



*Study on the improved methods for animal-friendly production, in particular on alternatives to the castration of pigs and on alternatives to the dehorning of cattle*

**D.2.1.1. Report on dehorning practices across EU member states**

**SP2: Alternatives to dehorning: To develop and promote alternatives to the dehorning of cattle.**

**WP2.1: State of the art of dehorning in the EU member states.**

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## Executive summary

The state of art of cattle dehorning in the EU Member States was made through a large survey under the responsibility of some partners of ALCASDE Consortium. Specific questionnaires were created for dairy, beef, and suckler herds and they were submitted to local experts of each EU Country belonging to relevant institutions like universities, national farmers' associations, cattle breeders associations, farm veterinarians and practitioners. After data collection, a quantitative analysis has been carried out in order to produce figures on dehorning practices and on the prevalence of disbudding/dehorning for each cattle category in Europe and in four EU macro-regions (North, Centre, East and South). Data from the survey showed that in Europe, 81.5% of dairy, 35.8 of beef and 62.5% of suckler cattle are currently dehorned. Regardless of cattle category the percentage of dehorned animals is the highest in the North macro-region. The overall prevalence of polled cattle is instead very low, particularly in the dairy cattle population (<1%). The percentages of polled beef and polled suckler cattle are a little higher than in dairy (3.2 and 7.7%) since polled beef breeds are raised in the North and the East macro-regions. Dehorning is performed primarily in cattle housed in free stall systems in order to reduce the risk of injuries for the stockman and among the pen-mates as well as to allow an easier handling of the animals. Regardless of cattle category, when production system was considered, results for cattle reared according to a conventional production scheme were similar to those of the total population while cattle in organic farms were less dehorned. As a method of horns removal, disbudding is generally preferred over dehorning. The latter method is performed for work safety reasons mainly when there is a change in the farm housing system (from tie to free stalls) or on horn-injured animals. Hot iron is the most used method of disbudding especially in the North and Centre macro-regions. The use of caustic paste appears more frequent in the South and the East. Dehorning of more aged cattle is mainly performed with the wire/saw method. Other instruments (guillotine, grinders and sheers) have been reported only in specific Countries. Some kind of anaesthetic and/or analgesic treatment is administered to the animals prior to or after disbudding only in a small percentage of dairy (20), beef (35) and suckler herds farms (29). The use of drugs has shown to increase when dehorning is carried out on more aged animals (72% of dairy, 52% of beef and 41% of suckler herds farms), since it is a more invasive procedure. However reported treatment protocols have shown to be inconsistent across Countries. In the large majority of European farms, the stockman is the main person in charge of calves disbudding. Horns removal from more aged cattle is performed with a frequent use of drugs and therefore it is more consistently carried out by veterinary practitioners, often with the assistance of the stockman.

## Introduction

Animal welfare is becoming an important issue in the European scenario of livestock husbandry. Farm practices which may once have been considered acceptable are now being discussed in the light of the new scientific knowledge and changing attitudes.

Under the WP 2.1 of ALCASDE, Task 2.1.1: *Quantitative survey of current dehorning practices*, aimed at estimating how many cattle are dehorned or not, and how dehorning is practiced across the European Union. The task was developed through a large survey carried out in the Member States under the responsibility of some partners of ALCASDE Consortium.

Contacts were established with local experts from relevant institutions like universities, national farmers' associations, cattle breeders associations, farm veterinarians and practitioners. In each Member State, specific questionnaires were submitted to experts of three cattle categories: dairy, beef, and suckler herd.

After data collection, a quantitative analysis has been carried out in order to produce figures on dehorning practices and on the prevalence of disbudding/dehorning for each cattle category in Europe and in four EU macro-regions (North, Centre, East and South).

The final results provide a broad view about dehorning practices in different production systems.

## 1. Current legislation on cattle dehorning in the EU Member States

Disbudding means the removal of the horn buds in calves before any horn material can be seen. In the framework of this report we defined a maximum age limit of 2 months to speak of disbudding, whereas the procedure of horn removal in older cattle is called dehorning.

There is no general EU legislation for disbudding and dehorning except for organic farming. Here the Commission regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control lays down the following:

'Operations such as [...] dehorning shall not be carried out routinely in organic farming. However, some of these operations may be authorised by the competent authority for reasons of safety or if they are intended to improve the health, welfare or hygiene of the livestock on a case-by-case basis. Any suffering to the animals shall be reduced to a minimum by applying adequate anaesthesia and/or analgesia and by carrying out the operation only at the most appropriate age by qualified personnel'.

When anaesthesia or analgesia are adequate, the appropriate age of the animal or qualification of the personnel are, however, not further specified and need to be determined by the local competent authority.

Since all member states of the EU are members of the Council of Europe and contracting parties to the European Convention of 1976 for the Protection of Animals kept for Farming Purposes, the Recommendation Concerning Cattle adopted by the Standing Committee on 21 October 1988 applies to all EU member states. In this recommendation, Article 17 lays down the following:

'Procedures resulting in the loss of a significant amount of tissue, or the modification of bone structure of cattle shall be forbidden, and in particular [...] dehorning by other means than the surgical removal of the horns'.

'Exceptions [...] may be made

- a. for procedures performed for veterinary medical purposes'
- b. for the [...] 'destruction or removal of the horn producing area at an early stage (disbudding) to avoid dehorning' and 'dehorning, if performed by surgical removal of the horns' if they are 'in the interest of the animals or when necessary for the protection of people in close contact with the animals'.

Furthermore, 'dehorning and disbudding by surgical means or by heat cauterisation on animals over four weeks of age' 'shall be carried out under local or general anaesthesia by a veterinary surgeon or any other person qualified in accordance with domestic legislation'.

'Destruction or removal of the horn producing area of animals under four weeks of age [...] by chemical cauterisation' or 'by heat cauterisation on the condition that it is done with an instrument which produces sufficient heat for at least ten seconds' require no anaesthesia, but 'shall be performed on animals in a way so as to avoid unnecessary or prolonged pain or distress. Such procedures may be carried out by a skilled operator'.

The legal standards of the single EU member states (and again the Council of Europe) are displayed in Table 1.



Table 1. Legal standards concerning disbudding and dehorning of single EU Member States and of the Council of Europe ( / = no specific requirements; na = no information available)

Country	Disbudding/ Dehorning	General	Age	Person who may perform	Anaesthesia required?	Used methods/ procedures	Additional Comments:
Council of Europe	Disbudding	These standards shall be implemented by all contracting states	≤ 4 weeks	Skilled operator	No	<ul style="list-style-type: none"> <li>o Chemical cauterisation</li> <li>o Heat cauterisation with an instrument which produces sufficient heat for at least ten seconds</li> </ul>	
			> 4 weeks	Veterinary surgeon or any other person legally qualified	Yes	<ul style="list-style-type: none"> <li>o Surgical</li> <li>o Heat cauterisation</li> </ul>	
	Dehorning		Veterinary surgeon or any other person legally qualified	Yes	<ul style="list-style-type: none"> <li>o Surgical removal</li> </ul>		
Austria	Disbudding	permissible if necessary to protect the animal or other animals in the specific case of intended use	≤ 2 weeks	Professionally competent person	No	<ul style="list-style-type: none"> <li>o Heat cauterisation with an instrument which contains an exact timing as well as an automatic disconnection device</li> </ul>	Biggest Austrian organic farming association (BIO Austria, covers about 2/3 of all organic farms): disbudding has to be performed using anaesthesia.
			≤ 2 weeks	Professionally competent person	Yes	<ul style="list-style-type: none"> <li>o If heat cauterisation using instruments other than described above is used</li> <li>o <i>Caustic paste NOT allowed</i></li> </ul>	
				Veterinarian	Yes	<ul style="list-style-type: none"> <li>o All other disbudding procedures</li> <li>o <i>Caustic paste NOT allowed</i></li> </ul>	
	Dehorning	permissible if veterinary indication exists	Veterinarian	Yes			
Belgium	Disbudding						
	Dehorning						

Country	Disbudding/ Dehorning	General	Age	Person who may perform	Anaesthesia required?	Used methods/ procedures	Additional Comments:
Bulgaria	Disbudding	No legislation	No legislation	Qualified veterinary doctors	Yes, if the calf is under 8 weeks old and the surgery is needed for cauterization or extirpation	<ul style="list-style-type: none"> <li>No legislation in this field, but the most used methods are: electrocautery and chemical cautery.</li> </ul>	Most of the farmers prefer cattle from breeds without horns.
	Dehorning	No legislation	No legislation	Qualified veterinary doctors	Yes, if the animal is more than 8 weeks old	<ul style="list-style-type: none"> <li>No legislation, but the most used method is wiring.</li> </ul>	
Cyprus	Disbudding						
	Dehorning						
Czech Republic	Disbudding		≤ 4 weeks	Professionally competent person	No	<ul style="list-style-type: none"> <li>Chemical cauterisation</li> <li>Heat cauterisation using an instrument that produces the required heat for the period of ten seconds at least</li> </ul>	
			>4 weeks	Professionally competent person	Yes		
	Dehorning	permissible if veterinary indication exists		Veterinarian	Yes		
Denmark	Disbudding				Yes		
	Dehorning	permissible if veterinary indication exists		Veterinarian	Yes		
Estonia	Disbudding						
	Dehorning						
Finland	Disbudding		≤ 4 weeks	Qualified person	No		
	Dehorning	permissible if veterinary indication exists		Veterinarian	Yes	<ul style="list-style-type: none"> <li>Surgical procedure</li> </ul>	
France	Disbudding	There is no specific					

