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REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

on the application of Directive 2007/43/EC and its influence on the welfare of chickens kept for meat production, as well as the development of welfare indicators

(Text with EEA relevance)

1 BACKGROUND

This report concerns Council Directive (EC) 2007/43/EC[1] which lays down minimum rules for the protection of chickens kept for meat production (hereafter "the Directive") and addresses Article 6(3) of the same Directive which requires the Commission to report to the European Parliament and to the Council on the application and influence of the Directive on the welfare of chickens kept for their meat. The report takes into account production conditions which influence broiler welfare as well as the socioeconomic and administrative implications of the Directive including regional aspects. This report is also one of the actions foreseen in the EU Strategy for the protection and welfare of animals 2012-2015[2]. The EU Strategy promoted an approach based on animal welfare outcomes and that indicators for assessing the welfare of broilers and at slaughter should be used more widely in future.

This report is based on a study completed in 2017 on the socio-economic and animal welfare impacts of implementing the Directive[3] (hereafter: "The 2017 study"). Other sources of information include audits by the Directorate-General for Health and Food Safety which provide information on official controls, opinions of the European Food Safety Authority (EFSA) and other studies which provide the scientific knowledge on broiler welfare and the outcome of a workshop with all Member States in 2017 on the use of slaughterhouse data to monitor welfare[4].

Prior to the Directive, there were no species specific broiler welfare requirements and only the requirements of Directive 98/58/EC[5] concerning the protection of animals kept for farming purposes applied, with its general principles for housing, food, water and care appropriate to the physiological and ethological needs of the animals. In 2005 a Eurobarometer study indicated that more than four in ten EU citizens mentioned chickens kept for meat production as one of the species most in need of improvements in terms of welfare and protection[6].

A separate Commission report on the impact of genetic selection on the welfare of chickens kept for meat production, which was required by Article 6 (1) of the Directive, concluded that, in line with its mandate on animal welfare and through the existing tools, the European

1 Council Directive 2007/43/EC of 28 June 2007 laying down minimum rules for the protection of chickens kept for meat production OJ L 182, 12.7.2007, p. 19-28

2 COM(2012)6 final https://ec.europa.eu/food/animals/welfare/strategy_en

3 Study on the application of the broilers Directive (DIR 2007/43/EC) and development of welfare indicators see: https://publications.europa.eu/en/publication-detail/-/publication/f4ccd35e-d004-11e7-a7df-01aa75ed71a1/language-en/format-PDF/source-50600507

4 "Use of slaughterhouse data to monitor welfare of broilers on farm" https://publications.europa.eu/en/publication-detail/-/publication/9fbf913d-de15-11e6-ad7c-01aa75ed71a1/language-en

5 Directive (EC) 98/58/EC of 20 July 1998 concerning the protection of animals kept for farming purposes OJ L 221, 8.8.1998, p. 0023 – 0027

6 "Attitudes of consumers towards the welfare of farmed animals" http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/yearFrom/1974/yearTo/2005/surveyKy/450

Commission was willing to facilitate improvements and, at this stage, there was no need for legislative instruments in this area[7].

The Directive introduced animal welfare requirements applicable to houses where chickens are kept for meat production, maximum stocking densities with additional requirements for keepers operating at the higher stocking densities. In the case of higher stocking densities, mortality rate data must accompany the flock to the slaughterhouse and be evaluated. This is the first EU piece of legislation which introduces animal-based indicators as a way to regulate animal welfare. Monitoring at slaughterhouses is additional to non-discriminatory farms inspections, and in certain cases should result in farm investigations to follow-up post mortem findings.

2 ECONOMICS OF THE SECTOR

The EU is a major global producer of broilers (11.3% of global production) with a total poultry meat production of 14.1 million tonnes in 2014. According to the 2017 study Brazil, the United States of America, and China each produce more. Three quarters of the EU production is concentrated in seven Member States: Poland, United Kingdom, Germany, France, Spain, Italy and the Netherlands which also have the largest farms[8].

