

The transition from battery cages to loose housing systems and furnished cages for Swedish laying hens

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In 1988 a ban on housing laying hens in cages was introduced into the Swedish Animal Welfare Act, originally with a 10 year transition period. In 1997, the law was changed to allow not only barn and aviary systems, but also furnished cages. The current legislation states that all laying hens shall have access to a perch, a nest and a dust bath. Traditional housing systems, i.e. single-tier systems (barn eggs), have always been legal and did, to a minor extent, exist parallel with the battery cages. Nevertheless, when the ban on cages was introduced many producers felt a need of replacing this with more intensive systems, such as multi-tier systems or aviaries. However, Sweden has a legal requirement for pre-evaluation of new technique and new systems for animal management, to avoid harmful effects on animal welfare. The initial batches of layers had severe problems with feather pecking, cannibalism and bumble foot. With time, the results improved, due to improved management and aviary design, change of hybrids and feed modifications. After legislation opening up for furnished cages, these were also subjected to pre-testing. Subsequently, the furnished cages were legally approved in 2002. During the transition period, no subsidies were paid for egg production, taking old battery cages down or purchasing new systems. For various reasons, the original 10 year transition period was later extended to include another 0 – 3 batches of layers, depending on management quality of the battery cages at each single farm. Since the beginning of 2004, no farms have had legal possibilities to house layers in battery cages. A small number of egg producers are currently fighting the ban on conventional cages through the legal system, while still producing in old battery cages, which is seen as disloyal by those producers who have made substantial investments in new housing systems. In 1988, the proportion of layers in conventional cages was close to 100 %, by the end of 2005 it was 2.7 %. The total number of layers in Sweden is 6.2 millions.

Keywords: laying hens; housing; welfare; egg production

Introduction

The housing of laying hens in conventional battery cages has long been a symbol of “factory farming” among the public in the western world. Most researchers in the field of animal production and animal welfare will acknowledge that the cages have both pros and cons. The advantages of housing hens in cages are - for example - the small group size, the separation of the birds from their droppings, and the relatively low levels of ammonia and dust in the poultry house (Appleby et al. 1992). Among the disadvantages inevitably linked to the battery cages are the limited possibilities for the birds to move around enough to achieve acceptable bone strength and to perform central behaviours, such as laying their egg in a nest, perching or dust bathing (Appleby et al. 1992).

Different countries have approached this dilemma in different ways. In some countries, the cages are generally accepted by consumers as a necessity, and the animal welfare aspects have not been perceived as

important. In other countries the consumers have driven the transition from battery cages to modern loose housing systems, and in yet other countries the governments have regulated the housing of laying hens in detail. In the European Union, the Laying hen directive (1999/74/EG) states that the conventional battery cages should be phased out by 2012. This paper aims at describing the process related to the legally driven transition from battery cages to loose housing systems and furnished cages in Sweden.

Multi-tier loose-housing systems

The total number of layers in Sweden today is approximately 6.2 millions, which makes the country almost self sufficient. The percentage of imported eggs is currently less than 10 %. The number of layers in Sweden during the last 25 years is shown in figure 1.

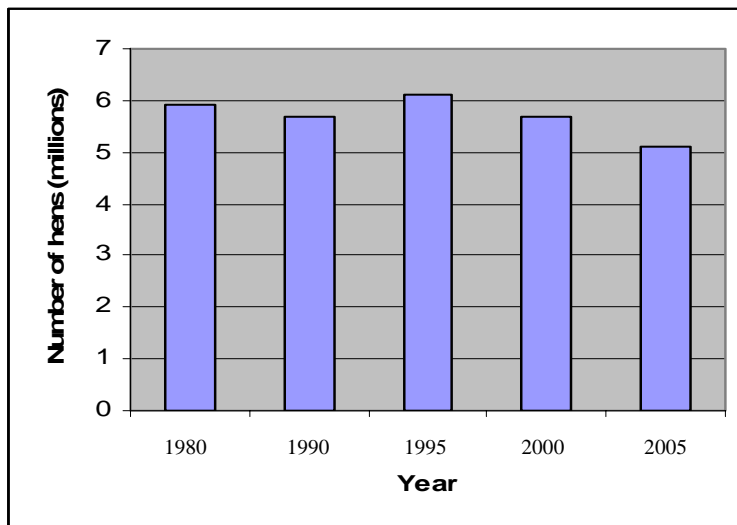


Figure 1. The total number of laying hens in Sweden over the last 25 years.

In 1988, the Swedish Animal Welfare Act and Ordinances were completely revised and rewritten. One of the major changes was the introduction of a ban on housing laying hens in cages. Originally, the ban was given a 10 year transition period, to allow for the development of alternative systems and a smooth phasing out of the battery cages. Traditional housing systems, i.e. single-tier systems (barn eggs), have always been legal and did, to a minor extent, exist parallel with the battery cages. However, these systems were perceived as old-fashioned and labour intensive by many producers, and at the time of the introduction of the ban in 1988 only a few percent of the egg production took place in such systems. When the ban on cages was introduced, many producers felt a need of replacing their cages with more intensive systems, such as multi-tier systems, also known as aviaries.

