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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND  
THE COUNCIL**

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## on systems restraining bovine animals by inversion or any unnatural position

### 1. BACKGROUND

Article 27(2) of Council Regulation (EC) No 1099/2009 on *the protection of animals at the time of killing*<sup>1</sup> provides that the " *No later than 8 December 2012, the Commission shall submit to the European Parliament and to the Council a report on systems restraining bovine animals by inversion or any unnatural position. This report shall be based on the results of a scientific study comparing these systems to the ones maintaining bovines in the upright position and shall take into account animal welfare aspects as well as the socioeconomic implications, including their acceptability by the religious communities and the safety of operators. This report shall, if appropriate, be accompanied by legislative proposals with a view to amending this Regulation concerning the systems restraining bovine animals by inversion or any unnatural position.*"

To prepare this report the Commission commissioned a study (later called the "BoRest study"<sup>2</sup>).

Due to the specificity and the complexity of this study (in particular collecting technical and scientific data in slaughterhouses), its preparation and realisation took much more time than expected, hence a delay in adopting this report.

### 2. RESTRAINING SYSTEMS FOR BOVINE ANIMALS SLAUGHTERED WITHOUT STUNNING

#### 2.1. The issue

In slaughterhouses, bovine animals<sup>3</sup> are restrained in upright position in a restraining pen before being stunned, usually using a penetrating captive bolt.

Article 4(4) of Regulation (EC) No 1099/2009 provides that the stunning requirements set out in Article 4(1) and in Annex I to this regulation do not apply if slaughter is subject to particular methods prescribed by religious rites, provided that the slaughter takes place in a slaughterhouse. Under these conditions EU legislation

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<sup>1</sup> OJ L 303, 18.11.2009, p. 1.

<sup>2</sup> *Restraining systems for bovine animals slaughtered without stunning/ Welfare and socio-economic implications – BOREST* - by Institut de l'Elevage (as coordinator). June 2015. ([http://ec.europa.eu/food/animals/welfare/practice/slaughter/index\\_en.htm](http://ec.europa.eu/food/animals/welfare/practice/slaughter/index_en.htm)).

<sup>3</sup> In the context of this report the word "animals" only refers to bovine animals (adult cattle and calves).

exceptionally allows slaughter methods without stunning such as bleeding animals without prior stunning, which include ritual slaughter described by Jewish or Muslim rites. For that purpose, specific restraining systems have been designed to reverse the bovine animal upside down or on its side (rotating pen) in order to facilitate the cutting by the slaughterman. Such restraining systems may only be used if animals are slaughtered without stunning<sup>4</sup>.

In a 2004 report *on the welfare aspects of animal stunning and killing methods*, scientists of the European Food Safety Authority (EFSA) favoured restraining animals in an upright position in case of slaughter without stunning<sup>5</sup>. Their opinion was based on a publication from 1990 comparing two types of pens (upright vs. rotating).

However, during the process of adoption of Regulation (EC) No 1099/2009, it was argued that rotating pens used in Europe are now substantially different from the model described in the 1990 publication. In addition some religious communities expressed concerns that an upright position might not be compatible with their religious rites.

## 2.2. General situation

In 2012, in total 25 million bovine animals were slaughtered in the EU<sup>6</sup> from which around 2.1 million<sup>7</sup> (8,5%) were slaughtered without stunning, nearly all of them (97%) in six Member States<sup>8</sup>.

From these 2.1 million animals, more than 1.6 million are slaughtered in a rotating device (78 % of the animals slaughtered without stunning) while the rest (22 %) are slaughtered in an upright device.

In 2012, rotating devices were not in use in Latvia, Portugal, Romania, Slovakia and the UK. The upright position was mandatory in the UK<sup>9</sup>.

The breakup between upright and rotating pen varies considerably between Member States from 100% upright (in the UK due to legislation) to 90% rotating (France), with various intermediate figures.

There is a wide range of practice in the way rotating pens are used. Most of slaughterhouse operators (80%) using the inverted position of 180° (upside down), while the rest put the animal in a partial rotation at 90° (on the side).

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<sup>4</sup> Article 15(2) of Regulation (EC) No 1099/2009.

<sup>5</sup> [http://www.efsa.europa.eu/EFSA/efsa\\_locale-1178620753812\\_1178620775454.htm](http://www.efsa.europa.eu/EFSA/efsa_locale-1178620753812_1178620775454.htm), see page 25.

<sup>6</sup> For details: see in particular section 4 of the Borest study.

<sup>7</sup> The precise figure is 2 147 300 bovine animals based on a 2012 survey from the competent authorities.

<sup>8</sup> Belgium, France Italy, the Netherlands, Spain and the UK.

<sup>9</sup> The upright position was also mandatory in Estonia but no slaughter without stunning was performed during the survey.

### **2.3. Rotating devices**

There are many types of equipment used (32 models identified by the BoRest study) with various manufacturers. Three main manufacturers share 50% of the market, the other half being supplied by local ones.

According to the BoRest study, more than 90% of the French slaughterhouses are equipped with modern designed rotating device, independently of the size of the slaughterhouses. These devices are also used in other countries like the Netherlands, Spain and Belgium (with France, these Member States representing 85% of the animals slaughtered without stunning).

Based on these data, the BoRest study estimates that more than 85% of the animals are slaughtered with modern designed rotating device. This is coherent with the fact that 67% of the slaughterhouses are equipped with devices of less than 10 years and that investment anterior to 1990 represents less than 15% of the slaughterhouses.