The 2017 study reported that broiler production in the EU has increased by 18.6% from 2009 to 2014, now representing about 6.5 billion birds a year. Production and consumption have been increasing steadily and chicken is second after pig-meat as the largest consumed meat in the EU. Poultry meat production in the EU is expected to increase by 3.8% and consumption by 3.4% in the period 2015-2025. The EU is 103.9% self-sufficient in poultry meat, with exports accounting for 11% of production and imports equivalent to 6%. Imports, most of which are higher value cuts from Brazil and Thailand, are mainly destined for France, Germany, Netherlands and the UK.

Just over a quarter of a million people are employed in the EU poultry sector, according to the 2017 study, with 62% employed in slaughter/processing and almost a fifth (19%) employed in primary production; mainly on the 23,360 large broiler farms[9]. In some regions of the EU the sector is highly integrated (common ownership of breeding, hatchery, housing, feed mill and processing plants) and keepers are paid a set rate for their labour and variable costs. In other regions, there is less integration and the keeper is also the owner of the birds. High levels of integration are common in Austria, France, Germany, Italy and the UK with lower levels more common in Belgium, Finland, the Netherlands, Poland and Sweden. Both models are common in Denmark and Hungary.

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[7] Report from the Commission to the European Parliament and the Council on the impact of genetic selection on the welfare of chickens kept for meat production (COM(2016) 182 final) https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-182-EN-F1-1.PDF

[8] European Commission - DG Agriculture and Rural Development available at: http://ec.europa.eu/agriculture/poultry/index_en.htm

[9] Farms with more than 1000 broilers (Eurostat in 2013) although these represent less than 1% of all broiler farms they have 94% of the birds.

3 APPLICATION OF THE DIRECTIVE

The 2017 Study reported that the Directive has been fully transposed into national legislation and that implementation of the Directive is regional in Belgium, Germany, Italy and Spain and is a devolved matter in the UK.

3.1 Training and guidance for persons dealing with chickens

The Directive introduced specific training requirements for keepers with derogations on the basis of prior experience. Such training is approved by the authorities and usually delivered by a third party. However, the 2017 study indicated a small number of Member States do not offer appropriate training courses.

The training emphasises the responsibility of the keeper and the need to balance management and provision of resources as well as practical aspects of catching and transport.

Authorities provide keepers with a certificate of competence, with two-thirds of these certificates awarded following training and a third on the basis of previous experience. Many keepers who could have got a derogation based on their experience chose instead to attend training as they valued the opportunity to learn about issues such as broiler behaviour and stress[10].

Although persons who catch and load birds prior to transport for slaughter do not require a certificate of competence, the Directive requires keepers to provide them with instructions and guidance. However the keeper is usually not the person organising the catching, especially where the sector is highly integrated and the slaughterhouse organises the transport, and the keeper is not in the best position to give instructions to the catching team. Where this is the case certain sections of the industry have provided additional training to catching teams to ensure that those involved are aware of good practices as well as their legal responsibilities.

3.2 Stocking densities and inspections

The Directive provides three stocking density ranges and keepers must meet a different set of requirements for each range:

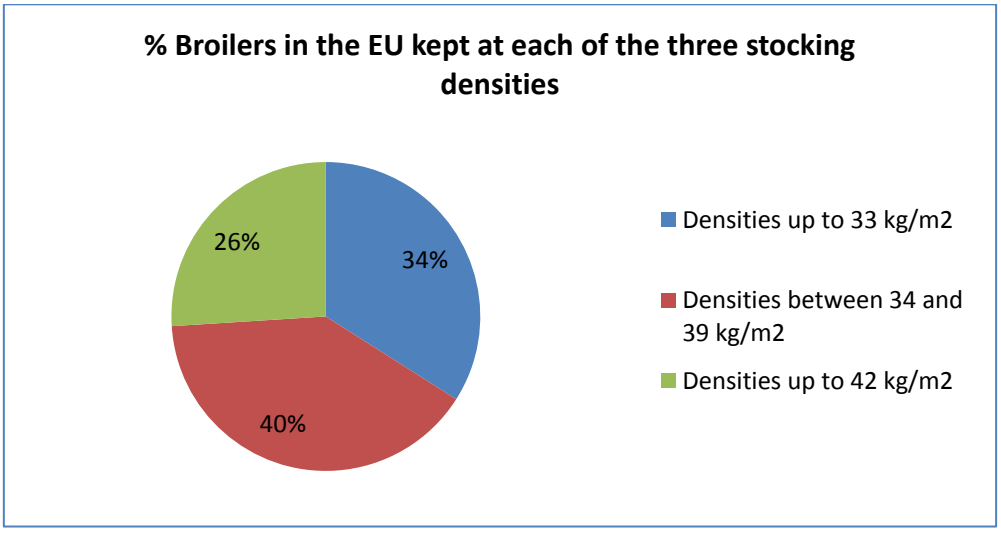
- The general rule is that the stocking density does not exceed 33 kg/m^2.
- A derogation to allow an increase above 33kg/m^2 up to 39kg/m^2 can be given when additional documented details for each house are kept and the house achieves certain climatic parameters. In addition the documentation accompanying the flock at the slaughterhouse shall include the daily mortality rate and the cumulative daily mortality rate.

