

Bacterial contamination of hen's table eggs and its influencing by housing systems

Peter Van Horne

LEI, Wageningen University and Research Center (WUR), P.O. Box 35, 6700AA Wageningen.

Corresponding author: peter.vanhorne@wur.nl

Abbreviated title: Competitiveness EU broiler industry

Summary

The objective of this study was to gain an insight into the current and future competitive position of the EU broiler meat sector. The calculations were performed by collecting the most important data (performance and input prices) for each country and determining the production cost for broilers in each country using a uniform calculation method. This was done for the year 2007 for the EU countries: the Netherlands, Germany, France, UK and Poland. The USA and Brazil were selected as examples of the situation outside the EU.

During the coming years, both European and national legislation will come into force which will exert an influence on the production cost. These regulations relate to food safety, animal welfare, and the environment. For all countries the impact on the production cost was calculated for the situation in 2012.

Keywords: production cost, broilers, international competitiveness, world trade

Introduction

The LEI institute (part of Wageningen University and Research Center) compared the production costs of broilers in the Netherlands with a number of neighbouring countries. LEI has carried out similar studies in the past. In terms of its method and choice of countries, this study is comparable with previous studies. The study consists of three parts: a) an international comparison of production costs on the basis of the year 2007; b) analysis of the differences in production costs between farms; and c) the development of the production costs until 2012 as a consequence of national and European regulations and legislation.

Method

The production costs of broilers in the reference year, 2007, were calculated for the Netherlands, Germany, France, the United Kingdom, and Poland. These calculations were performed by collecting the most important data for each country (the technical results, the variable and fixed costs, and the prices) and determining the production costs for broilers in each country using a uniform calculation method.

Results for 2007

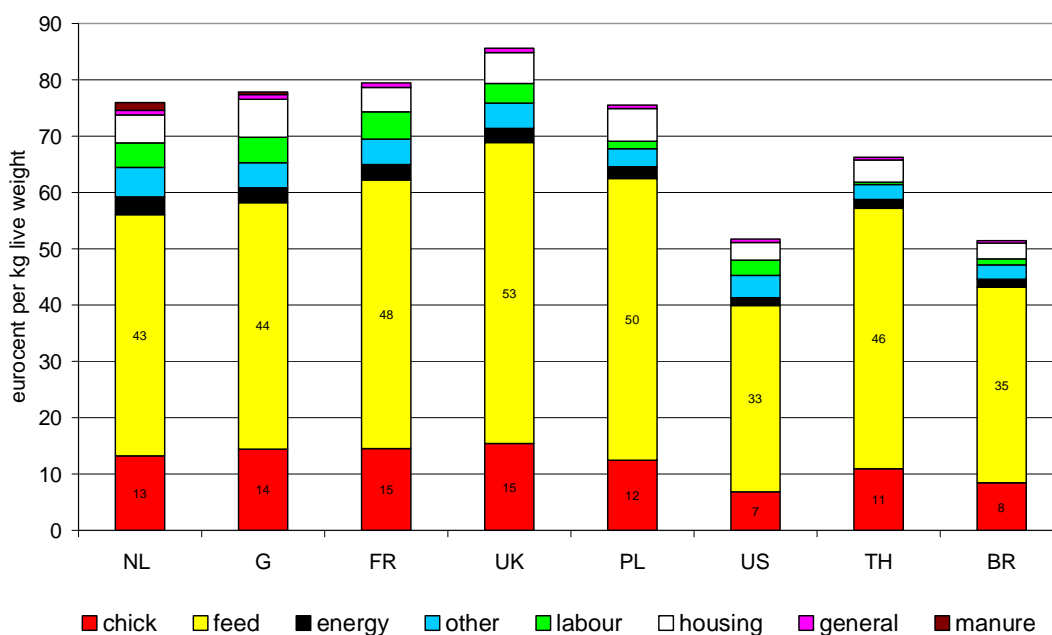
Figure 1 shows the results for the primary farms. Of the EU countries, Poland had the lowest production costs in 2007, namely €0.754 per kg of live weight. In the Netherlands, the average production costs were a little higher at €0.759. In Germany, the average production costs were a little higher than in the Netherlands (€0.778 or +2%). In France, too, the production costs were higher than in the Netherlands (€0.794 or +4%). The United Kingdom had significantly higher production costs than in the Netherlands (€0.856 or +13%). Dutch farms combine good production results with relatively low feed prices. Conversely, Dutch broiler farms are confronted with high manure-disposal costs, more expensive poultry houses, and higher energy costs (energy tax). The Dutch manure-disposal costs in particular constitute a high cost item that is not incurred by broiler farmers in France, the United Kingdom, or Poland.

