

## WP2.2. Religious slaughter: Evaluation of current practices

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### Objective

The aim of the study was to assess some procedures of the current methods of Halal slaughter.

### Material and methods

Information on the procedures of current Halal practices in EU countries (Belgium, Germany, Italy, the Netherlands, Spain and the UK), Turkey and Australia were collected through spot visits in 18 cattle, 12 sheep, and 5 poultry abattoirs. The spot visit consisted on the assessment of the handling and restraint methods, stunning, neck cutting procedures and post-cut management in each abattoir.

**Table1. Number of abattoirs visited and animals inspected according to the restraining method and the use of pre-slaughter stunning.**

Cattle Restraining method	Without stunning		With stunning	
	Abattoirs	Animals	Abattoirs	Animals
Turned 45°	1	30	0	0
Turned on the side (90°)	3	54	1	54
Turned on the back (180°)	3	82	1	65
Upright	5	149	4	152
<b>Total</b>	<b>12</b>	<b>315</b>	<b>6</b>	<b>271</b>

Sheep Restraining method	Without stunning		With stunning	
	Abattoirs	Animals	Abattoirs	Animals
Hoisted before neck cutting	3	150	0	0
Manually on the side	2	96	1	95
Mechanically on the side	1	18	0	0
Upright	0	0	5	174
<b>Total</b>	<b>6</b>	<b>264</b>	<b>6</b>	<b>269</b>

Poultry Stunning method	With stunning	
	Abattoirs	Animals
Gas stunning	1	50
Water bath electrical stunning	4	150
<b>Total</b>	<b>5</b>	<b>200</b>



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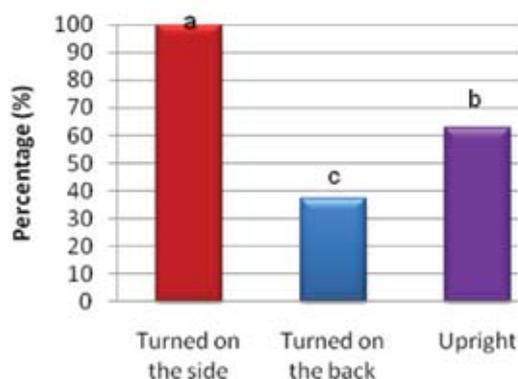
The data collected in this survey are only examples of current practices and may not constitute a complete representation of the Halal slaughter practices performed in those countries because of the low number of abattoirs surveyed. The results presented may be also affected by other factors of the restraint (design, construction and operation), handling, neck cutting procedures and post-cut management, as it was beyond the scope of the project, to relate the results to technical details or different quality of performance.

## Results

### Cattle slaughtered without stunning

Figure 1

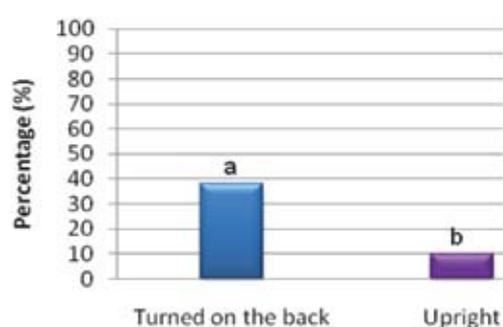
Percentage of cattle struggling during restraint on the different restraining methods assessed.



Different letters (a, b, c) means significant ( $p < 0.05$ ) differences.

Figure 2

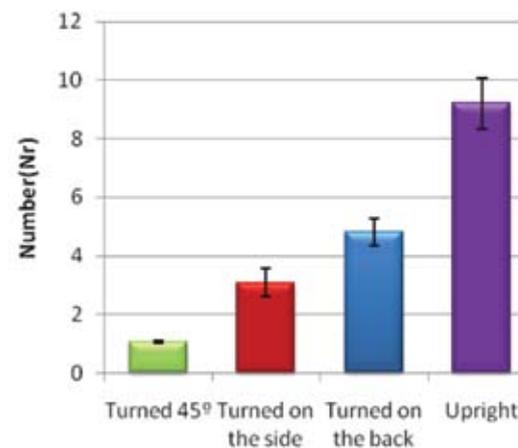
Percentage of cattle vocalizing during restraint on the different restraining methods assessed.



Different letters (a, b) means significant ( $p < 0.05$ ) differences.

Figure 3

Number of cuts on the different restraining methods assessed.



In the abattoirs surveyed, the restraint to cut interval was longer in cattle restrained 45° and on the side than those turned on the back and upright position. During restraint, all cattle turned on the side (90°) showed struggling behaviour. Furthermore, the percentage of animals that showed struggling behaviour was higher in cattle restrained in upright position than turned on the back (180°) (63 vs. 37%). On the other hand, the percentage of vocalizations was higher in cattle turned on the back than those restrained in upright position (38 vs. 10%). The mean number of cuts was higher for cattle restrained in upright position and turned on the back than those in the other restrain systems.

## Cattle slaughtered with stunning

The stunning methods used were penetrating captive bolt in two abattoirs, non penetrating captive bolt in one abattoir and electrical head only stunning in three abattoirs. The restraint to stun interval was higher for cattle turned on the side and on the back than in upright position. Furthermore, the percentage of struggling cattle was higher in those animals turned on the back than those turned on the side and upright position.

Figure 4  
Restraint to stun interval.

