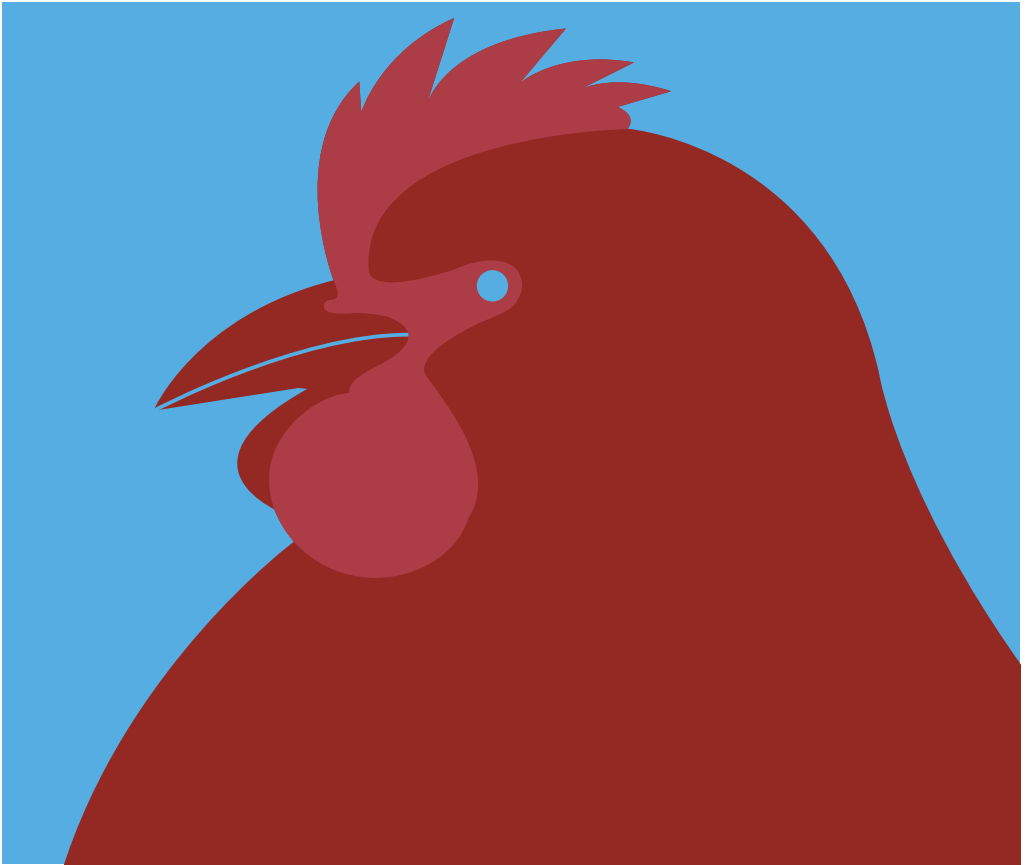


A Review of the Chicken Food Chain

Summary Document



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Background

In early 2005, **safefood** decided that a review of the chicken food chain could bring clarity to a number of questions and consumer concerns surrounding the food safety and production methods associated with this commodity. The review also looked at the nutritional properties of chicken.

safefood is undertaking two comprehensive food chain reviews over a three year period with the aim of:

- Providing consumers with information to help them make informed decisions.
- Helping consumers to understand how the food safety system works.
- Promoting good practice along the food chain.

Chicken's position as the main protein source for many consumers on the island of Ireland underlined the need for a review of the entire chicken food chain, from farm to fork.

The rationale for choosing chicken as the subject of this review was also based on **safefood**'s bi-annual consumer research survey, called *safetrak*.

The *safetrak* findings, contained in the report, emphasise the high awareness consumers have of chicken-related health and food safety issues.

This summary document gives a brief overview of the findings of the review. A full report is available on **safefood**'s website at www.safefoodonline.com.

