

CONSUMER PREFERENCE OF MEAT PRODUCTS PROCESSED USING DIFFERENT COOKING METHODS IN SOME SELECTED URBAN AND RURAL COMMUNITIES OF EDO STATE

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ABSTRACT:

This study was conducted to ascertain consumer preference of meat products processed using different cooking methods in some selected urban and rural communities of Edo State. Questionnaires were used for the Study to ascertain the preference for the different cooking methods. At the end of administering of the questionnaires, it was established that majority (95%) of the respondents preferred boiled chicken followed by fried chicken and oven dried chicken which both had (90%). Smoked chicken had (80%) while grill chicken had (58%) preference. Pan boiling, electric cooking had (40%) respondents. For pressure cooking, many responded were not familiar with this cooking method as it was second to the least preferred method with (35%). while braising which had (23%) that is the less preferred method. The result from the study showed that there is significant difference ($P < 0.05$) in the different cooking methods. It was concluded that boiled chicken, followed by fried and oven dry were preferred by the consumers compared to other cooking methods due to what the consumers are traditionally acquainted with.

Key words: Chicken, Cooking methods, Consumer preference, Edo State

INTRODUCTION

Due to the health concerns caused by improper cooking of meat, cooking method has been paid special attention and many studies have been done to investigate the effects of heating on meat quality and its nutrients (**Ikeme, 1990**). Consumers preferred proper boiling, frying, oven drying and smoking of meat products. **Kondjoyan et al. (2013)**, reported that consumer preferred boiling because it is what they are traditionally used to and it also has an important effect on the nutritional properties of the meat product. Oven drying of meat products is preferred by consumers due to enhancement in the flavour, tenderness, appearance, juiciness and general acceptability of the meat product. According to **Pankaj and Anthony (2006)**, consumer also prefer frying because the cooking time for frying meat product is short due to the high frying temperature, resulting in brownish appearance of the meat surface probably due to microbial reaction. Smoking is one of the most ancient processing and preservation technologies in practice for centuries. The preservative effect is generally attributed to the anti-oxidant and anti-microbial properties of phenolic compounds. Smoking technology is of two forms, hot and cold smoking. Cold smoking is achieved without thermal treatment usually at temperature below 30°C whereas; the commonly used method of hot smoking or dry smoking is carried out at thermal temperature of 70-80°C (**Bykowski and Dutkiewicz, 1996**).

The processes of cooking, boiling, drying and smoking are involved in hot smoking resulting in a longer product shelf life of 6-9 months when stored properly, and able to keep in check some bacteria. Smoke adds flavour, and is both an antimicrobial and antioxidant, but since it does not actually penetrate far into meat or fish it is insufficient for preserving food; it is thus typically combined with salt-curing or drying. Smoking is especially useful for oily fish, as its antioxidant properties inhibit surface fat acidification and delay interior fat exposure to degrading oxygen. Some heavily-salted and long-smoked meat can be kept without refrigeration for weeks or months.

MATERIALS AND METHODS

A total of sixty (60) questionnaires were administered to the consumers of chicken meat products produced under different cooking methods in the selected urban and rural communities as shown in Table 1. Ten (10) copies of the questionnaire were administered to three (3) ADP zones (Edo North, Edo Central and Edo South) comprising of two (2) communities making up the urban and rural areas.

Table 1: Questionnaire Distribution Reflecting the Location of the Study

ADP Zones	Local govt. Areas	Types of Area	Communities
Edo North	Etsako West	i. Urban ii. Rural	i. Auchu ii. Aviele
Edo Central	Esan West	i. Urban ii. Rural	i. Eguare ii. Uhiele
Edo South	Oredo	i. Urban ii. Rural	i. New Benin ii. Umagba/Eboh

RESULTS AND DISCUSSION

The results of the cooking preference by respondents are presented in Table 2. However, majority of the respondents (95) preferred boiling their chicken while 90 of the respondents liked fried or oven dried chicken, 80 % of the respondents preferred smoked chicken, 58 liked grilling their chicken, 40 preferred pan boiling, while 24 liked electric cooking and 21 respondent preferred pressure cooking. The braising cooking method was the least preferred method by the respondents (23%).

Table 2: Cooking Methods Preference.

Cooking methods	Frequency* (n= 60)	Percentage (%)
Boiled chicken	57	95
Fried chicken	54	90
Oven dried chicken	54	90
Smoked chicken	48	80
Grill	35	58
Pan boiling	24	40
Electric cooking	24	40
Pressure cooking	21	35
Braising	14	23

***Multiple responses hence total exceeds sample size and percentages**

The choice of method of cooking is relative and a matter of individual preference. However, majority of the respondents preferred boiling, frying, oven drying and smoking as methods of cooking their chicken. This may be probably due to what the majority were traditionally acquainted with or what is easily obtainable within their localities. For instance, **Mora et al., (2011)** reported that oven cooking is broadly utilized in commercial processing and food service operations while **Hugas et al., (2002)** opined that high-pressure processing (HPP), also known as high hydrostatic pressure (HHP) treatment, is used by the food industry for microbial inactivation coupled with preservation of food quality.

CONCLUSION AND RECOMMENDATION

From the study, it was observed that the boiled meat had the highest scores for all the sensory parameters evaluated. Thus, boiling method is preferred by the majority of the consumers in the study area where the present work was conducted. Based on the results, chicken meat products processed by boiling is recommended to the meat products vendors and processors for high patronage by consumers in Edo state.

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