effects for human health and for the environment.

# Methodology



- Questionnaire survey (on-line platform)
- Data collection between March and May 2020.



- Only adult Portuguese participants were included
- Ethical approval (ref. 12SUB2020)





Data treatment – Excel 2016



# **Results – Shopping practices**

Who makes family food shopping



Myself • My partner • Both spouses • Other person





### **Results – Preferences**

### Attributes more valued when purchasing meat





### **Results – Preferences**

|         | Totally<br>dislike | Like very<br>little | Like<br>little | Like<br>much | Like very<br>much | Never<br>tasted |
|---------|--------------------|---------------------|----------------|--------------|-------------------|-----------------|
| Beef    | 7%                 | 7%                  | 19%            | 51%          | 16%               | 0               |
| Pork    | 9%                 | 6%                  | 15%            | 52%          | 18%               | 0               |
| Chicken | 0                  | 1%                  | 7%             | 59%          | 33%               | 0               |
| Turkey  | 5%                 | 5%                  | 12%            | 49%          | 27%               | 1%              |
| Sheep   | 35%                | 9%                  | 17%            | 31%          | 6%                | 2%              |
| Goat    | 37%                | 7%                  | 16%            | 33%          | 4%                | 3%              |
| Rabbit  | 33%                | 9%                  | 22%            | 25%          | 9%                | 1%              |
| Horse   | 41%                | 3%                  | 5%             | 5%           | 2%                | 43%             |
| Boar    | 31%                | 3%                  | 11%            | 28%          | 8%                | 19%             |

# **Results – Consumption**

#### Weekly meat consumption

|         | Five or<br>more times | Four<br>times | Three<br>times | Twice | Once | Seldom | Never |
|---------|-----------------------|---------------|----------------|-------|------|--------|-------|
| Beef    | 0%                    | 3%            | 9%             | 23%   | 28%  | 27%    | 8%    |
| Pork    | 2%                    | 6%            | 8%             | 32%   | 31%  | 17%    | 4%    |
| Chicken | 3%                    | 11%           | 31%            | 38%   | 15%  | 3%     | 0%    |
| Turkey  | 2%                    | 3%            | 8%             | 26%   | 21%  | 34%    | 5%    |
| Sheep   | 1%                    | 0             | 3%             | 6%    | 8%   | 43%    | 38%   |
| Goat    | 0%                    | 0             | 2%             | 3%    | 5%   | 43%    | 46%   |
| Rabbit  | 0%                    | 0             | 2%             | 4%    | 15%  | 44%    | 35%   |
| Horse   | 0%                    | 0             | 2%             | 3%    | 0%   | 19%    | 76%   |
| Boar    | 0%                    | 0             | 2%             | 3%    | 1%   | 41%    | 53%   |

# **Results – Cooking method**

38%

35%

0.4

32%

27%

0.3

29%



Turkey Chicken

5%

0.1

3%

9%

10%

12%

0.2

Grilled

Boiled

Fried

Roasted

Stewed

0

Beef



Pork

Sheep Goat

0.5





Rabbit

Horse Boar







# **Results – Knowledge**

Opinion about the influence of meat on human health





# **Results – Knowledge**



# Conclusions

- ▶ White meat (chicken and turkey) is more consumed than pork.
- ▶ There is a trend to reduce the consumption of red meat.
- ▶ The price is not the main factor to take into account when purchasing meat
- Appearance and color are the main quality attributes valued by consumers.
- People prefer methods that preserve the flavor and eventually contribute to reduce the amount of fat: stew or grill.
- People are informed about meat and the effects on human health and on the environment.



### Acknowledgments

The authors acknowledge financial support from the Portuguese Foundation for Science and Technology (FCT) within the scope of the project Ref<sup>a</sup> UIDB/00681/2020. Furthermore, we would like to thank the CERNAS Research Centre and the Polytechnic Institute of Viseu for their support.

Thank You







Fundação para a Ciência e a Tecnologia

FC