Country	Disbudding/ Dehorning	General	Age	Person who may perform	Anaesthesia required?	Used methods/ procedures	Additional Comments:
	Dehorning	reference in the French regulation but farmers have to take into account the Recommendation of the Council of Europe					
Germany	Disbudding	permissible if necessary to protect the animal or other animals in the specific case of intended use	≤ 6 weeks	Person with the necessary knowledge and skills	No	o <i>Caustic paste NOT allowed as authorisation from medicinal products act ceased</i>	Private organic standards regarding dehorning: - Demeter standards: Disbudding/dehorning is not allowed. Temporarily limited exception can be granted in specific reasonable cases.
		permissible if veterinary indication exists	> 6 weeks	Veterinarian	Yes	o <i>Caustic paste NOT allowed as authorisation from medicinal products act ceased</i>	
	Dehorning	permissible if veterinary indication exists		Veterinarian	Yes	/	
Greece	Disbudding				No		There is no specific legislation regarding disbudding or dehorning
	Dehorning				No		
Hungary	Disbudding	No legislation			No		The decree n° 32/1999. (III.31.). This legislation mentions disbudding among operations that are allowed to do without anesthesia. But that is all.
	Dehorning	No legislation					
Ireland	Disbudding	Use of electro immobilisation device not allowed	≤ 2 weeks		No	o A cauterisation method (i.e. using a heated disbudding iron) is preferred to the use of caustic potash	For Farmers participating in the Animal Welfare, Recording and Breeding Scheme (The Suckler Welfare Scheme): All calves

Country	Disbudding/ Dehorning	General	Age	Person who may perform	Anaesthesia required?	Used methods/ procedures	Additional Comments:
			> 2 weeks		Yes		born in the herd must be disbudded within three weeks of birth, except where the horn buds do not emerge within this period, or for animals that are naturally polled.
	Dehorning			Veterinarian	Yes		Dehorning should only be carried out in exceptional circumstances and by a veterinarian. Local anaesthetics are classified as Veterinary Surgeon Only or VSO medicines. VSO medicines can only be administered by a veterinary surgeon or by a stockperson under the immediate direct supervision of a veterinary surgeon. Handling facilities should provide adequate restraint to minimise stress to the animal.
Italy	Disbudding	Legislative decree n. 146, 26 March 2001	≤ 3 weeks	Not specified	No	o Cauterisation	
			> 3 weeks	Not specified	Not specified		The Italian law does not specify whether animals older than 3 weeks should be dehorned by a veterinarian and with anaesthesia.
	Dehorning	n.a.					
Latvia	Disbudding						
	Dehorning						
Lithuania	Disbudding						
	Dehorning						

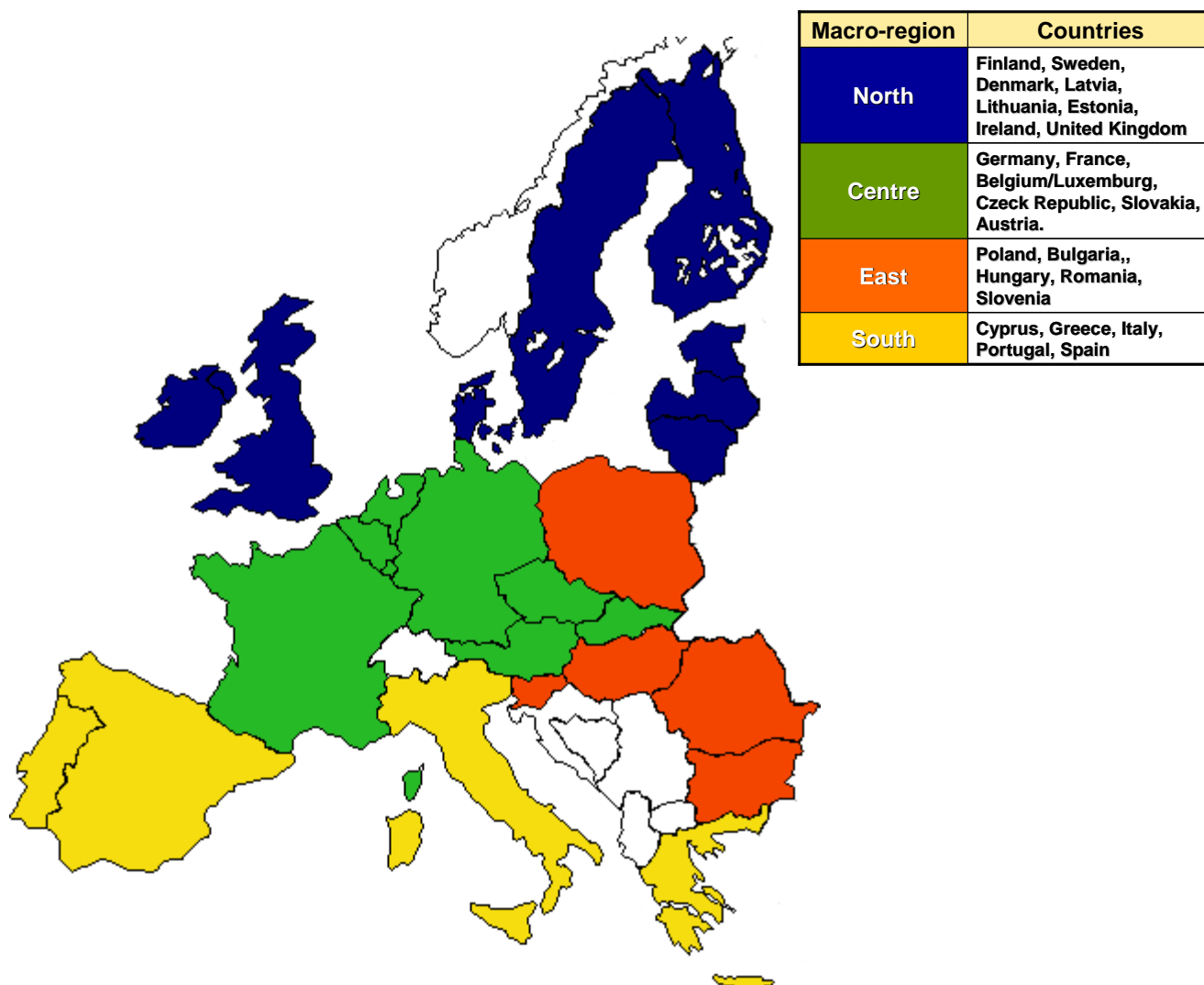
Country	Disbudding/ Dehorning	General	Age	Person who may perform	Anaesthesia required?	Used methods/ procedures	Additional Comments:
Luxembourg	Disbudding						
	Dehorning						
Malta	Disbudding						
	Dehorning						
Netherlands	Disbudding	permissible if veterinary indication exists	≤ 2 months	Farmer or veterinarian but application of anaesthesia by veterinarian	Yes	o electric or hot air method	
	Dehorning	permissible if veterinary indication exists	> 6 months	Farmer or veterinarian but application of anaesthesia by veterinarian	Yes	o wire saw	
Poland	Disbudding	No legislation					
	Dehorning	No legislation					
Portugal	Disbudding	/					Recommendations: preferably under age of 2 months under local anaesthesia; for beef cattle: do not routinely dehorn, avoid dehorning during summer because of flies, avoid caustic paste disbudding.
	Dehorning						
Romania	Disbudding	No legislation					
	Dehorning	No legislation					
Slovakia	Disbudding		≤ 8 weeks	-	No		
	Dehorning	permissible in case of health or security problem		Veterinarian	Yes		
Slovenia	Disbudding			Veterinarian	Yes		
	Dehorning	permissible if veterinary indication exists		Veterinarian	Yes		
Spain	Disbudding	/					Recommendations in accordance with Council of

Country	Disbudding/ Dehorning	General	Age	Person who may perform	Anaesthesia required?	Used methods/ procedures	Additional Comments:
	Dehorning						Europe, regulation to be expected
Sweden	Disbudding	permissible if veterinary indication exists			Yes		
	Dehorning	permissible if veterinary indication exists		Veterinarian	Yes		
United Kingdom	Disbudding		≤ 1 week	trained and competent stock-keeper	No	o Chemical cauterisation, <i>but NOT recommended</i>	Further DEFRA recommendations: anaesthesia should be tested by pricking the skin in the area around the horn bud or the base of the horn to see whether the animal can still feel anything
					Yes	o With a heated iron	
			> 1 week		Yes	o <i>Chemical cauterisation NOT allowed</i> o With a heated iron	
	Dehorning	Should not be a routine procedure, disbudding is preferred to dehorning		Veterinarian recommended	Yes; plus appropriate pain relief after procedure recommended	o Cutting o Sawing	Further DEFRA recommendations: should be done in spring or autumn to avoid flies or frosts, wound should be protected from contamination

## 2. Methodological approach

To describe the cattle dehorning situation in Europe, three specific questionnaires were created and submitted to local experts of dairy and beef cattle and suckler herds in all Member States (Annex I, II and III). For each cattle category, data have been processed at national level as well as at European and macro-regional levels (North, Centre, East and South). The four macro-regions have been created as follows,

Figure 1. Aggregation of the EU Member States into 4 macro-regions.



In the questionnaires, **disbudding** was defined as removal of the horn buds in calves of up to 2 months of age, whereas **dehorning** was defined as removal of the horns of a more aged animal. Results for Europe and the four macro-regions have been calculated by weighing the data from each Member State for the number of cattle reared in the same Country according to EUROSTAT 2007 (Table 2). Data reported for dairy cows (red column) were used to define the national dairy cattle population. Suckler cows population in the different Member states has been estimated using data reported for 'Other cows' (green column). Since there were no official data about the national beef cattle population, this has been estimated as a half of the number of young cattle with less than two years (blue columns). In this procedure, it was assumed that young dairy and beef replacements (female calves and heifers) would represent 50% of the young stocks.

