Future prospects for the European egg industry

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Abbreviated title: Future prospects for the European egg industry

Summary

Egg production in the EU-27 reached 6.37 MT in 2008, which is about 10 % of the world production. For the ten last years, egg production in the EU has been stable in volume, while European egg production systems have known a very strong evolution in relation with consumer expectations in terms of animal welfare and variety of products, but also due to the implementation of the EU welfare regulation. The situation remains contrasted within the EU with a part of cage system varying from 30 % to more than 95 %. European egg consumption is 235 eggs per person per year, with strong variations according to countries, and a rise in the share of egg products in the global consumption. In 2008, the European self-sufficiency rate was 102 %, with a very low level of import. The perspectives for the European egg industry will depend on his ability to differentiate his products and compete with third countries which don't withstand the same constraints (animal welfare and sanitary requirements), but also on the conclusions of WTO negotiations which could lead to an opening of the European market to products (egg powder for example) from emerging countries.

Keywords: Egg industry, trade, consumption, regulation, competitiveness, prospective

World background

A dynamic world production

According to FAO, world egg production reached 63 MT in 2007 (1000 billions eggs on the base of 16.4 eggs per kg). China is by far the first producer with 25.8 MT that is 41 % of world production, followed by the EU-25 and the US. World production rose in average by 3 % per year during the ten last years, compared to a 3.6 % growth during the former 1987-1997. Most part of the world growth is originated in traditional Asian producing countries, which represent more than 60 % of world production and whose average growth is near of 56 % from 1997 to 2007 : China (+57 %), India (+69 %), Indonesia (+81 %) and Philippines. Chinese production is responsible for 60 % of world growth during the last ten years. On the other hand, in the same time, production was decreasing in Japan and Thailand.

Table 1: Egg Production (Tonnes). (Source: FAO April 2009)

	1987	1997	2007	Average Annual Change 1987- 1997	Average Annual Change 1997- 2007
China	4 901 880	16 482 270	25 846 300	12.9%	4.6%
UE-27	6 446 938	6 362 736	6 537 311	-0.1%	0.3%
US	4 109 300	4 600 000	5 308 000	1.1%	1.4%
India	979 000	1 578000	2 671 000	4.9%	5.4%
Japan	2 375 845	2 573 211	2 525 000	0.8%	-0.2%
Mexico	975 029	1 328 935	2 300 000	3 1%	5.6%
Russia		1 791 560	2 093 100	ND	1.6%
Brazil	1 235 147	1 466 477	1 690 000	1.7%	1.4%
Indonesia	329 700	606 810	1 095 230	6.3%	6.1%
TOTAL	32 602 652	46 555 548	62 571 804	3.6%	3.0%

According to OECD, world egg production should continue to increase strongly until 2015 with an increase of 23 % compared to 2005. Most important growths (more than 40 %) will occur in Egypt, India, Pakistan, Turkey and Brazil. China production growth should slow down with an average 2.5 % annual growth.

International trade represents less than 3 % of world production

According to FAO data, international trade reached 1.2 MT for shell eggs, 52 000 T for egg powder and 205 000 T for liquid egg products in 2006, that is around 1.7 MT shell egg equivalent, intra UE trade included. International trade increased during the ten last years about 80 % for egg products compared to a 43 % growth for shell eggs. Most part of shell eggs and liquid egg products is intra European Union trade. The egg powder trade, after a strong development, is now stabilized for two years. The EU and the US are the major actors on this market.

Very heterogeneous consumption levels in the world

Average consumption level in the world was assessed, by FAO, to 9.1 kg per person in 2005 that is about 145 eggs. Strong variations exist according to the different countries: more than 300 eggs per person in Japan, 230 -240 eggs in the EU or in the US, and less than 100 eggs in most of African countries or South East Asia. In developing countries, demand and supply should continue to grow more rapidly than in developed countries, due to a strong demographic growth in the former and to the already high consumption levels in most developed countries.

The European egg industry and markets

European production stabilized

EU-27 egg production was 6.38 MT in 2008 (that is a little more than 104 billions eggs), stable compared to 2007, after a light decline during the former three years. EU produces about 1.5 MT of egg products in equivalent liquid that is a little less than a quarter of European egg production.