At this point in time, the development of such systems had been initiated, and different varieties were used in different European countries. However, Sweden has a legal requirement for pre-evaluation of new technique and new systems for animal management, to avoid harmful effects on animal welfare (Gunnarsson et al. 1997, DFS 2004:8). As the multi-tier systems were new to Sweden and reports from other countries indicated bird welfare problems (especially in non-debeaked birds), the authorities decided that the multi-tier systems had to undergo such testing before it could be marketed freely in the country. It should be mentioned that de-beaking or beak trimming is illegal in Sweden.

In a case like this, the testing is quite extensive. Initially, the different types of systems are followed very closely by researchers. After this first phase, a system can be sold to a number (in this case 10-15) of commercial producers, where several batches are run under the supervision of the researchers. Details regarding bird health, bird behaviour and egg production are recorded by the producers and by the researchers. The testing started in the early 1990's, and some of the initial batches of layers had severe problems with feather pecking, cannibalism and bumble foot (Algers et al., 1995). With time, the results improved, due to improved management and aviary design, change of hybrids and feed modifications (Ekstrand et al., 1997). The systems were legally approved in 1999.

Furnished cages

Parallel with the development of the multi-tier systems, the discussion on the possibilities of improving the basic cage design was continued. In 1997, the law was changed to allow not only barn and aviary systems, but also furnished cages. The current legislation states that all laying hens shall have access to a perch, a nest and a dust bath. Different types of furnished cages have undergone the same type of pre-testing as the multi-tier loose-housing systems, and based on the results various details regarding the design of the furnished cages and the space allowance for the birds were added to the national legislation in 2003, when the furnished cages were legally approved. For example, there is currently a maximum group size of 16 hens for furnished cages (DFS 2004:17).

The transition period

During the transition period, no subsidies were paid for egg production, dismantling old battery cages or purchasing new systems. For various reasons, the original 10 year transition period was later extended to include another 0 – 3 batches of layers, depending on management quality of the battery cages at each single farm. Since the beginning of 2004, no farms have had legal possibilities to house layers in battery cages. The gradual decrease of the percentage of hens housed in battery cages can be seen in figure 2.

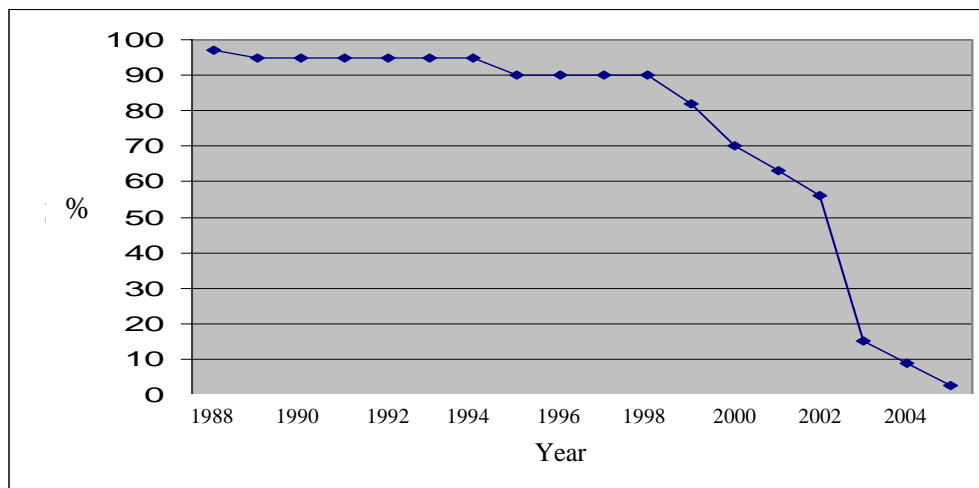


Figure 2. The percentage of laying hens housed in conventional battery cages in Sweden from 1988 to 2005.

Although the original 10 year transition period can appear to be relatively generous, it is obvious that the major changes in housing systems did not appear until later. There are several possible explanations

for this. In the beginning, many producers hoped that the ban would soon be lifted again, and thus decided not to make any effort to adjust to the situation. Secondly, the most interesting alternative from an economical point of view at that time, i.e. the aviary systems, were not developed enough and not commercially available at a larger scale until later. Thirdly, many producers were interested in furnished cages, and wanted to await the development of commercially interesting alternatives in this area.

A small number of egg producers are currently fighting the ban on conventional cages through the legal system, while still producing in old battery cages, which is seen as disloyal by those producers who have made substantial investments in new housing systems. By the end of 2005 approximately 2 % of the laying hens were kept in conventional cages, and the transition period was then regarded as completed. In total, 56 % of the Swedish laying hens were then kept in loose-housing systems and 36 % were kept in furnished cages. Finally 6 % hens were kept in organic production systems.

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