[10] "Educating professionals on animal welfare" available at:

https://publications.europa.eu/en/publication-detail/-/publication/4cca0815-024f-11e7-8a35-01aa75ed71a1

- A further increase above 39kg/m^2 up to 42kg/m^2 is allowed where, in addition to the conditions mentioned in the previous point being met, monitoring by the authorities confirms records of low mortality rates and good management practices. At these highest stocking densities, the Directive provides an indicator, by way of a formula, for the cumulative daily mortality rate which must not be exceeded.

When transposing the Directive into national legislation, according to the 2017 Study Austria, Denmark, Germany, Sweden and the UK opted not to make use of some or all of these stocking density derogations. Both Germany and the UK indicated that their decision was based on scientific evidence that welfare could be compromised at higher stocking densities. In the remaining 23 Member States national legislation is a straightforward transposition of the Directive. So at the time of the 2017 Study there was a group of Member States allowing a stocking density up to 33kg/m^2, others up to 39kg/m^2, and a third group to the maximum 42kg/m^2 and overall almost three quarters of broilers in the EU are kept at a stocking density below 39kg/m^2 (see chart):



The 2017 Study indicated that slightly more than a quarter of EU production is at the highest stocking density where keepers are obliged to meet certain additional requirements set out in the Directive. More than half (55%) of broilers stocked at the highest density are in France, with 18% located in the Netherlands and 9% in Belgium.

During random inspections, authorities have ensured that overstocking does not occur at risk periods. One risk period is just before "thinning", a practice used in many Member States to remove a portion of birds for slaughter some days earlier than the majority of the flock thereby creating additional space in the house. The other period when stocking density might be highest is immediately before the birds are sent for slaughter when the production cycle is completed. In order to effectively assess compliance with the Directive's legal requirements, Member States need to set clear compliance criteria so that their inspectors can make a practical judgement whether farms comply with the law. Most Member States provided some form of guidance for the practical steps to follow when measuring stocking density, but few gave any guidance to inspectors to assess if ventilation was sufficient. Ventilation is a critical point to ensure the climatic conditions within a house but authorities only a minority of

Member States had defined maximum gas concentrations and provided equipment to measure them. Random farm inspections are generally focussed on the resources provided rather than the birds themselves as it is difficult to examine individual live birds among several thousand in a poultry house.

Certain authorities, particularly in Denmark which has a longest established system for monitoring specific indicators at the slaughterhouse, indicated that it was more efficient to identify problem farms on the basis of slaughterhouse monitoring rather than relying on random farm inspections. These authorities see the use of an animal based indicator which can be measured *post mortem* and which is strongly correlated with the climatic conditions within the house during rearing as the most efficient way to organise controls and target potential problems with environmental conditions on farm.

Both industry and authorities consider the requirement for data for both daily and cumulative daily mortality rates to accompany flocks to slaughter excessively burdensome. In a majority of Member States only the cumulative daily mortality rate data accompanies the flock to the slaughterhouse. In order to investigate when mortalities occur, e.g. close to slaughter or earlier during rearing, authorities need access to daily mortality rates in the case of stocking densities higher than 33 kg/m2. The provision of this data is made easier in certain Member States as keepers record daily mortality rates directly into a database, and this data can also be accessed by the official veterinarians who may need to investigate when deaths occurred..