European self-sufficiency level reached 102.3 % in 2008 against 101.7 % in 2007. Egg and egg products exports reached 185 800 tonnes egg shell equivalent in 2008, of which a third for egg products. Imports level remains very low (23 500 tonnes egg shell equivalent in 2008).

Table 2: Major European egg producers (ITAVI from SSP and European Commission)

	Production 2008 (billions eggs)*	Average Annual Change 2000-2008	Change 2008/2007
France	14.3	- 1.2 %	-0.5 %
Germany	12.0	- 1.9 %	+ 0.8 %
Italy	11.7	- 1.5 %	+1.0 %
Spain	11.6	- 0.9 %	- 5.6 %
United Kingdom	9.8	+ 0.7 %	+ 5.5 %
The Netherlands	9.5	- 0.5 %	+ 1.1 %
Poland	8.2	+ 2.1 %	=
EU- 25	97.5	- 0.6 %	- 1.3 %
Romania	5.3	nd	=
Bulgaria	1.5	nd	-2.7%
UE à 27	104.4	nd	-0.1%

* 16.4 eggs per kilo

A progressive and heterogeneous diversification of production systems within the EU

Since ten years and more, production systems within the EU has registered a strong diversification, with a switch from cage to alternative housing systems, due first to the new consumers expectations concerning animal welfare, and secondly to the European welfare regulation implementation (EC/99/74 Directive).

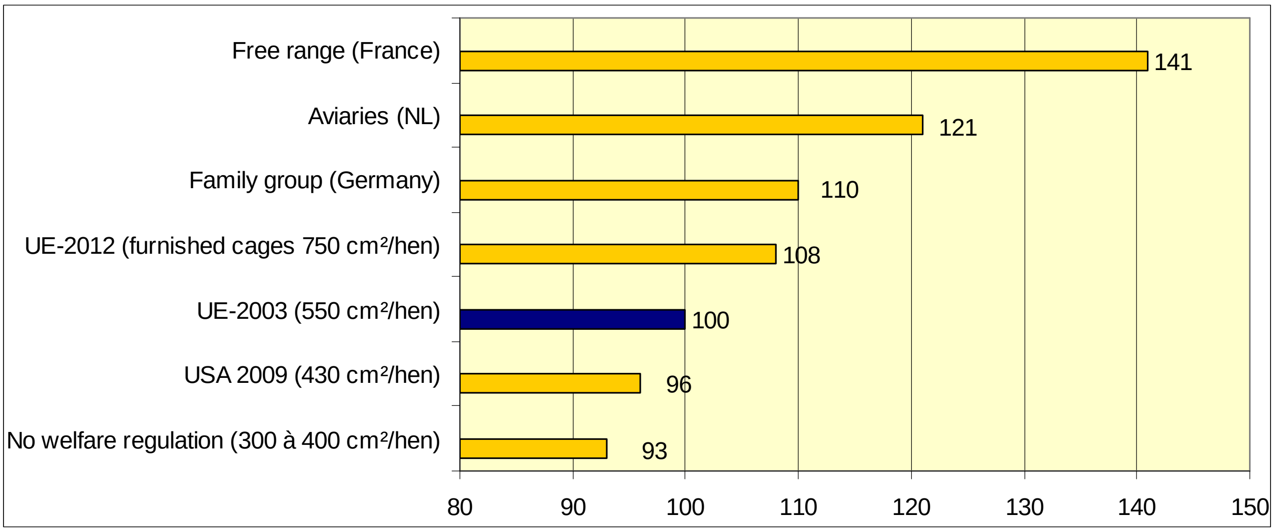
Table3: Share of alternative production systems within the EU (ITAVI from national sources and European Commission)