The calculations used in this study for the various countries are based on average production costs. An analysis carried out using LEI data reveals that the production costs within the Netherlands for chicken vary between 8% higher and 8% lower than the average. Such differences between farms probably also occur in the other countries. This means

that a farm with low production costs in the Netherlands, Germany, France or Poland has a good competitive position. The differences between farms within a country are greater than the differences noted between the countries.

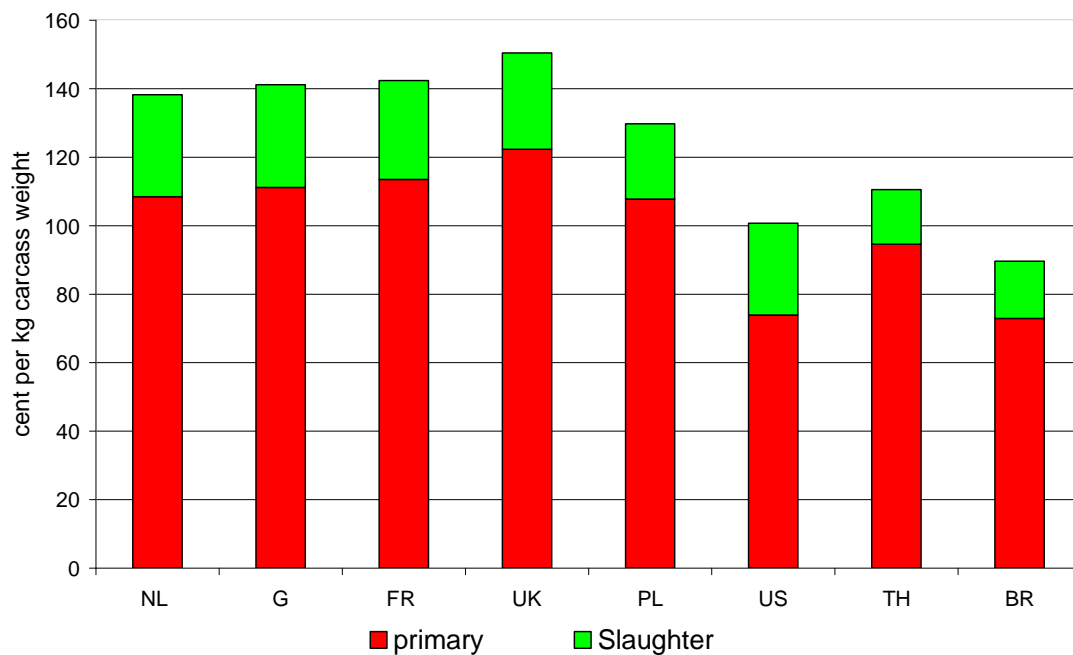
Figure 1 presents the production costs for a number of countries outside the EU, namely the USA, Thailand and Brazil. In 2007, the US producers' production costs for chicken were 32% lower than in the Netherlands, whilst in Brazil production costs were 33% lower. In Thailand, the production costs were 13% lower than in the Netherlands. The lower production costs in the USA and Brazil can be largely explained by the low feed price. This is the result of a large local supply of feed ingredients for animal feed. For Brazil and Thailand, the favourable climate conditions and the low labour costs are important factors. In the non-EU countries, the production costs are also reduced by the lack of regulations and legislation comparable with those within the EU. Examples include the prohibition of the use of antimicrobial growth stimulators and meat-and-bone meal in poultry feed which are not allowed in the EU.

Figure 1. Composition of the production costs for the primary farm by country (in euro cents per kg of live weight).



This study focuses on the costs within the primary sector. In order to give an impression of costs after slaughter, the slaughter costs have also been mapped out for the different countries. The slaughter costs are considerably lower in Brazil and Thailand than in the EU primarily due to the lower labour costs. The production costs after slaughter are lowest in Brazil. In the Netherlands, the USA, Thailand and Brazil, the production costs in 2007 were €1.38, €1.01, €1.11 and €0.90 per kg of carcass weight respectively.

Figure 2. Costs for primary production (broiler farm) and slaughter (in euro cents per kg of carcass weight).