Table 2. Cattle population in Europe

**Cattle numbers (in thousand heads) by category**

	EU bovine population													
	Total		<1 year		1-2 years		>2 years		Cows		Dairy cows		Other cows	
	2007	%var.	2007	%var.	2007	%var.	2007	%var.	2007	%var.	2007	%var.	2007	%var.
BE	2573.4	-1.29%	710.9	1.09%	508.4	-2.42%	1354.0	-2.07%	1034.7	-2.10%	524.3	-1.43%	510.4	-2.78%
BG	811.0	-4.01%	187.0	-7.94%	54.4	-1.73%	380.8	-2.77%	349.9	-3.15%	335.9	-4.07%	14.0	26.08%
CZ	1386.7	-1.65%	407.8	-1.67%	315.3	-1.39%	643.6	-1.76%	559.3	-1.51%	407.4	-2.38%	151.9	0.95%
DK	1545.0	-2.15%	507.0	-5.41%	294.0	-1.34%	743.0	-0.27%	656.0	0.31%	551.0	-0.72%	105.0	6.06%
DE	12808.5	-0.54%	3949.8	0.70%	2950.2	-1.46%	5708.5	-0.90%	4789.2	-0.15%	4064.4	0.25%	724.9	-2.33%
EE	242.0	-1.22%	64.6	-1.82%	51.2	-0.58%	126.2	-1.17%	112.7	-1.83%	104.1	-4.41%	8.6	45.76%
IE	5902.2	-1.66%	1633.4	-0.15%	1311.4	-3.14%	2957.4	-1.81%	2204.9	-0.50%	1087.5	0.04%	1117.4	-1.01%
EL	682.0	-0.10%	194.0	1.54%	133.0	5.49%	355.0	-2.88%	295.0	-3.65%	150.0	10.58%	145.0	4.75%
ES	6409.5	3.65%	2402.4	7.54%	786.7	1.82%	3240.4	1.39%	2882.0	3.17%	903.0	-4.14%	1959.0	6.93%
FR	19123.8	1.17%	5070.3	1.18%	3610.7	1.94%	10442.8	0.91%	7921.1	0.57%	3758.5	-1.07%	4162.6	2.10%
IT	6577.0	3.74%	1929.0	-0.96%	1436.0	2.45%	2918.0	5.72%	2280.0	2.11%	1839.0	1.39%	441.0	5.23%
CY	55.9	-0.34%	20.4	0.25%	10.2	-12.05%	25.3	4.89%	23.7	-0.96%	23.7	-0.96%	0.0	-
LV	398.7	5.73%	114.9	6.92%	72.5	15.27%	211.4	2.22%	195.6	1.95%	180.4	-1.07%	15.2	59.94%
LT	787.9	-6.07%	185.5	-16.21%	146.9	-8.36%	455.5	-0.35%	414.8	0.95%	404.5	1.38%	10.3	-13.45%
LU	193.1	3.67%	53.0	3.59%	43.9	5.26%	96.3	3.00%	73.3	-1.74%	40.2	12.99%	33.1	16.57%
HU	705.0	0.43%	190.0	-0.52%	150.0	0.00%	365.0	0.83%	323.0	0.31%	266.0	-0.75%	57.0	7.55%
MT	19.4	1.67%	5.3	-0.75%	5.0	-1.97%	9.2	5.29%	7.8	1.70%	7.6	-1.34%	0.2	21.05%
NL	3820.0	4.00%	1505.0	5.69%	620.0	0.00%	1695.0	4.05%	1555.0	2.64%	1490.0	3.26%	89.0	23.61%
AT	2000.2	-0.14%	634.1	0.41%	437.1	0.48%	929.1	-0.78%	795.8	-0.36%	524.5	-0.55%	271.3	0.01%
PL	5405.6	2.36%	1344.4	6.90%	1052.8	1.96%	3008.3	0.59%	2738.6	2.04%	2677.3	1.53%	61.3	30.86%
PT	1426.2	1.35%	386.5	2.95%	218.6	1.48%	821.2	0.58%	722.0	0.53%	304.5	-0.90%	417.6	1.60%
RO	2819.0	-3.91%	714.3	-3.61%	277.2	-0.90%	1795.3	-4.11%	1603.5	-3.70%	1572.9	-4.05%	30.6	18.70%
SI	479.5	5.62%	149.4	9.37%	125.2	3.62%	204.9	4.24%	177.6	2.65%	117.2	4.14%	60.4	-0.12%
SK	501.8	-1.18%	146.2	-2.97%	103.2	2.00%	252.5	-1.38%	215.7	-1.37%	180.2	-2.56%	35.5	5.19%
FI	902.7	-2.84%	303.9	-3.02%	228.2	-4.06%	370.6	-1.92%	332.1	-1.91%	296.1	-4.31%	44.6	11.23%
SE	1516.7	0.05%	494.9	-0.10%	364.4	1.24%	668.3	1.18%	548.5	-0.57%	365.7	-4.93%	182.7	9.47%
UK	10078.0	-2.49%	2848.0	-3.13%	2455.0	-2.58%	4777.0	-2.05%	3643.0	-2.07%	1978.0	-1.35%	1665.0	-2.92%

%var: percent variation, 2007 compared to 2006

Data collected from the experts have been analysed and they will be presented and discussed by cattle category. The reliability of the information has been collected from the experts of the questionnaires for the different EU countries. It was classified as rough estimates, fairly reliable estimates and census data expressed as the percentage of the responses given in each class. These responses (%) have been calculated as the mean of the all questionnaires within category (dairy and beef cattle, and suckler herds).



### 3. Dehorning in dairy cattle

Information on the source of the data collected for dairy cattle are reported in Table 3.1. Questionnaires coming from Agricultural Ministries or from other public institutions were available only in a few Countries. In most Countries, information were given by experts having different expertise and background.

Table 3.1. Sources of data in different EU Member States

EU REGIONS	COUNTRY	Ministries of Agriculture or other governmental sources	Cattle breeding associations	Farmers or farmers' associations	(Associations of) veterinary practitioners	Other (see notes)
NORTH	Denmark		<input checked="" type="checkbox"/>			
	Estonia		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
	Finland					<input checked="" type="checkbox"/> <sup>1</sup>
	Ireland	<input checked="" type="checkbox"/> <sup>2</sup>				
	Sweden	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/> <sup>3</sup>
	United Kingdom		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>4</sup>
CENTRE	Austria	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>5</sup>
	Czech Republic			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <sup>6</sup>
	France			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <sup>7</sup>
	Germany	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>8</sup>
	Netherlands			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>9</sup>
EAST	Bulgaria			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <sup>10</sup>
	Hungary					<input checked="" type="checkbox"/> <sup>11</sup>
	Poland			<input checked="" type="checkbox"/>		
	Romania		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Slovenia	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>12</sup>
SOUTH	Cyprus	<input checked="" type="checkbox"/>				
	Greece		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/> <sup>13</sup>
	Italy		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>14</sup>
	Portugal				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>15</sup>
	Spain		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

<sup>1</sup> Finnish Center for Animal Welfare, University of Helsinki

<sup>2</sup> Teagasc (Agriculture and Food Development Authority)

<sup>3</sup> Swedish Animal Health Service

<sup>4</sup> University of Liverpool

<sup>5</sup> National milk recording scheme (at state level)

<sup>6</sup> Research Institute of Animal Production

<sup>7</sup> Extension organisations

<sup>8</sup> Associations of milk inspection boards of the Federal States (Landeskontrollverbände)

<sup>9</sup> A.I. technicians, researchers

<sup>10</sup> Institute of Animal Science, Stara Zagora University

<sup>11</sup> Independent expert

<sup>12</sup> Chamber of Agriculture

<sup>13</sup> Faculty of Veterinary Medicine

<sup>14</sup> Public Veterinary agency for cattle health

<sup>15</sup> University of Lisboa

Some information on the sample of farms and cattle surveyed in each Country by the experts are reported in Table 3.2.

Table 3.2. Dairy cattle population in EU Member States and data about the surveyed farm sample.

EU REGIONS	COUNTRY	EUROSTAT 2007	SURVEYED DATA		
		Dairy cows population	Number of farms	Number of animals	Number of experts
NORTH	Denmark	568 000	4 900	568 000	1
	Estonia	104 100	-	-	-
	Finland	300 000	12 000	296 069	1
	Ireland	1 090 000	1 383	107 420	4
	Sweden	365 581	6 500	365 581	10
	United Kingdom	1 980 000	888	133 240	10
	<b>TOT</b>	<b>4 407 681</b>	<b>25 671</b>	<b>1 470 310</b>	<b>26</b>
CENTRE	Austria	524 500	21 750	249 058	39
	Czech Republic	407 400	na	7 000	2
	France	3 800 000	12 000	500 000	29
	Germany	4 229 138	7 313	288 671	36
	Netherlands	1 490 000	21 000	na	5
	<b>TOT</b>	<b>10 451 038</b>	<b>62 063</b>	<b>1 044 729</b>	<b>111</b>
EAST	Bulgaria	335 000	80	1 205	1
	Hungary	266 000	14	-	-
	Poland	2 677 300	1 190	38 905	-
	Romania	1 572 000	200	44 776	200
	Slovenia	117 200	66	2 433	2
	<b>TOT</b>	<b>4 967 500</b>	<b>1 550</b>	<b>87 319</b>	<b>203</b>
SOUTH	Cyprus	23 700	230	55 590	1
	Greece	150 000	860	84 180	11
	Italy	1 839 000	3 401	506 070	52
	Portugal	310 000	700	34 370	2
	Spain	903 287	506	48 240	13
	<b>TOT</b>	<b>3 225 987</b>	<b>5 697</b>	<b>728 450</b>	<b>79</b>
<b>TOT EU</b>		<b>20 004 806</b>	<b>93 777</b>	<b>3 291 903</b>	<b>419</b>

na= not available

Table 3.3. Reliability of the national information for dairy cattle (% over 7 items).