	Cage	Free Range	Barn	Organic	Alternative systems together
1996 (UE - 15)	92 %	4 %	4%	ND	8 %
2000 (UE - 15)	89 %	6 %	5 %	ND	11%
2007 (UE - 25)	75 %	9 %	14 %	2 %	25 %
France	81 %	13 %	3 %	4 %	19 %
Spain	96 %	2 %	2 %	-	4 %
Germany	63 %	10 %	22 %	5 %	37 %
The Netherlands	46 %	12 %	40 %	2 %	54 %
United Kingdom	60 %	35 %	5 %	1 %	40 %
Italy	78 %	1 %	18 %	2 %	12 %

Marketing standards have been defined for the European market from 2001, and since 2004, egg farming methods have to be mentioned on the eggs with a code, and in clear on the boxes. In 2007, 85 millions of laying hens were kept in alternative systems within the EU-25 that is about 25 % of European laying hens' number.

In the future, European welfare regulations could have negative impact on the European egg industry competitiveness. The extra costs due only to welfare regulation have been assessed by Peter van Horne (LEI): egg production costs (at the farm level) were, in 2006, 32-33% lower in the US or in Brazil than in the EU. US and Brazil competitiveness can be explained by a low cost of inputs (feed and labour), but also by lower welfare and sanitary regulatory requirements. Welfare regulations could explain 20 to 25 % of the gap between EU and US or Brazil egg production costs. The graph below shows the impact of the only welfare criteria on the production costs.

Figure 1 Cost of animal welfare constraints (Source LEI and ITAVI for Free range)



Within the EU, regulatory backgrounds are quite different and explain the diversity of situation concerning the weight of the different rearing methods. Currently, three countries impose further-reaching requirements on the housing of laying hens than the EU. In Sweden, a ban was promulgated twenty years ago against keeping hens in cages. The law was later amended to allow furnished cages. In Germany and the Netherlands, the regulation plans the ban of cages systems (even furnished cages), and allows only a more demanding systems in term of available space per hen: rearing in small group in higher (60 cms) and larger cages in which space per hen is between 800 and 900 cm^2. The diversity of national demands also explains the diversity of national supplies and rearing systems.