Different maximum stocking densities are applied in different Member States. The higher requirements of management and monitoring to operate at the higher stocking densities mitigate against potential welfare problems.

The requirement to train keepers is valued by the industry, and certain sections of the industry also provide additional training for transport organisers and personnel engaged in catching birds prior to transport.

Farm inspections generally provide assurance that legislative requirements are met, but Member States have not always provided clear compliance criteria so that their inspectors can make a practical assessment whether farms comply with the law, although there are some good practices such as well-defined maximum gas concentrations and available equipment to measure these.

A good practice in some Member States is automatic sharing of data on mortality rates which facilitates investigation of cases, in accordance with the Directive, when excessive deaths may have occurred.

4 DEVELOPMENT OF WELFARE INDICATORS

4.1 Mandatory indicator

To be useful as part of a monitoring programme an indicator should be clearly defined, practically measurable and support decision-making regarding the acceptability of conditions

on farm. The maximum cumulative daily mortality rate[11] specified in the Directive for farms operating at the highest stocking densities is such an indicator.

This indicator, which is determined for each flock using a formula specified in the Directive, can be used to measure whether the keeper has been able to avoid excessive deaths during the rearing period. If flocks operating at the highest stocking densities exceed the prescribed limit, authorities require keepers to provide sufficient explanation that the causes lie beyond their sphere of control otherwise they are obliged to operate at lower stocking densities for the next seven consecutive flocks. The keeper is required to operate below the limit during this period before being allowed to operate again at the higher stocking densities.

Frequently, when mortality rates are exceeded, the deaths occurred in the first week of production and the keeper claims these were due to conditions at the hatchery and/or in the parent flocks. The authorities accept such claims but do not investigate conditions at the hatchery. EU law does not provide specific requirements for hatcheries and none of the Member States audited by DG Health and Food Safety had criteria for assessing the general requirements of Directive 98/58/EC in relation to these establishments.

Use of the cumulative daily mortality rate to reduce stocking densities in subsequent flocks is often perceived as a penalty. In order to stay below the limit and avoid a reduction in stocking densities, keepers who might otherwise cull birds for animal welfare reasons may instead transport possibly unfit birds for slaughter so that they are not included as part of their farm mortality rates.

Monitoring of conditions such as abnormal levels of contact dermatitis, parasitism and systemic illness are, as required, part of routine post mortem inspection at the slaughterhouse. However the Directive does not define the extent or severity of such conditions which correspond to poor welfare conditions. So although the official veterinarian is obliged to communicate the results to the keeper and the competent authority where inspection results are consistent with poor animal welfare it is at the discretion of the Member State to further define measurable criteria, and provide an indicator, which might support this decision.

4.2 Voluntary indicators

The 2017 Study reported that 18 Member States have a requirement in national law which requires footpad dermatitis to be recorded and 15 of these link this requirement to targeted actions. Footpad dermatitis is an indicator which is monitored at the slaughterhouse and can be used to identify problematic farms where corrective actions are needed to address underlying problems. Footpad dermatitis is a form of contact dermatitis due to ammonia burns, where prolonged contact with poor litter, with a high moisture and ammonia content, causes chemical irritation of the skin. Footpad dermatitis is correlated with other forms of

[11] 'Cumulative daily mortality rate' means the sum of daily mortality rates, which in turn is the number of chickens which have died in a house on the same day including those that have been culled either for disease or because of other reasons divided by the number of chickens present in the house on that day, multiplied by 100.

contact dermatitis such as hock burns and breast blisters which suggest not only poor litter quality but also possible lameness or mobility problems. It is not influenced by catching, transport or conditions at slaughter and is therefore a good indicator of animal welfare on farm. The 15 Member States which link this indicator to targeted action by law together with the UK and Spain, where such systems are implemented without being specified in law, means that almost 80% of poultry production in the EU is subject to this scoring system.