EU REGIONS	COUNTRY	Rough estimates % of responses	Fairly reliable estimates % of responses	Census data % of responses
NORTH	Denmark		100	
	Estonia	100		
	Finland		100	
	Ireland	5	95	
	Sweden	38	57	5
	United Kingdom	28	70	2
CENTRE	Austria	43	51	6
	Czech Republic	100		
	France	40	60	
	Germany	42	52	6
	Netherlands		100	
EAST	Bulgaria	100		
	Hungary		100	
	Poland	100		
	Romania	100		
	Slovenia		100	
SOUTH	Cyprus	100		
	Greece		93	7
	Italy		100	
	Portugal	24	76	
	Spain	34	66	

### 3.1. General results

Information on the main dairy breeds reared in the different European Member States are reported in Table 3.4. As expected, strains of Holstein and Holstein Friesian cattle were the prevailing breeds reared in the dairy farms across Europe and particularly in the North. These breeds were followed by strains of Simmental cattle (Fleckvieh, Montbeliarde) in the Centre and in the East and by strains of Brown cattle (Italian Brown, Brown Swiss) in the South.

Table 3.4. Main dairy breeds reared in EU Member States according to the national experts report

EU REGIONS	COUNTRY	MAIN DAIRY BREEDS REPORTED		
NORTH	Denmark	Danish Holstein	Jersey	Danish Red
	Estonia	Estonian Holstein	Estonian Red	-
	Finland	Ayrshire	Holstein	Finnish breeds
	Ireland	Holstein Friesian	-	-
	Sweden	Swedish Holstein	Swedish Red and White	Jersey
	United Kingdom	Holstein	Holstein Friesian	British Friesian
CENTRE	Austria	Simmental-Fleckvieh	Holstein	Brown Swiss
	Czech Republic	Holstein	Czech Fleckvieh/Czech Red Spotted	Crossbreds
	France	Holstein	Montbeliarde	Normande
	Germany	Holstein Friesian	Fleckvieh	Red Holstein
	Netherlands	Holstein Friesian	Dutch-Friesian	-
EAST	Bulgaria	Holstein Friesian (b&w)	-	-
	Hungary	Holstein	-	-
	Poland	Polish Holstein Friesian	Simmental	-
	Romania	Romanian Black Spotted (Holstein)	Romanian Spotted (Simmental)	Brown
	Slovenia	Simmental	Holstein	Brown Swiss
SOUTH	Cyprus	Friesian	-	-
	Greece	Holstein Friesian	-	-
	Italy	Italian Holstein Friesian	Italian Brown	Italian Simmental
	Portugal	Holstein Friesian	Crossbreds	-
	Spain	Holstein	Brown Swiss	Spanish breeds

DAIRY CATTLE DEHORNING IN EUROPE

Data of Figure 3.1 show that the majority of dairy farms in the EU dehorn their cattle. The overall prevalence of polled dairy cattle is instead very low (<1%). When the different macro-regions are considered (Figure 3.2 and Table ), the practice of dehorning appears less frequent only in some of the East Countries and in Estonia where farm size are generally very small. In the South, only smaller farms with tie stalls particularly located in mountain areas tend not to dehorn, but there are significant national and local differences. Polled dairy cattle are rare and they can be found with the highest percentage in the North and Centre macro-regions (1.0% and 1.2% respectively).

Figure 3.1. Percentage of dairy farms with dehorned and polled animals and percentage of dehorned and polled cattle, in Europe

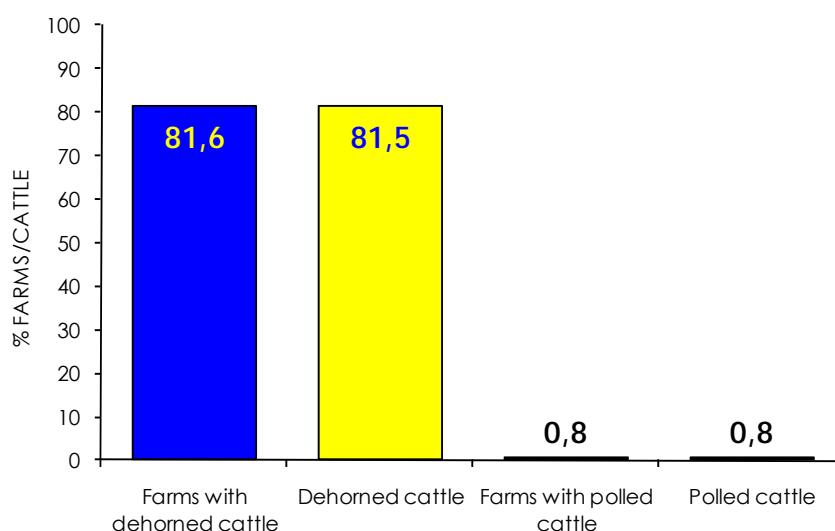


Figure 3.2. Farms Percentage of dairy farms with dehorned and polled animals and percentage of dehorned and polled cattle, in different European macro-regions

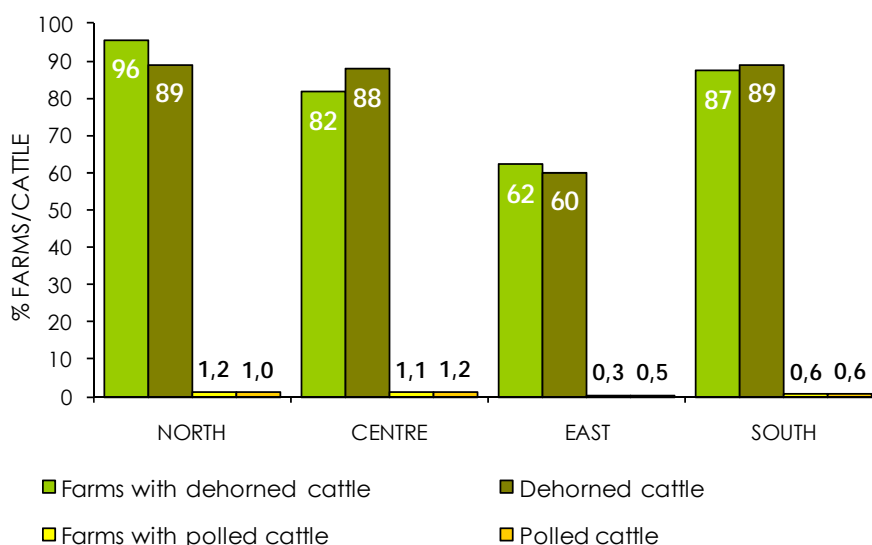


Table 3.5. Percentage of dairy farms with dehorned vs. polled cattle and percentage of dehorned vs. polled cattle in EU Member States

EU REGIONS	COUNTRY	Farms with dehorned cattle	Dehorned cattle	Farms with polled cattle	Polled cattle
NORTH	Denmark	93	99	0	0
	Estonia	15	15	-	1
	Finland	95	98	<1	<1
	Ireland	99	74	2.5	<1
	Sweden	94	94	0.7	2.7
	United Kingdom	99	96	<1	<1
CENTRE	Austria	79	84	1	1
	Czech Republic	93	93	0	0
	France	87	92	0	<1
	Germany	70 <sup>1</sup>	80	2.2	1.7
	Netherlands	97	99	<1	<1
EAST	Bulgaria	40	40	5	5
	Hungary	100	94	0	0
	Poland	95	93	0	0.25
	Romania	7.6	6.6	0	0
	Slovenia	20	20	0	0
SOUTH	Cyprus	94	97	0	0
	Greece	94	97	0	0
	Italy	82	85	<1	<1
	Portugal	77	90	0.2	0.3
	Spain	100	96	0	0

<sup>1</sup> Result from a concurrent survey with 226 farmers: 89%

### 3.2 DAIRY CATTLE DEHORNING AND HOUSING SYSTEMS

#### HOUSING SYSTEM IN THE SURVEYED DAIRY FARMS

Loose housing appears to be the predominant housing system for dairy cattle in Europe (Figure 3.3). The free stall system is more frequent in the North macro-region even though there are Countries like Finland and Sweden and Estonia where tie stall farms prevail (Table 3.6 and Figure 3.4). The presence of tie stalls is typically common in the small scale farms of the East region and in mountain areas of South and Centre (Alps, Pyrenées).

