



REPUBLIC OF KENYA



PACKAGING AND BRANDING OF CHICKEN MEAT



Introduction

Chicken meat contains higher unsaturated fatty acids, hence prone to oxidation and microbial growth at typical cold-storage temperatures. The quality and shelf life of chicken meat depends on processing, transportation, distribution and storage conditions in retail stores and homes. Proper procedures, including packaging, must maintain quality and safety until the indicated expiry date.

Packaging methods

Packaging techniques include modified atmosphere packaging (MAP) and vacuum packaging (VP), use of additives and freezing to prolong shelf life. These contemporary methods offer advantages such as minimized microbial growth and improved oxidative stability by eliminating oxygen. Vacuum packaging creates a vacuum by removing air. In contrast, MAP and controlled atmosphere packaging (CAP) preserve foods by replacing some or all of the oxygen with gases like carbon dioxide or nitrogen. It is key that all packaging materials be free of radioactivity

How long can chicken meat be stored in various packaging?

Storage times for chicken meat vary by packaging and processing method. Fresh chicken in styrofoam trays and shrink wrap, as well as opened meat packages, last three to five days in the fridge. Ground meat last one to two days. Follow “use-by” dates on processed meats. Store canned meats in a cool, dry place; they have a shelf life of two to five years.

Recommended food grade packaging materials

Plastic wraps and storage bags



Consumer plastic wraps and bags are primarily composed of three main types of plastics: polyethylene, polyvinylidene chloride and polyvinyl chloride. These plastic resins are derived from petroleum. Additional substances such as plasticizers, colorants or anti-fog compounds may also be incorporated.

In-store produce bags



In-store produce bags are usually crafted from polyethylene or a similar plastic film, and they are used for packaging fruits and vegetables in-store. It is advisable to avoid using them for cooking purposes, as the thin plastic may melt or burn.

Oven cooking bags



Oven cooking bags, along with their closure ties, are constructed from heat-resistant nylon, making them suitable for use in either microwave ovens or conventional ovens set at temperatures not exceeding 204.4°C.

Aluminum foil paper



Aluminum foil consists of 98.5% aluminum, with the remaining balance primarily comprising iron and silicon to enhance strength and puncture resistance. The molten alloy is rolled thinly and solidified between large, water-cooled chill rollers. In the final rolling stage, two layers of foil are processed simultaneously through the mill. The side in contact with the polished steel rollers appears shiny, while the opposite side emerges dull. However, it makes no difference which side of the foil comes into contact with the food.

Freezer paper



White or brown paper coated on one side with plastic serves to prevent air from penetrating frozen foods, thereby safeguarding against freezer burn and moisture loss.

Parchment paper



Parchment paper, made from odorless and tasteless cotton fiber and/or pure chemical wood pulps, can be waxed or coated to become greaseproof or grease resistant. It is commonly used in baking as a pan liner or for wrapping foods during cooking

Wax paper



This paper is triple-waxed, featuring a food-safe paraffin wax that is pressed into the paper's pores and applied as a coating on the outside

Branding of chicken meat

Branding of chicken meat must contain the following information:

- Name of the product
- Nutritional value
- Date of manufacture
- Sell by end-date
- Seal of quality from relevant authority

Advantages of packaging and branding chicken meat

Branding and packaging helps in:

- ✓ Marketing of the product
- ✓ Preventing moisture loss
- ✓ Offering the product to the consumers in most desirable form and appearance
- ✓ Preventing further bacterial contamination of meat
- ✓ Arresting pick up of foreign flavour and odour by meat
- ✓ Controlling oxygen transfer

Packaging materials must not contain substances that could migrate into food during irradiation. Additionally, these materials must not exhibit detectable radioactivity post-irradiation.



Wrapped raw chicken meat



Branded raw chicken meat

Compiled by: Adongo A.O., Alaru P.A.O., Ouko V.O., Wachira A.M.,
Mungube E.O., Kariuki I.W., K'Oloo T.O., Ogali N.I., Ngaira V.M.,
Nyambati E., Changwony, D.

Editors: Nyabundi K.W., Mukundi K.T., Omondi S.P., Maina P.,
and Wanyama H.N.

For further information, contact:

The Institute Director,

Non-Ruminant Research Institute,

P.O. Box 169-50100, Kakamega

Telephone: 020 2619792

Email: director.nri@kalro.org kalro.kakamega@kalro.org

Website: www.kalro.org

Design and layout by Emma Nyaola

KALRO/NAVCDP/ IC Brochure No.028/2024