Sweden, Denmark, the Netherlands and the UK have used this indicator in practice for the longest and use the three tier scoring system first introduced in Sweden[12]. The eleven Member States who do not have such a scoring system linked to targeted actions nevertheless carry out *post mortem* inspections, as required by Regulation (EC) No 854/2004[13], but do not systematically make use of this data to prioritise farm inspections.

Use of footpad dermatitis as an indicator has allowed Member States to develop effective control systems for broiler welfare[14]. Although the scoring and trigger levels differ between Member States, all of them provide instructions for *post mortem* assessment, reporting of results and follow up. Good communication and coordination between the authorities responsible for the slaughterhouse and for the farm is needed so that keepers with persistently high scores are obliged to deal with the problem. Continued low footpad dermatitis scores, on the other hand, provide evidence that the keeper is performing well.

EFSA provided a harmonised data collection system and a model for the submission of data[15] as required by Article 6(2) of the Directive. Member States experts at the 2017 workshop indicated that while this epidemiological/sampling approach gave a national picture of levels of footpad dermatitis this did not provide a tool to prioritise controls of individual farms on an on-going basis. The Member State experts concluded that, unless they already had such a system in place, they needed to develop guidance on how data from slaughterhouses could be used as part of risk based controls.

Mortality rates provide a basic measure of the welfare of the flock, but scoring specific types of contact dermatitis at post mortem, notably footpad dermatitis, is now relied on in a majority of Member States as the best way to make a risk assessment of broiler farms and prioritising farms for investigation and action. Monitoring of subsequent flocks at *post mortem* can be used to confirm that underlying problems have been corrected.

Conditions at hatcheries and/or parent flocks are often suspected of giving rise to high

[12] "Management tools to reduce footpad dermatitis in broilers", I. de Jong & J. van Harn, Aviagem, 2012

[13] Regulation (EC) No 854/2004 of the European Parliament and of the Council of 29 April 2004 laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption OJ L 139, 30.4.2004, p. 206, Corrected and re-published in OJ L 226, 25.6.2004, p. 83

[14] "Contribution of Meat Inspection to the surveillance of poultry health and welfare in the European Union", A. Huneau-Salaün, K. D. Stärk, A. Mateus, C. Lupo, A. Lindberg, S. Le Bouquin-Leneveu, Epidemiology & Infection, 2015, Vol. 143, Issue 11, pp. 2459-2472

[15] "Technical assistance to the Commission (Article 31 of Regulation (EC) No 178/2002) for the preparation of a data collection system of welfare indicators in EU broilers' slaughterhouses" http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2013.3299/pdf

mortality rates during the early stages of rearing, but such establishments are not investigated by authorities as they have not defined specific animal welfare rules applicable at these other sites.

5 INFLUENCE ON THE WELFARE OF CHICKENS

An EFSA opinion[16] lists the major diseases with welfare implications for broilers as leg problems, contact dermatitis, ascites and sudden death syndrome. It indicates that these have been exacerbated by intense selection for fast growth rate and increased feed efficiency, but also by environmental conditions. The Directive seeks to improve the welfare of chickens through better management and environmental conditions and made the issue of genetic selection the subject of another Commission report.

The 2017 study indicates that there has been little assessment of the impact of the Directive either by the Member States or by industry. The audits carried out by DG Health and Food Safety together with the 2017 workshop with Member States provide the basis for the following conclusions on the impact of the Directive on the welfare of the birds.

Production systems are basically the same as before the Directive entered into force, with one-day old chicks placed in a house, on a floor covered with litter material (e.g. straw, wood chips, peat or paper). Improvements have been made in housing and the quality of the environment as certain Member States have phased out older housing which was not capable of meeting the requirement to maintain average relative humidity inside the house at levels below 70 % during 48 hours when the outside temperature is below 10°C. That incapacity was also found to result in high levels of footpad dermatitis and the monitoring of this indicator also brought about housing improvements.

So most systematic improvements have been made through measures to address footpad dermatitis rather than through random farm inspections. Actions to address high levels of contact dermatitis also included killing birds at a younger age, before mobility problems occur and preventing deterioration in bird welfare. Maintaining appropriate litter through the lifecycle of the flock is also credited with reducing diseases such as coccidiosis and necrotic enteritis thereby bringing about improvements in bird health.