Figure 3.3. Housing system in the surveyed farms in Europe

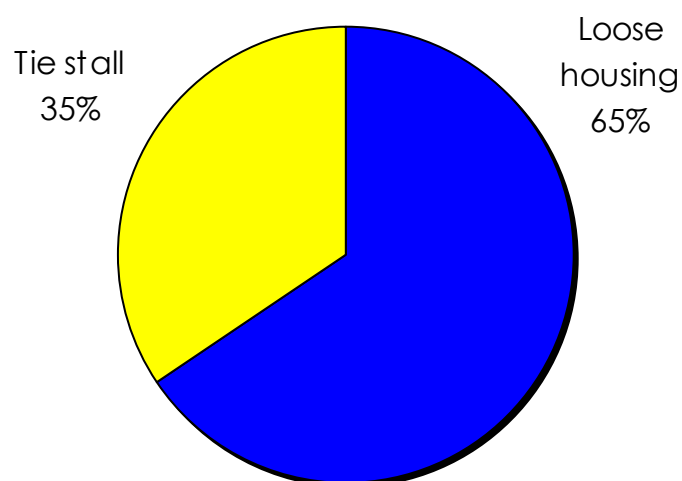


Figure 3.4. Housing system in the surveyed farms in different European macro-regions



Table 3.6. Housing system and average number of dairy cattle/unit in the surveyed farms in EU Member States

EU REGIONS	COUNTRY	LOOSE HOUSING		TIE STALLS	
		% farms <sup>1</sup>	Average n° of dairy cows per farm	% farms <sup>1</sup>	Average n° of dairy cows per farm
NORTH	Denmark	65	130	35	33
	Estonia	10	16	90	16
	Finland	30	38	70	16
	Ireland	100	90	-	-
	Sweden	34	90	66	41
	United Kingdom	99.7	167	0.3	80
CENTRE	Austria	37	26	63	15
	Czech Republic	95	175	5	85
	France	90	45	10	30
	Germany	53 <sup>2</sup>	64	47	27
	Netherlands	95	66	5	na
EAST	Bulgaria	70	15	30	8
	Hungary	100	273	-	-
	Poland	50	148	50	20
	Romania	5	>30	95	<10
	Slovenia	23	56	77	31
SOUTH	Cyprus	na	na	na	na
	Greece	99	93	1	16
	Italy	72	188	28	48
	Portugal	92	53	8	6
	Spain	41	110	59	85

na= not available

<sup>1</sup> When the sum of percentage data was different than 100, values have been corrected.

<sup>2</sup> Estimations from other sources give higher proportions of loose housing (about 67%, AID 2005, concurrent survey with 226 farmers: 74%)



DAIRY CATTLE DEHORNING IN LOOSE HOUSING SYSTEMS

More than 80% of the loose housed dairy cattle is predominantly dehorned since dehorning allows for a higher stocking density and makes the animals easier to handle (Figure 3.5). This general trend changes in some Countries of the East macro-region where the practice is less frequent because it is carried out only in large scale farms (Table 3.7 and Figure 3.6).

Figure 3.5. European surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in loose housing system

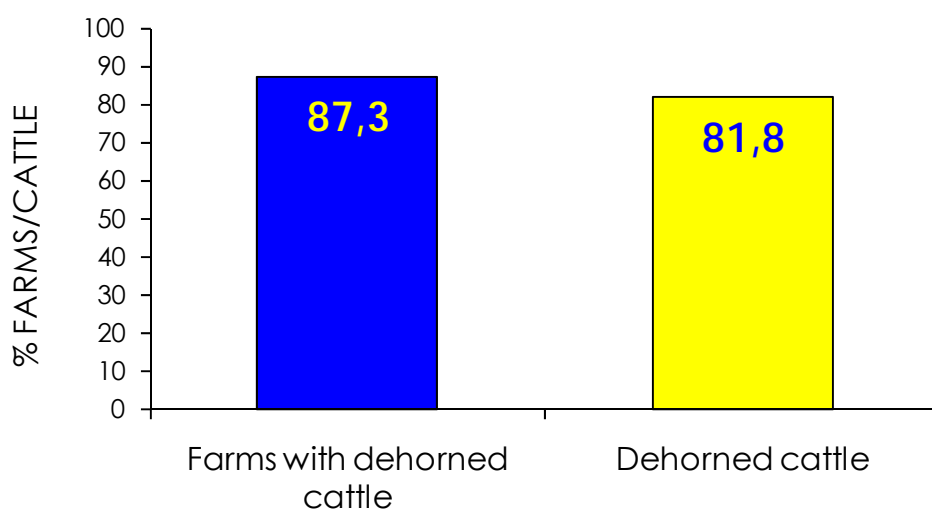
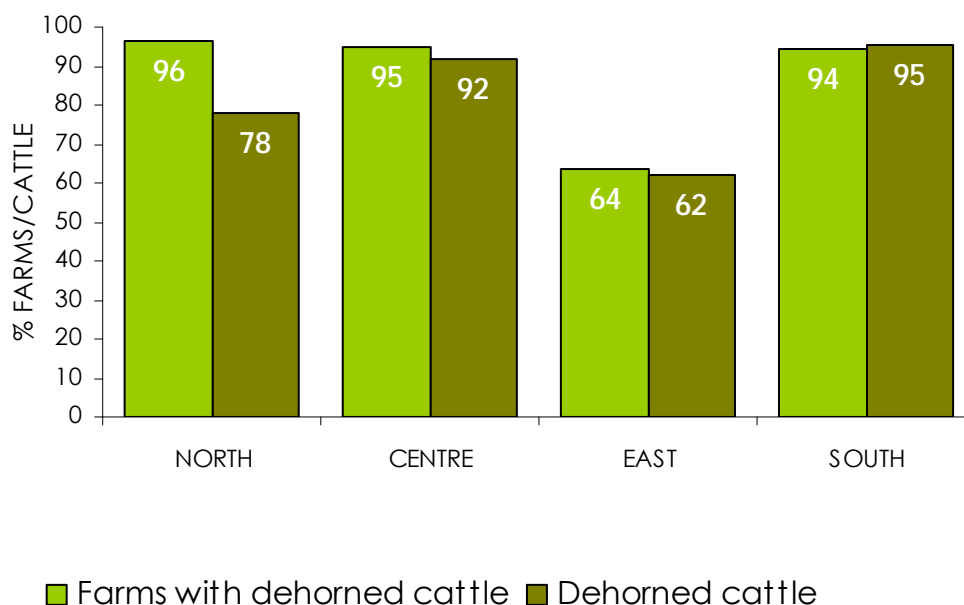


Figure 3.6. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in loose housing system in different European macro-regions



## DAIRY CATTLE DEHORNING IN TIE STALL SYSTEMS

Tie stalls are predominant in small-scale farming systems and in these farms dehorning is less frequent than in loose housing farms (Figure 3.7). Small-scale farms with tie stalls are prevalent in some Eastern Countries and therefore the number of dehorned animals for this macro-region is the lowest (Figure 3.8 and Table 3.7). Horned cows housed in tie stalls can be frequently found in the Scandinavian Countries and in Estonia but the weight of these Countries in terms of dairy cattle population within the North macro-region is limited. Tie stall system are also frequent in several mountain areas of Western and Southern Europe (Alps, Pyrenees), where often rustic, local breeds are raised. These cows are typically left horned (Figure 3.8 and Table 3.7).

Figure 3.7. European surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in tie stall system

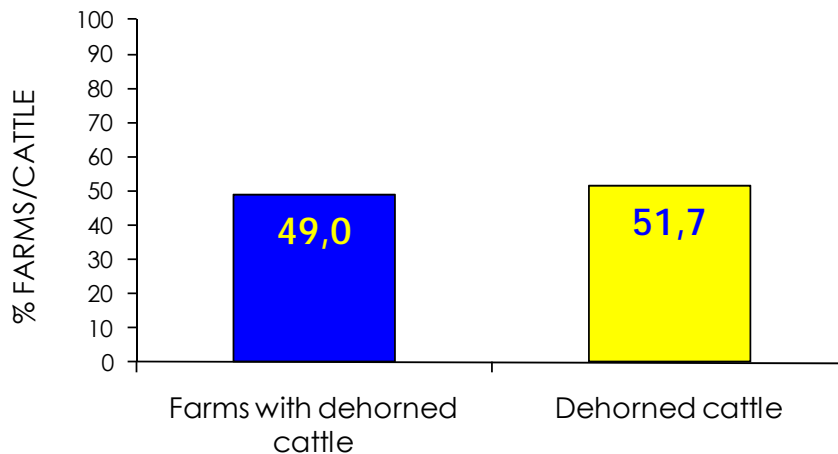


Figure 3.8. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in tie stall system in different European macro-regions

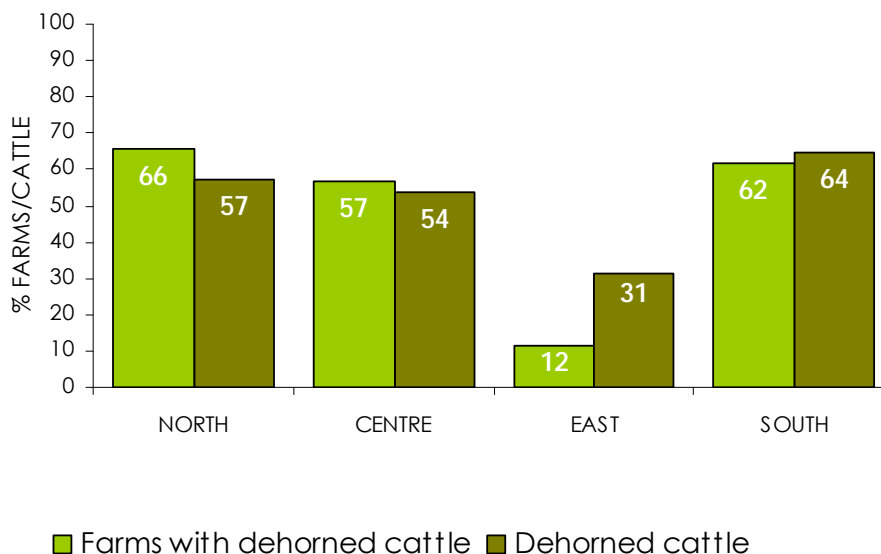


Table 3.7. Surveyed farms with dehorned cattle, and percentage of dehorned cattle in different housing systems (loose housing and tie stall) in EU Member States

