

ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD

DISCUSSION PAPER

**RECOMMENDATIONS FOR SAFE ROASTING/COOKING OF POULTRY,
INCLUDING TURKEY, CHICKEN, GOOSE AND DUCK**

Introduction

1. The attached paper reports the findings of an investigation of cooking times for the roasting/cooking of poultry. The Food Standards Agency issues advice to consumers on the safe roasting/cooking of turkey and other poultry and the study was commissioned following reports that the advised cooking times may be too great for fan assisted ovens, causing overcooking of the bird and impairing the quality of the meat. The current FSA cooking advice for poultry is based on conventional convection ovens whilst there are reports that over 55% of UK households have a fan-assisted oven.

Background

2. The Food Standards Agency issues advice annually to consumers on the safe cooking of roast turkey. This advice states that the turkey should be thoroughly cooked because eating undercooked turkey (or other poultry) could cause food poisoning. Without use of a food thermometer, there are three main ways to tell if a turkey is cooked:

- The meat should be piping hot all the way through
- When you cut into the thickest part of the meat, none of the meat should be pink
- If juices run out when you pierce the turkey, or when you press the thigh, they should be clear.

3. As a general guide when cooking an unstuffed turkey in a preheated oven at 180°C (350°F, Gas Mark 4) the FSA currently advises that the following times should be observed:

- 45 minutes per kg plus 20 minutes for a turkey under 4.5kg
- 40 minutes per kg for a weight between 4.5kg and 6.5kg
- 35 minutes per kg for a weight above 6.5kg.

4. For other types of poultry, such as goose and duck, the Agency advice is that different cooking times and temperatures are required. In a conventional oven at 220°C/425°F/Gas Mark 7, goose should be cooked for 35 minutes per kg, once the oven has preheated. Duck should be cooked for 45 minutes per kg at 200°C/400°F/Gas Mark 6. These times and temperatures are based on an

unstuffed bird. The oven should always be hotter for duck and goose to melt the fat under the skin. They also need regular basting and should be properly cooked before serving.

5. The Agency received reports that the advised cooking times and temperatures for turkeys are too great causing the turkey to be overcooked and dry, thus impairing the quality of the meat. The current cooking advice is based on conventional convection ovens rather than fan assisted ovens which are reported to be used by over 55% of UK households.

6. The Agency therefore commissioned an evidence-based study to review the cooking advice for turkeys and other types of poultry meat in fan assisted ovens and that would ensure food safety whilst maintaining the organoleptic qualities of the meat. The study was carried out by Campden and Chorleywood Food Research Association (CCFRA).

Key Findings of the Study

7. The study determined the following temperatures for the safe cooking of poultry in fan-assisted ovens, based on actual temperature measurements, sensory evaluations and confirmation of microbiological safety (the full dataset will be presented at the meeting).

Cooking times for turkey using a preheated fan assisted oven with a temperature of 180°C:

- *45 minutes per kg plus 20 minutes for c.3.3kg birds*
- *40 minutes per kg plus 20 minutes for c.5.5kg birds*
- *30 minutes per kg plus 20 minutes for c.7.5kg birds*

Foil should be used to cover the bird throughout cooking up until the final 30 minutes. Turkey should be basted every hour during cooking.

The most significant difference to current FSA advice is for the cooking of larger birds (reported here as 30 minutes per kg plus 20 minutes for birds ~7.5kg) whereas the FSA advises 35 minutes per kg in a conventional oven. The times and temperatures for smaller sized birds (<6.5 kg) remain effectively unchanged.

Cooking times for chicken using a preheated fan assisted oven with a temperature of 180°C:

- *50 minutes per kg plus 40 minutes for all weights*

Foil should be used to cover the bird throughout cooking up until the final 30 minutes. Chicken should be basted every 30 minutes during cooking.

This differs from current FSA advice which advocates times and temperatures as for turkey in conventional ovens (see para 3).

Cooking times for duck using a preheated fan assisted oven with a temperature of 200°C:

- *35 minutes per kg for all weights*

The skin should be pierced all over before cooking and the fat should be drained off halfway through the cooking process. Duck benefits from not being covered with foil during cooking.

This is a reduced cooking time compared to FSA advice for conventional ovens, 45 minutes per kg at 200°C.

Cooking times for goose using a preheated fan assisted oven with a temperature of 200°C:

- *35 minutes per kg plus 20 minutes for all weights*

Goose should remain covered with foil throughout cooking to reduce “drying out”, unless a more crispy skin is desired, in which case the foil could be removed for the last 30 minutes. The skin should be pierced all over before cooking and the fat should be drained off halfway through the cooking process.

This is a reduced cooking temperature compared to FSA advice for conventional ovens, 35 minutes per kg at 220°C.

Action Required by ACMSF

8. The ACMSF is invited to consider the findings of the study and whether the work can form a basis for revising FSA advice on the safe roasting/cooking of poultry.

**Secretariat
September 2007**