The Chicken Food Chain

- from farm to fork

The island of Ireland enjoys a reputation as a leading producer of food. Our soil quality and production standards are regarded as reassurance to both the domestic and international consumer that the produce they buy is safe and nutritious and has been produced within a stringent framework of food safety controls.

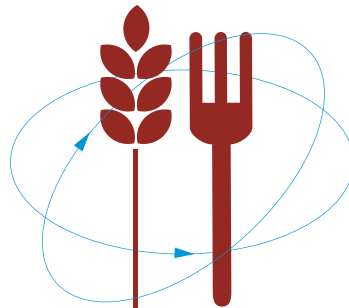
The island's chicken production industry adheres to rigorous international standards. There are various levels of responsibility in this area.

The Food Safety Authority of Ireland and Food Standards Agency Northern Ireland, provide the primary focus for all the public sector agencies involved in food safety regulation working in the Republic of Ireland and Northern Ireland, respectively. Their aim is to guarantee the integrity of the system in place for the processing, distribution and retailing of food.

Along the food chain the role of inspectors, principally, veterinary personnel and environmental health officers, north and south, is to ensure that the legislation,

both domestic and European, is being followed.

It must be stated, however, that the responsibility for attaining the highest standards of safety in the chicken food chain, rests with the industry itself.



The Chicken Industry

The chicken industry here is a highly developed, well-regulated and economically valuable industry. Chicken is an excellent source of protein with approximately 90% of all adults eating chicken regularly. Relative to other protein sources, chicken is readily available, versatile and good value.

At farm gate the poultry industry on the island of Ireland is worth over €150m (Stg£101m) and Stg£120m (€177m) to the respective economies of the Republic of Ireland and Northern Ireland.

There are a small number of key industry players, with eleven companies representing over 90% of all domestic broiler production on the island.

Broilers are chickens reared specifically for consumption, as distinct from egg-laying hens.

The chicken industry is highly integrated along the food chain ie: the main processors are also mainly responsible for breeding and rearing.

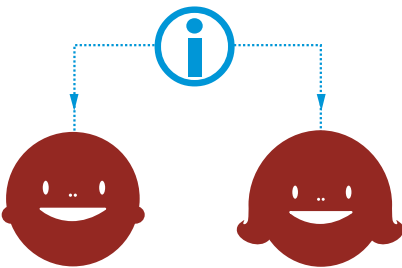
The full report concludes that, while chicken is, in essence, a safe and nutritious food and is subject to considerable regulation, every opportunity to improve the processing chain should be taken by industry, to further enhance consumer confidence.

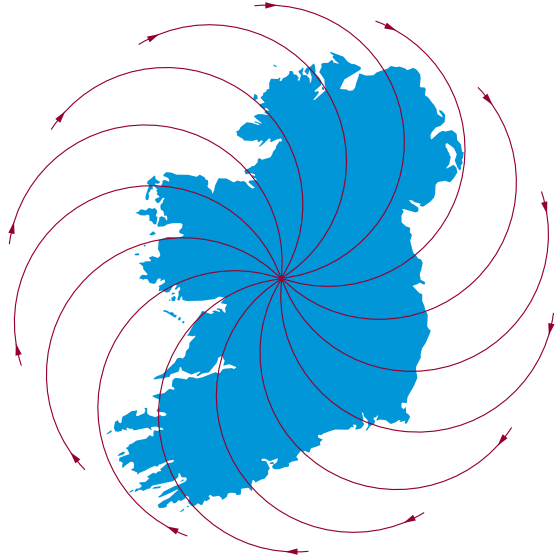
Consumers and Chicken

In September 2004 **safefood** commissioned research to identify the foods about which consumers were most concerned. Chicken registered as the food of main concern.

From a base of over 1,300 consumers, over 40% indicated that chicken was the food they were “most concerned about in terms of how it is produced, packaged, sold in shops and handled in the home”. In comparison, the corresponding figure for turkey, despite the similarities in production, packaging and sale, was just 2%.