## **3. ANIMAL-WELFARE CONSIDERATIONS**

### **3.1. Literature review**

In the 2004 EFSA report, scientists refer to a study performed in 1990 comparing a type of pen where animals are restrained in an upright position (Cincinnati pen or ASCPA) and a pen where animals are turned on their side or back (Weinberg pen). From this study it appears that there is a welfare advantage in restraining animals in an upright position.

Since the introduction of the Weinberg pen, there have been significant alterations to the original design of rotating restraints.

Inverting the animals generates a series of animal welfare concerns: the animal is exposed in a unnatural posture, generating abdominal pressure and stress due to the inversion especially if the animal is kept for a long time.

On the other hand restraining in upright position for slaughter without stunning makes the cutting more difficult for the slaughterman (from down to up) and possibly creates impaired working conditions.

### **3.2. Data collected from the BoRest study**

In the BoRest study, animal welfare issues were studied on 1113 bovine animals with different samples of categories of animals, restraint devices or practices collected in 18 slaughterhouses in six Member States<sup>10</sup> from July to December 2013. Several

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<sup>10</sup> Belgium, France Italy, the Netherlands, Spain and the UK. These six Member States represented 97% of the bovine animals slaughtered without stunning at the time of study.

animal welfare parameters were observed concerning the restraint duration, cutting and bleeding procedures as well as the loss of consciousness.

For most of the variables, the ranges of the averages obtained in the three positions (inverted, lateral, upright) were similar. The results showed some differences but most of them could be associated with some particularities of the design of the device, the quality of the head restraint and the skill of the operators.

Due to the large variability of the design of the slaughterhouses (layout of the corridor, layout of the restraining and bleeding area, design of the restraining device, etc.) and skills and capabilities of the slaughter men observed during this study, it was not possible to take into account and analyse all factors.

However, the study did not lead to conclusive findings establishing significant differences in terms of animal welfare outcomes between the two restraining systems.

#### **4. ECONOMIC, SOCIAL AND SOCIETAL ASPECTS**

According to the BoRest study, upright restraining systems are cheaper than the rotating ones on all the economic aspects: total investment, maintenance and life time.

The annual costs for an upright restraining device are estimated at about EUR 4,300 per year (including the depreciation costs of an investment of EUR 50,000 , maintenance and interest costs) and for a rotating restraining device at EUR 12,600 (including the depreciation costs of an investment of EUR 100,000 , maintenance and interest costs).

However it should be remembered that costs in the restraining area are only a small part (less than 10%) of the total slaughtering costs.

The line speed at a slaughterhouse is the one of the most critical factors of the slaughter costs. In this regard, the study concluded that the line speed does not differ between the upright and rotated system. In both cases, on average, about 28 to 30 adult animals are slaughtered per hour.

Compared to costs, slaughterhouses' directors declared that considerations on occupational safety of the personnel, animal welfare and religious acceptability play an equally important role for choosing the restraining system.

In the context of the BoRest study an effort has been made to collect information from a wide range of religious representatives<sup>11</sup>.

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<sup>11</sup> See in particular Table 40 page 126 and page 249 of the study.

For the representatives of the Jewish communities, inverted position was always preferred.

For the representatives of the Muslim communities, the use of rotating devices was often preferred, but the upright position was also considered acceptable if correctly adapted and if the staff operating the system was experienced.

In the opinion of both communities, head restraint, whatever the position of the bovine animals, constitutes a concern in terms of welfare, bleeding efficiency and practices.

On working conditions, no comparison could be made between the two restraining systems because limited number of response from personnel working with upright restraining system. The main risks in terms of work safety are linked with possible unexpected movements of the animals after releasing from the restraint device and while hoisting.

## **5. TRADE**

No official information is available on the trade in Halal or Kosher meat.

Based on 2009-2013 Eurostat data, exports of beef meat from EU to Muslim Mediterranean countries and to Israel are very low (less than 15,000 tonnes of carcase weight equivalent) compared to the overall export to third countries (up to 400,000 tonnes per year). Furthermore, they are highly variable from one year to another. EU exports to Middle East increased significantly these last years, but still at a low level.

## **6. CONCLUSIONS**

The restraining system of bovine animals slaughtered without stunning is chosen by the slaughterhouse operators to meet the religious requirements of the communities concerned. In addition, the operators want a system that allows a quick loss of consciousness of the animals, ensures the work safety and is economically viable.

Two main restraining systems are used in the EU:

- a) the upright system where animals are bled in upright position (also used for stunning animals with a captive bolt);
- b) the rotating system where animals are bled after being rotated in an inverted or lateral position (only authorised for slaughter without stunning).

Both systems have advantages and disadvantages. The upright system was in the past considered more appropriate for the perspective of animal welfare because it does

not put the animal in an unnatural position. Data collected on more than one thousand animals in the EU show that from an animal welfare point of view there is no conclusive findings indicating that one system is better than the other. Due to the variety of the situations found in slaughterhouses, the animal welfare outcomes depend more on the way devices are designed and used than on the position of the animals (upright or inverted).

The same applies for the safety of the operators or the throughput of the slaughterline.

Investment and operating costs are substantially higher for rotating restraining systems than or upright ones. The first ones are however widely used in the EU (80% of bovine animals slaughtered without stunning).

The vast majority of rotating restraining systems used in the EU have been recently designed.

Information on best practices and training for proper use of such restraining systems contributes to improved welfare of animals, independent of the restraining system used. The BoRest study provides an overview in this regard.