EU REGIONS	COUNTRY	LOOSE HOUSING		TIE STALL	
		% of farms with dehorned cattle	% of dehorned cattle	% of farms with dehorned cattle	% of dehorned cattle
NORTH	Denmark	95	43	90	56
	Estonia	15	15	15	15
	Finland	98	85	20	15
	Ireland	100	75	-	-
	Sweden	100	56	89	44
	United Kingdom	98	96	100	100
CENTRE	Austria	94	58	70	42
	Czech Republic	93	99	40	1
	France	98	96	65	70
	Germany	91	89	52	47
	Netherlands	99	99	50	50
EAST	Bulgaria	40	40	40	40
	Hungary	100	94	-	-
	Poland	95	93	13	50
	Romania	9	8	6	5
	Slovenia	70	88	5	12
SOUTH	Cyprus	na	na	na	na
	Greece	92	97	-	-
	Italy	94	94	54	61
	Portugal	81	95	27	30
	Spain	100	98	100	94

na= not available

### 3.3 DAIRY CATTLE DEHORNING AND PRODUCTION SCHEMES

#### PRODUCTION SCHEME IN THE SURVEYED DAIRY FARMS

Conventional production schemes clearly prevail in Europe (Figure 3.9), although some organic dairy farming is reported in the North (5.8%) and Centre (4.7%) macro-regions (Figure 3.10). In the surveyed sample of farms, the presence of organic dairy was most notable in Austria (24% of farms), Denmark (10%) and Finland (10%) while organic dairy farms are almost absent in the Countries included in the South and East macro-regions (Figure 3.10 and Table 3.8).

Figure 3.9. Production schemes in the surveyed farms in Europe

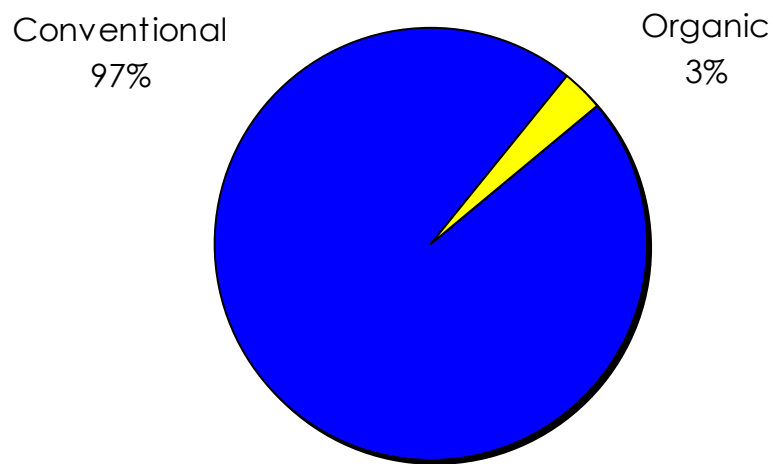


Figure 3.10. Production schemes in the surveyed farms in different European macro-regions

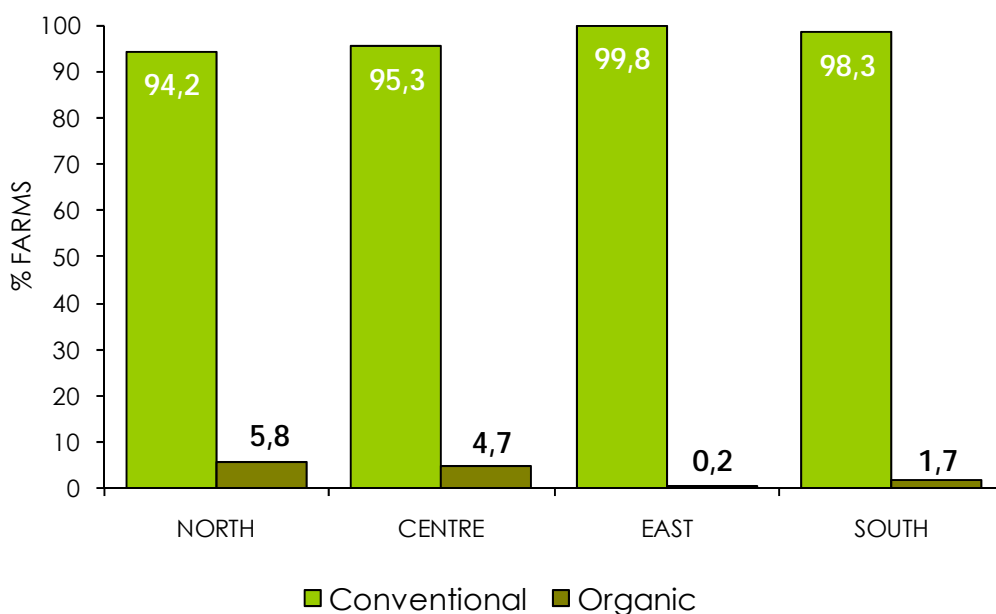


Table 3.8. Percentage of farms, average number of dairy cattle/unit, and percentage of tie stalls in different production schemes in EU Member States

EU REGIONS	COUNTRY	CONVENTIONAL			ORGANIC		
		% farms	Average n° of dairy cattle per farm	% of tie stalls	% farms	Average n° of dairy cattle per farm	% of tie stalls
NORTH	Denmark	90	130	60	10	125	0
	Estonia	91	16	90	9	na	90
	Finland	90	23	50	10	19	40
	Ireland	99.7	90	0	0.3	50	0
	Sweden	95	59	80	5	67	36
	United Kingdom	93	155	<1	7	99	0
CENTRE	Austria	76	21	69	24	17	51
	Czech Republic	100	200	5	-	-	-
	France	99	45	10	1	40	10
	Germany	93	53	48	7 <sup>1</sup>	30	35
	Netherlands	99	66	5	1	na	na
EAST	Bulgaria	99.7	15	30	0.3	30	0
	Hungary	100	273	0	-	-	-
	Poland	99.7	25	50	0.3	6	na
	Romania	100	29	95	-	-	-
	Slovenia	99	38	77	1	18	0
SOUTH	Cyprus	na	na	na	na	na	na
	Greece	100	93	1	-	-	-
	Italy	97	172	28	3	73	16
	Portugal	100	50	8	-	-	-
	Spain	100	94	64	-	-	-

na= not available

<sup>1</sup> Estimates from other sources are lower (about 3%, Statistisches Bundesamt 2007)

## DEHORNING IN CONVENTIONAL DAIRY PRODUCTION SYSTEMS

The majority of conventional dairy farms in Europe dehorn their animals (Figure 3.11). Only in the East region where most of the conventional farms are of small scale, dehorning is not very common (Figure 3.12).

Figure 3.11. European surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in conventional production scheme

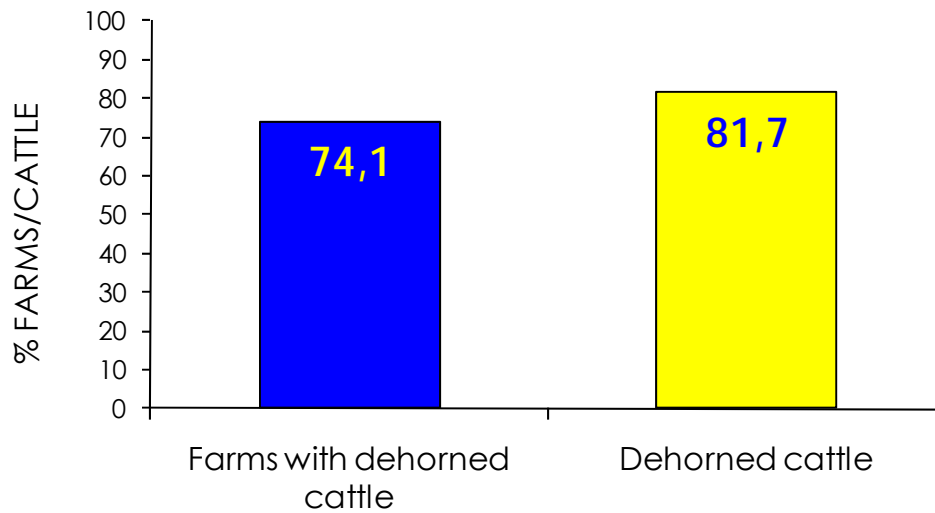
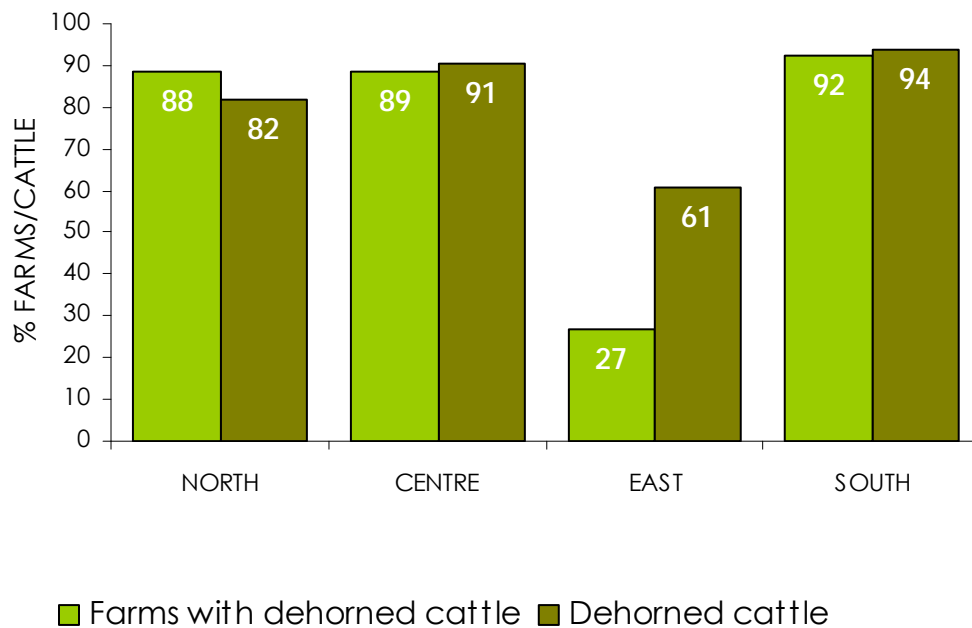


Figure 3.12. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in conventional production scheme in different European macro-regions



DEHORNING IN ORGANIC DAIRY PRODUCTION SYSTEMS

The European organic production scheme (Council Directive n 1294/2005) does not ban the practice of dehorning. However the overall prevalence of dehorned dairy cattle in this system (Figure 3.13) appears to be much lower than in the conventional one (Figure 3.11). When the four macro-regions are taken into account (Figure 3.14 and Table 3.9), dehorning is still prevalent in the organic farms of the North with the only exception of Estonia. Horned dairy cows under organic production schemes can be found in the South and East regions where though the percentage of organic producers is minimum (Table 3.8).