Focus groups were conducted by **safefood** to further explore the reasons behind these concerns. From these focus groups, consumers disclosed that they did not want to be made aware of any issues with respect to chicken, which might “put them off”. Nevertheless, it is important that the consumer is informed of any hazards, so that they may take the necessary preventative steps to reduce the risk of foodborne illness.





One of the recurring consumer concerns was connected with the country of origin of the chicken. Country of origin was reported as one of the major determinants during purchase. The naming of the producer farm or farmer on the label was noted to provide reassurance to consumers in terms of food safety. Consumers from both Northern Ireland and the Republic of Ireland were comfortable with purchasing chickens from anywhere on the island. County of origin was not, however, reported as a major determinant in the purchase of chicken-based frozen or ready meals.

Labelling is another area which attracted consumer concern. Some aspects of the current labelling legislation is lacking, for example, there are no labelling requirements at the catering stage of the food chain. Currently more than 70% of all chicken meat used in the catering industry is not sourced from the island of Ireland or from the European Union.

The full report also looks at other issues which were raised by consumers such as animal welfare and avian influenza.

The Links in the Chicken Food Chain

From a food safety perspective the overriding principle in the production of chicken is the safety of the consumer. Therefore, only poultry of the highest standards of safety should be placed on the market and those businesses involved at each link of the chain have primary responsibility for ensuring that those standards are met.

In January 2006 a series of new food hygiene laws came into force under the term “the hygiene package” These new pieces of legislation affect all food business from primary producers (i.e. farmers), manufacturers, distributors, caterers and retailers.

Rearing

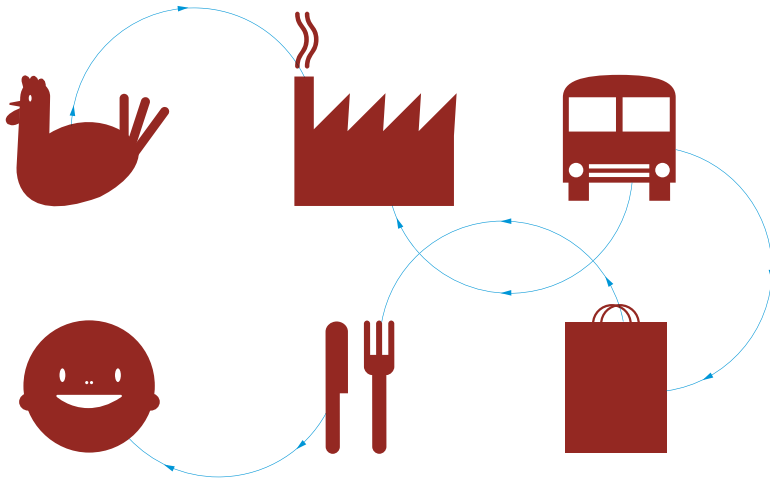
The chicken supply chain is extremely efficient. It takes approximately 21 days to hatch an egg, 35-42 days to rear a conventional chicken and 81 days to rear an organic chicken. There are specific regulations that govern the use of the terms free range and organic. This legislation includes definitions of the stocking density ie: how many chickens can be reared together and in what size of space, as well as the composition of the feed.

The departments of agriculture north and south are the competent authorities for the enforcement of the legislation on feedstuffs. They conduct a sampling programme on a yearly basis.

The use of antibiotics in the feed is governed by Irish Medicines Board in the Republic of Ireland and the Department of Agriculture and Food in Northern Ireland. These products are not for sale to the general public and require a prescription for use by authorised personnel. Annual residue monitoring programmes are conducted by the authorities.

Slaughter

Poultry slaughter can take place in one of two types of slaughterhouse, “EU Approved” or “Domestic”. EU legislation requires veterinary personnel to be present on both types of premises.



Processing

The importance of a food safety management system including HACCP (Hazard Analysis and Critical Control Point) within the processing environment is central to successfully preventing contamination of the product.