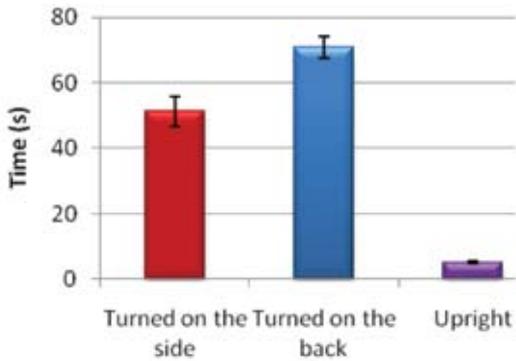
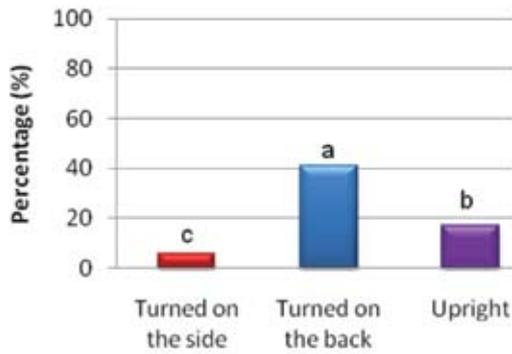


Figure 5  
Percentage of cattle struggling during restraint.



Different letters (a, b, c) means significant ( $p < 0.05$ ) differences

## Sheep slaughtered without stunning

Figure 6  
Restraint to cut interval.

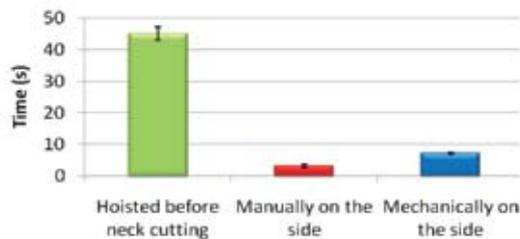
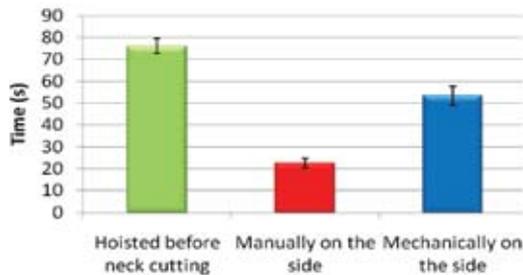


Figure 7  
Time to loss rhythmic breathing after neck cutting.

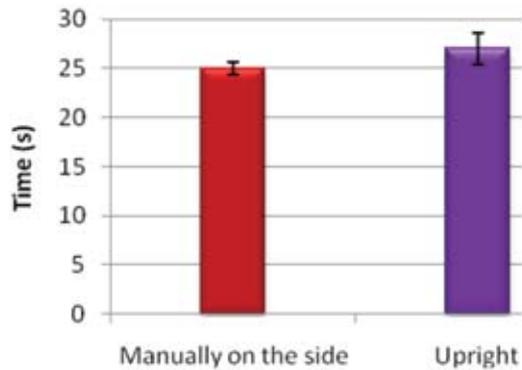


The restraint to cut interval was higher when sheep were hoisted before neck cutting compared with those turned on the side. After neck cutting, the loss of consciousness was assessed through the absence of rhythmic breathing. This physiological reflex disappeared earlier when sheep were turned on the side than hoisted.

## Sheep slaughtered with stunning

Figure 8

Restraint to stun interval.



The stunning methods used were non penetrating captive bolt in one abattoir and electrical head only stunning in 5 abattoirs. The restraint to stun interval was similar in both restraining methods.

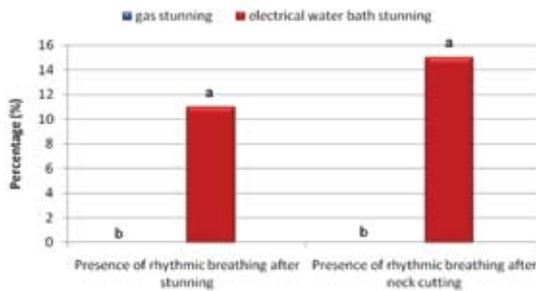
## Poultry

### Poultry slaughtered with stunning

In four abattoirs the stunning methods used were electrical water bath and in one abattoir gas stunning. The stun to cut interval was longer in poultry stunned with gas than electrically (32 → 0.0 vs. 15 → 0.95 s). After stunning, the prevalence on poultry with rhythmic breathing was 11% and 0% in electrical water bath and gas stunning, respectively. After neck cutting, the prevalence of poultry with rhythmic breathing increased to 15% in electrically stunned poultry.

Figure 9

Presence of rhythmic breathing after stunning and after neck cutting.



Different letters (a, b) means significant ( $p < 0.05$ ) differences.



The DIALREL project is funded by the European Commission and involves partners from 11 countries. It addresses issues relating to religious slaughter in order to encourage dialogue between stakeholders and interested parties. Religious slaughter has always been a controversial and emotive subject, caught between animal welfare considerations and cultural and human rights issues. There is considerable variation in current practices and the rules regarding religious requirements are confusing. Consumer demands and concerns also need to be addressed and the project is collecting and collating information relating to slaughter techniques, product ranges, consumer expectations, market share and socio-economic issues. The project is multidisciplinary and based on close cooperation between veterinarians, food scientists, sociologists, and jurists and other interested parties.

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The text represents the views of the author(s) and does not necessarily represent a position of the Commission, who will not be liable for the use made of such information.

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