Figure 3.13. European surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in organic production scheme

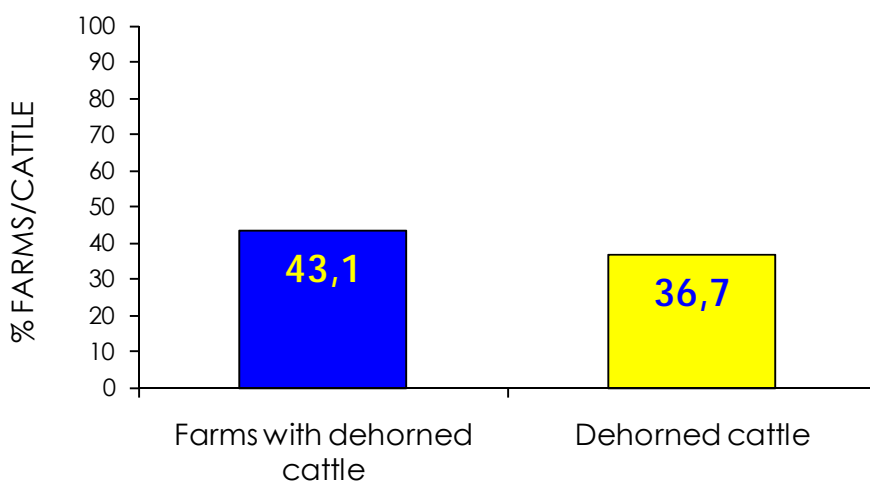


Figure 3.14. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in organic production scheme in different European macro-regions

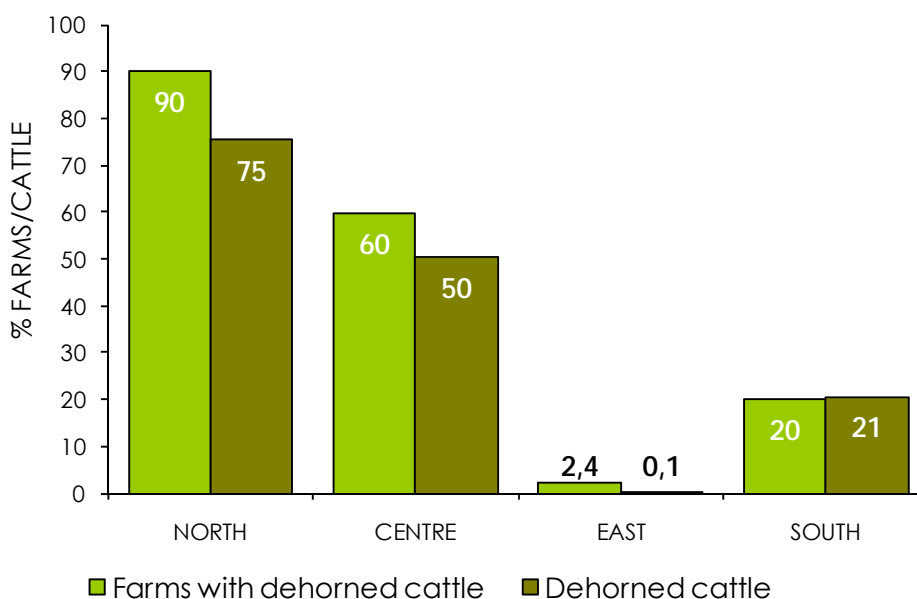


Table 3.9. Farms with dehorned cattle (%), and percentage of dehorned cattle in different production schemes (conventional and organic) in EU Member States

EU REGIONS	COUNTRY	CONVENTIONAL		ORGANIC	
		% of farms with dehorned cattle	% of dehorned cattle	% of farms with dehorned cattle	% of dehorned cattle
NORTH	Denmark	95	48	95	52
	Estonia	15	15	15	15
	Finland	90	93	90	7
	Ireland	75	75	100	100
	Sweden	96	94	97	6
	United Kingdom	96	95	86	95
CENTRE	Austria	83	80	77	20
	Czech Republic	100	100	-	-
	France	98	96	98	96
	Germany	76	83	33 <sup>1</sup>	36
	Netherlands	99	99	50	na
EAST	Bulgaria	40	40	0	0
	Hungary	100	94	-	-
	Poland	30	90	0	0
	Romania	20	10	-	-
	Slovenia	13	96	100	4
SOUTH	Cyprus	na	na	na	na
	Greece	97	97	-	-
	Italy	91	93	35	36
	Portugal	77	90	-	-
	Spain	100	96	-	-

na= not available

<sup>1</sup> estimates from other sources are higher (about 46 %, Hörning et al. 2004)



### 3.4 DISBUDDING vs. DEHORNING IN DAIRY FARMS

As a method of horns removal, disbudding is generally preferred to dehorning which is far less frequent (Figure 3.15). There is considerable uniformity in the various macro-regions regarding the prevalence of disbudding over dehorning (Figure 3.16). However, experts from Countries like France and Portugal reported that farms performing disbudding on their young replacement can occasionally dehorn more aged cattle bought from the market. The dehorning of adult cattle is more frequent in many Countries of the East macro-region, when there is a change in the farm housing system (from tie to free stalls) or when horned cows are introduced into dehorned herd (Table 3.10).

Figure 3.15. Percentage of farms practicing disbudding and dehorning in European surveyed farms

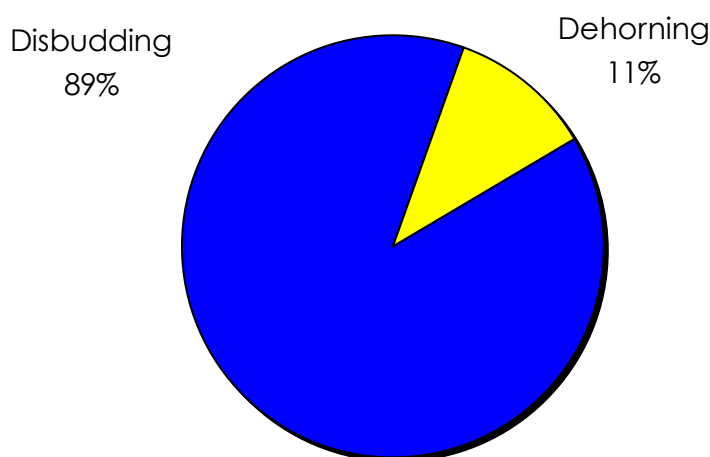
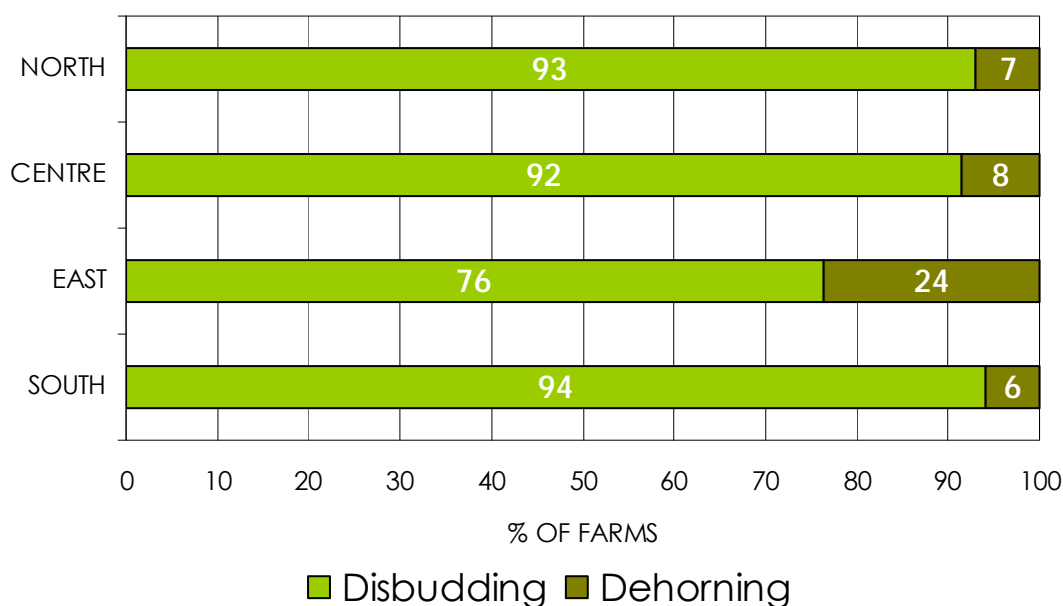


Figure 3.16. Percentage of farms practicing disbudding and dehorning in different European macro-regions



## Methods of disbudding and dehorning

Hot iron is the most used method of disbudding especially in the North and Centre macro-regions (Table 3.10). The caustic paste is instead the prevailing disbudding method used in Spain and Portugal, while the use of scoop/tube has been reported as the main method used in Greece and it is the only method applied in Bulgaria.