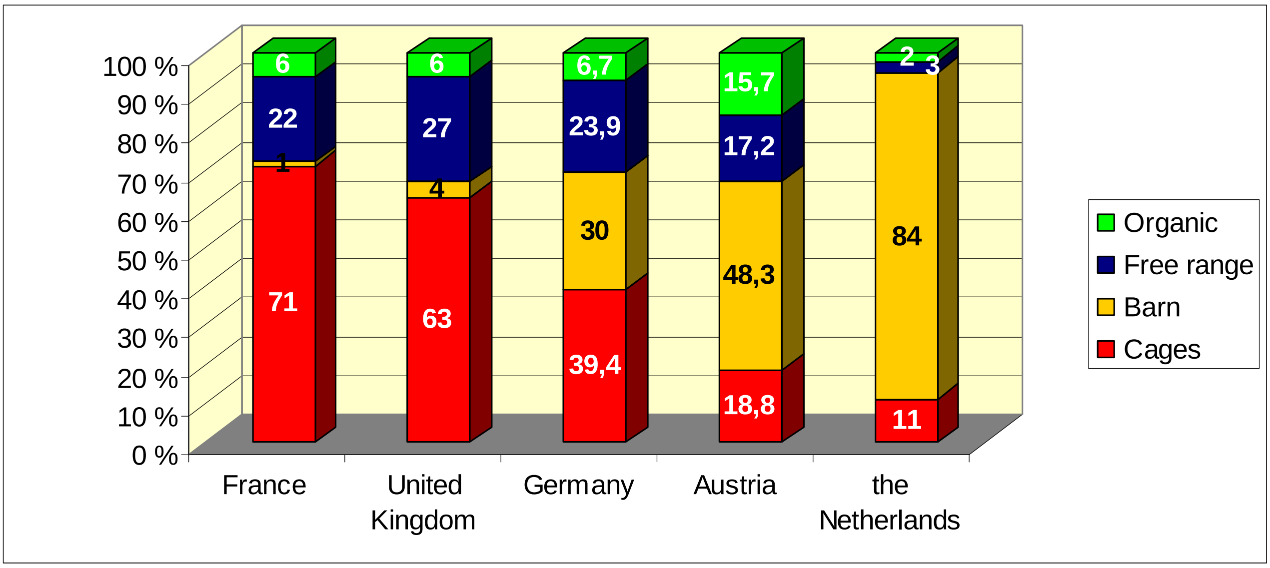
Segmented European markets

Within the EU-27, egg and egg products average consumption reached 235 eggs per capita and per year, with strong variations between countries. Two main trends are common to all the countries: on the one hand, an increasing share of egg products in the global egg and egg products consumption, and on the second hand, an increasing share of alternative eggs in table egg consumption. This trend is more marked in home consumption than in restaurant or catering. So, segmentation of table egg market and share of the different types of eggs vary a lot according to the national markets.

Table 4: Egg consumption in different Member states (ITAVI from IEC and national statistics)

	Consumption 2007 (Eggs/capita.)	Egg products share	Alternatives eggs share in home consumption (volume)
Hungary	295	ND	ND
France	247	31 %	29 %
Italy	224	33 %	< 10 %
Belgium	200	46 %	ND
Germany	210	ND	61 %
Spain	211	ND	< 5 %
The Netherlands	182	23 %	89 %
United Kingdom	178	20 %	37 %
Denmark	300	42 %	ND
Sweden	197	18 %	63 %

Figure 2: Egg shell markets segmentation within the EU (ITAVI from Nielsen, BEIC, Gfk)



Future prospects

Development perspectives remain favourable on the world market, driven by a strong demand from emerging countries like China. New actors appear on the international scene, like India. European situation is more stable, with even a slight decline in production during the last years. However, European market is going towards further segmentation in aid to egg products (25 % of European production), and second to alternative systems which represents near 30 % of European table egg demand. These changes remain much contrasted within the EU members. Today, the European egg industry appears to be at a very important stage of its history. Regulatory, economic and sanitary context is strongly changing, within the EU and at international level. The different change drivers, which will determine the possible scenarios for the future, are the following:

- The European regulation about animal welfare. European Commission has recently confirmed that the ban for traditional cages housing systems will be effective in 2012. This should contribute to emphasize the production systems' diversification and the development of alternative systems.
- Increasing requirements in the field of environment (for example, the Dutch regulation towards a reduction of ammonia emissions) and of sanitary safety (fight against salmonella), which could induce extra productions costs. On this last point, great differences between Member States are still observed.
- A strong raw materials prices' volatility (for animal feed) and incidences on changes on productions costs.
- Trends in purchase behaviours and consumption habits, which remain uncertain:

On the one hand, the economic crisis reinforces the consumers' price sensitivity, which is in favour of egg consumption: first, because egg protein remains the cheaper one, and second because in some difficult economic context, consumers come back to cooking, using basic products like eggs.

On the other hand, more and more consumers are aware of animal welfare issues, rearing methods, and the way animals are fed, as witness the increase in organic products demand. New consumers' expectations are taken over (and even emphasized) by supermarkets and some major actors of the catering or industry.

- A sanitary background marked by endemic avian flu situation in some parts of the world.
- WTO negotiations which could, if an agreement were concluded, lead to a reduction of import duties and to an opening of the European market to more competitive third countries products, particularly as far as egg products are concerned (egg powder).

In this context, European egg industry has to provide a great effort to adapt production tools in perspective of 2012. Egg producers have to make some investment decisions, which will engage them for the next twenty years (furnished cages, “small group” German system or aviaries), whereas technical models have yet to be tested or to be improved, and market future prospects are still uncertain.

These choices will have to take into account the development of non cages eggs productions, which should keep in pace with the demand changes, in order to avoid some over supply in alternative eggs (just like what happened from 2005 in the Netherlands).

In conclusion, future production systems should both comply with animal welfare respect and provide sanitary guarantees, and be competitive at price level for supplying catering and food industry, which represent today nearly 50 % of global egg consumption, and could reach more than 60% in 2020. This competitiveness requirement will be increased in a context of globalization and opening of the European market to supply from third countries which won’t support equivalent constraints. Indeed, if world trade liberalization is expected for the next decade, the integration of animal welfare standards in international negotiations may be far more difficult.

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