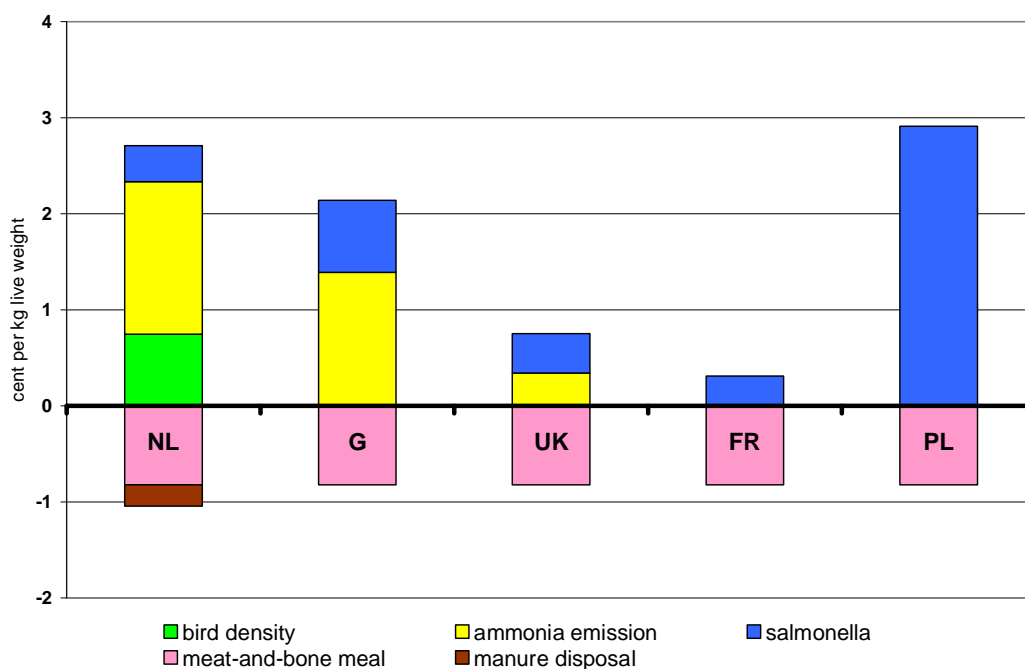


Towards 2012

During the coming years, both European and national legislation will come into force which will exert an influence on the production costs of chicken. These regulations relate to food safety, animal welfare, and protection of the environment. In all these areas, both society and the public in the Netherlands – and in other European member states – impose conditions that are interpreted in terms of legislation and regulations. In 2010, EU regulations will be introduced to regulate the bird density in broiler houses. Although this is a European measure, it will have particularly strong economic consequences for the Netherlands as the average bird density is greater in the Netherlands than in other countries. Dutch broiler farmers will also be confronted with national environmental measures designed to reduce the level of ammonia emissions. Pursuant to the current regulations, all broiler houses will need to achieve low-emission standards by 2010. Lastly, the Zoonoses Directive is an additional measure at EU level. Although this will also increase the costs incurred by Dutch farms, it is nevertheless expected that the resultant cost increases will be greater in Poland in particular.

Offsetting the rise in costs are two potential benefits for the broiler sector. If the ban on using meat-and-bone meal is relaxed, the production costs could be reduced all over Europe due to the lower feed price. For Dutch poultry farmers, the production costs could be reduced by lower manure disposal costs. A slight decline in the manure disposal costs for dry manure is expected after the manure incineration plant in Moerdijk is brought into service. The result is that in 2012 the production costs in the Netherlands will have risen by over €0.017 per kilogram of live weight. In Germany, that increase will be €0.013. In the United Kingdom, there will be no increase, while in France the production costs will fall by €0.005 per kg of live weight. In Poland, the production costs will rise by €0.021, primarily as a consequence of measures aimed at reducing salmonella contamination. Figure 3 shows the costs in each country for the different themes.

Figure 3. Expected increase in costs (euro cents per kg of live weight) in the various European countries between 2007 and 2012.



As no concrete measures are expected in the US, Brazil and Thailand that would raise production costs, the difference in production costs compared with the Netherlands, Germany and Poland will grow still further.

Conclusions

To summarise, the production costs of broilers within Europe are significantly higher than those in other countries such as Brazil, the United States and to a lesser extent Thailand. In Europe – and particularly in north-western Europe – consumer demand for poultry relates chiefly to chicken breast and, to a lesser extent, chicken legs. This means that demand for the various parts of the broiler is not balanced with the supply. Consequently, chicken legs are on the one hand exported to countries outside the EU (e.g. Eastern Europe) while on the other hand chicken breast is imported from other countries (such as Brazil). The imported chicken breast is supplied frozen and this product is used primarily for further processing into frozen products, particularly frozen convenience foods. In 2007, the EU created import quotas, whereby a maximum is set for the import quantities imported under a low tariff. However, outside these quotas, imports of chicken breast remain economically attractive despite the high EU import tariffs. The quantity of imports of chicken breast will be influenced by the differences in production costs between the EU countries and other countries (as investigated in the study) and by exchange rates. The Dutch broiler sector will need to focus on sales of fresh poultry meat in the Netherlands, Germany and the United Kingdom. The statistics show that exports to Germany have been declining in recent years, while exports to the United Kingdom have been clearly increasing. Also this study also shows, Dutch producers have had much lower production costs in recent years than producers in the United Kingdom. This may to a considerable extent explain the increase in exports to the UK. For both markets, it is important to offer a high-quality and safe product.