Further indirect indications of the positive benefits of adopting such measures on flock health have emerged from other work carried out by DG Health and Food as part of the Commission's action plan on antimicrobial resistance[17]. In particular, there is evidence that the need to use antimicrobials (other than coccidiostats) for treating common conditions has been substantially reduced, or avoided altogether, in those Member States which have a strong focus on welfare, health and hygiene issues[18].

[16] "Scientific Opinion on the influence of genetic parameters on the welfare and the resistance to stress of commercial broilers" http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2010.1666/full

[17] https://ec.europa.eu/health/amr/sites/amr/files/amr_action_plan_2017_en.pdf

[18] http://ec.europa.eu/food/audits-analysis/overview_reports/details.cfm?rep_id=121

The Directive has provided a good framework for ensuring broiler welfare and although the scoring of footpad dermatitis is not defined at EU level, the use of this indicator has resulted in the most systematic improvements in animal welfare.

6 COSTS OF THE DIRECTIVE

The 2017 study indicated, on the basis of a survey of Member States, that the costs of the implementation of the Directive were estimated in six Member States and were not comparable. The recorded implementation costs; both annual and one-off, were associated with keepers' costs to meet the more detailed requirements, costs for the authorities for additional staff and equipment to measure environmental parameters, and administrative and production costs for the industry.

The 2017 study indicates that, overall, Member States and industry do not consider the implementation of the Directive as having significant financial implications. The only Member States which indicated a significant cost were the UK and the Netherlands. The UK estimate, on the basis of an Impact Assessment before the Directive was implemented, a cost of c. €71.1 million for one off and annual costs over eight years. The main cost arose from the UK decision not to allow farms to operate at the highest stocking densities. According to the 2017 study, these costs were borne by the industry but consumer willingness to pay for products with higher animal welfare standards offset costs from lower stocking density and production. In the Netherlands no impact assessment was carried out; however, both the authorities and industry believe the implementation of the Directive had a substantial cost as, prior to the Directive, stocking densities ranged from 45 kg/m2 to 50 kg/m² and the lower production from the lower stocking densities introduced by the Directive were costs that had to be borne by the industry. The Netherlands estimated an annual administrative and production cost for the industry of €2.7 million, not including the loss in revenue from stocking density reductions to comply with the Directive. In other Member States costs from implementation ranged from negligible up to €6 million annually for growers in Finland.

Monitoring of indicators at the slaughterhouse, were seen as a cost for both slaughterhouse staff and Official Veterinarian time (e.g. The Czech Republic estimated costs of c. €1.3 million to carry out checks in slaughterhouses).

Broiler farming is a large and growing sector of the agricultural economy in the EU providing significant employment. Exports and imports largely balance each other and there has been no major cost from implementing the Directive. The competitiveness of the sector in different Member States has not been negatively affected by operating at lower stocking densities.

7 CONCLUSIONS

Broiler farming is an important part of the EU agricultural economy and, according to the information gathered with the 2017 study, there has been no major cost from implementing the Directive. The Directive has provided a framework by which Member States have improved management and housing for broilers which have had a positive effect on the health and welfare of the birds.

Controls based on monitoring footpad dermatitis are best at demonstrating that animal welfare has improved. Such controls are the most efficient and effective way of prioritising farm investigations. Also authorities and keepers have been able to measure progress and maintain standards based on real animal welfare outcomes through scoring footpad dermatitis.

Member States are aware of the steps needed to implement monitoring systems for footpad dermatitis and two thirds of Member States have already established such systems.

Random inspection of farms is still an important part of any control system, in particular to check stocking densities and that management and housing and other resources are appropriate.

Different maximum stocking densities have been applied in different Member States, and the possible negative effects of high stocking densities have been mitigated by applying higher requirements and monitoring using cumulative daily mortality rates as an indicator. High mortality rates are often blamed on conditions at hatcheries and/or parent flocks but there are no known actions by authorities to address this suspicion. The proper assessment of the more technical requirements, such as ventilation, which influence chickens' welfare, is also a challenge for authorities.

The Commission will continue to work with Member States to disseminate examples of good practice for controls and with Member States and industry on guidance on farm management.