As part of the new ‘hygiene-package’ legislation, regular inspections are carried out in processing premises according to a risk-based evaluation system.

Storage and Distribution

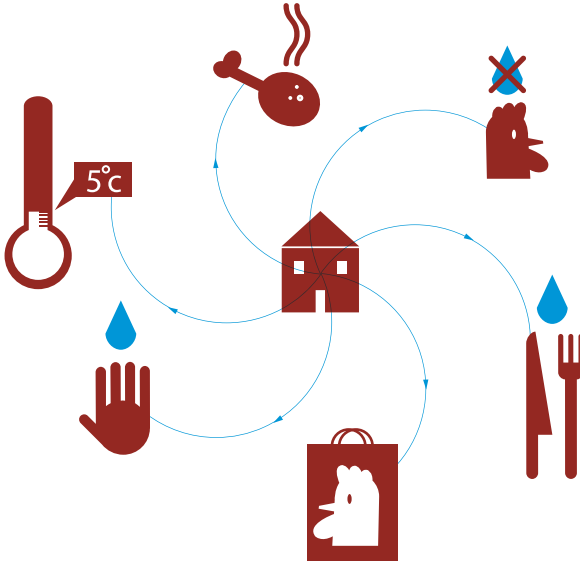
The most critical control factor during the distribution and storage of chicken is temperature. EU Council regulations strictly stipulate that fresh, frozen and quick frozen poultry meat must be stored at set temperatures to limit the potential growth of microorganisms that would affect the quality and safety of the product during its shelf-life.

Retail and Catering

As with the production sector, primary responsibility for the safety of the food rests with the retailer or caterer.

Environmental Health Officers have responsibility at the point where food enters a distribution network and retain control until final sale to the consumer. While the owner is ultimately responsible, the role of the Environmental Health Officer is to advocate food safety to managers and staff.

When chicken products reach retail level, the regulatory authorities carry out surveillance to check for bacteria such as *Salmonella* and *Campylobacter*. While evidence of both has been found, the number of raw chicken products testing positive for *Salmonella* has decreased, but the number testing positive for *Campylobacter* remains high. Nevertheless,



if the chicken is properly prepared and cooked, potential pathogens will be killed so that there is no threat to human health.

The Home

When the chicken finally makes its way through the food chain and into the home there are still a number of potential hazards. However, the proper cooking and storage of chicken is a key factor in eliminating any threat of foodborne disease. The following measures should be followed in the home:

- Chicken meat should not be washed.
- All utensils and surfaces that come into contact with raw chicken should be cleaned after use.
- Hands should be washed thoroughly after handling raw poultry meat.
- Chicken should be cooked adequately until it is piping hot all the way through, the meat is no longer pink, and the juices run clear.
- Raw or cooked chicken should be stored in a refrigerator at 5°C or less.
- Raw chicken should be packed in separate bags or containers during transport home from the retailer.
- Leftover chicken should always be reheated until piping hot all the way through and should NEVER be reheated more than once.
- Refrigerated leftover chicken should be eaten within three days.

Nutrition



Chicken is an excellent source of protein in the diet.

A medium serving (130g) of grilled chicken, without skin, provides approximately 60% of the Recommended Daily Allowance of protein for men and 70% for women.

It is also a source of vitamins, minerals and trace elements.

Chicken has received much of its good nutritional reputation on the basis of being a high-protein, low-fat food. It must be remembered that the nutrient profile of chicken can be changed radically depending on the cooking/preparation process.

The following points should guide chicken preparation/consumption:

When cooking chicken from raw at home, methods using little addition of fat are best.

When choosing processed chicken products e.g. battered or breaded products, individuals should be aware that they tend to be higher in calories, fat and salt. Nutrition labeling will provide information that will allow individuals to make a more informed choice.

When eating chicken at home or in a catering outlet, chicken should form part of a balanced diet, where possible vegetables and starchy carbohydrate options such as potatoes/rice/pasta should be chosen as accompaniments or incorporated into dishes.

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