The dehorning of more aged dairy cattle is mainly performed with the wire/saw method (Table 3.10). Some Countries report the use of other instruments (guillotine, dehorning shears; see Table footnotes for details).

Table 3.10. Methods used for disbudding and dehorning in EU Member States (% of farms)

EU REGIONS	COUNTRY	DISBUDDING	METHODS			DEHORNING	METHODS	
		% of farms	Hot iron	Caustic paste	Scoop/ tube	% of farms	Wire/ saw	Other
NORTH	Denmark	90	100	0	0	10	10	90 <sup>1</sup>
	Estonia	99	100	0	0	1	100	0
	Finland	98	100	0	0	2	100	0
	Ireland	96	85	12.5	2.5	4	100	0
	Sweden	96	100	0	0	4	61	39 <sup>2</sup>
	United Kingdom	91	93	4	3	9	78	22 <sup>3</sup>
	MEAN*	93.1	93.1	4.9	2.0	6.9	75.3	24.7
CENTRE	Austria	97	99	<1	0	3	100	0
	Czech Republic	99	60	37.5	2.5	1	100	0
	France	97	78	22	0	25	50	50 <sup>4</sup>
	Germany	93.3	95.3	4.5	0.2	6.7	100	0
	Netherlands	100	100	0	0	<1	<1	0
	MEAN*	91.5	88.4	11.3	0.2	8.5	81.8	18.2
EAST	Bulgaria	90	0	0	100	10	0	100 <sup>5</sup>
	Hungary	79	0	100	0	21	100	0
	Poland	65	100	0	0	35	100	0
	Romania	91	50	45	5	39	100	0
	Slovenia	100	100	0	0	<1	100	0
	MEAN*	76.5	72.1	19.6	8.3	23.5	93.3	6.7
SOUTH	Cyprus	90	50	50	0	10	100	0
	Greece	96	30	6	64	4	100	0
	Italy	99	76	16	8	1	100	0
	Portugal	86	38	60	6	28	100	0
	Spain	90	5	93	2	10	68	32 <sup>6</sup>
	MEAN*	94.0	50	41.4	8.6	6.0	91.0	9.0
MEAN EU*		88.8	75.9	19.3	4.8	11.2	85.4	14.6

\*Mean values weighed according to the dairy cattle population of each Member State.

<sup>1</sup> Denmark: dehorning shears

<sup>2</sup> Sweden: pruning shears/tube/cautery/hot iron (calves up to 3.5 months)

<sup>3</sup> UK: choppers, guillotine

<sup>4</sup> France: hydraulic scoop, grinder

<sup>5</sup> Bulgaria: cutting

<sup>6</sup> Spain: cable, cautery

## PERCENTAGE OF DISBUDDED vs. DEHORNING CATTLE IN THE DAIRY SECTOR

Results based on the percentage of cattle (Figures 3.17 and 3.18 and Table 3.11) were consistent with what was previously reported for farms (Figure 3.15 and 3.16 and Table 3.10).

Figure 3.17. Percentage of disbudded or dehorned dairy cattle in European surveyed farms

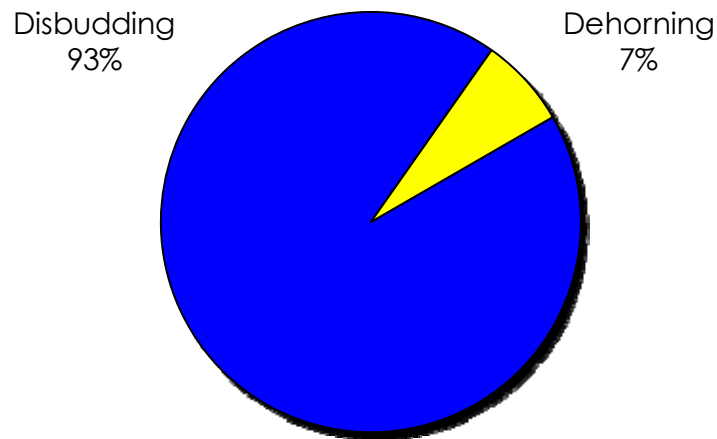


Figure 3.18. Percentage of disbudded or dehorned dairy cattle in different European macro-regions

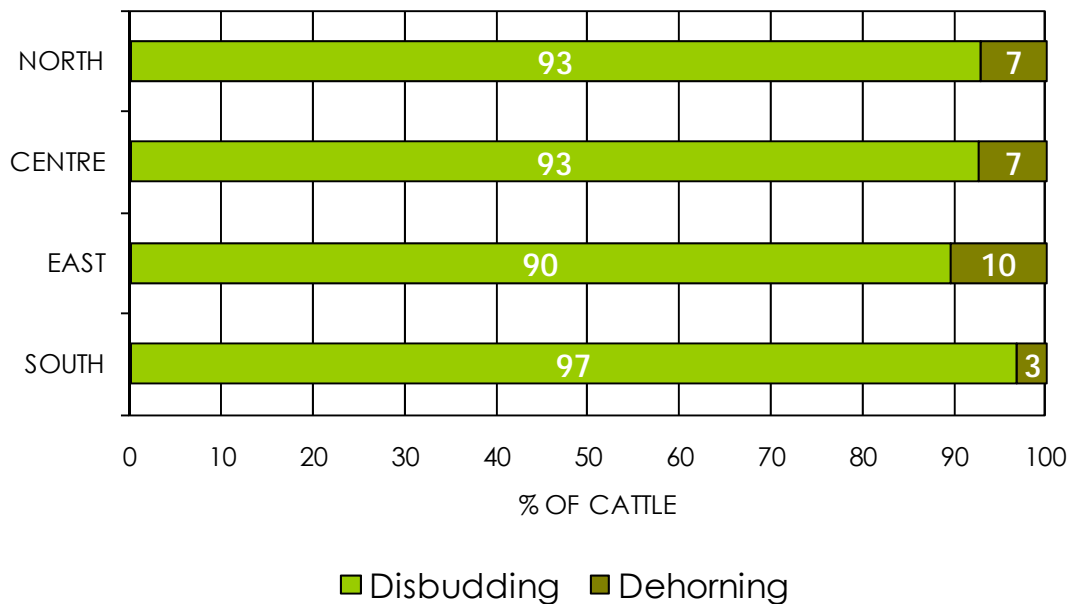


Table 3.11. Methods used for disbudding and dehorning in EU member states (% of cattle)

EU REGIONS	COUNTRY	DISBUDDING % of cattle	METHODS (%)			DEHORNING % of cattle	METHODS (%)	
			Hot iron	Caustic paste	Scoop/ tube		Wire/ saw	Other
NORTH	Denmark	90	100	0	0	10	10	90
	Estonia	99	100	0	0	1	100	0
	Finland	99	100	0	0	1	100	0
	Ireland	93.5	87.5	11.2	1.3	6.5	100	0
	Sweden	95	100	0	0	5	59	41
	United Kingdom	92	93	4	3	8	82	18
	MEAN	92.9	93.8	4.6	1.7	7.1	76.9	23.1
CENTRE	Austria	97	99	<1	0	3	100	0
	Czech Republic	92.5	60	35	5	7.5	100	0
	France	95	78	22	0	5	50	50
	Germany	92.6	94.9	4.5	0.5	7.4	100	0
	Netherlands	100	100	0	0	-	<1	0
	MEAN	92.8	88.3	11.2	0.4	7.2	81.8	18.2
EAST	Bulgaria	90	0	0	100	10	0	100
	Hungary	64	0	100	0	36	100	0
	Poland	87.5	100	0	0	12.5	100	0
	Romania	97	72.5	27	0.4	3	100	0
	Slovenia	99	100	0	0	1	100	0
	MEAN	89.7	79.2	13.9	6.9	10.3	93.3	6.7
SOUTH	Cyprus	90	50	50	0	10	100	0
	Greece	96	24.5	6.4	69.1	4	100	0
	Italy	99	79	14	7	1	100	0
	Portugal	94	41	54	5	6	100	0
	Spain	94	5	90	7	7	5	20
	MEAN	96.9	51.6	39.0	9.4	3.1	77.6	22.4
MEAN EU		93.1	78.2	17.2	4.6	6.9	82.4	17.6

### 3.5 USE OF DRUGS AND PERSON IN CHARGE OF THE PROCEDURE

#### USE OF DRUGS DURING DISBUDDING

Some kind of anaesthetic and/or analgesic treatment is administered to the animals prior to or after disbudding only in a small percentage of dairy farms (20%) (Figure 3.19). However, treatment protocols are inconsistent. According to the experts, local anaesthesia is given to 54.1% of the animals, sedation to 18.2% and sedation + local anaesthesia follows with 14.2% of the calves. The use of post-operative analgesics (AG) is very limited (4.0%).

The percentage of dairy farms using drugs during disbudding is the highest in the North macro-region (Figure 3.20) likely because there are specific legal recommendations in force in many Countries (see 1. National Legislation on Cattle Dehorning).

Figure 3.19. Percentage of farms using drugs during disbudding procedure in European surveyed dairy farms

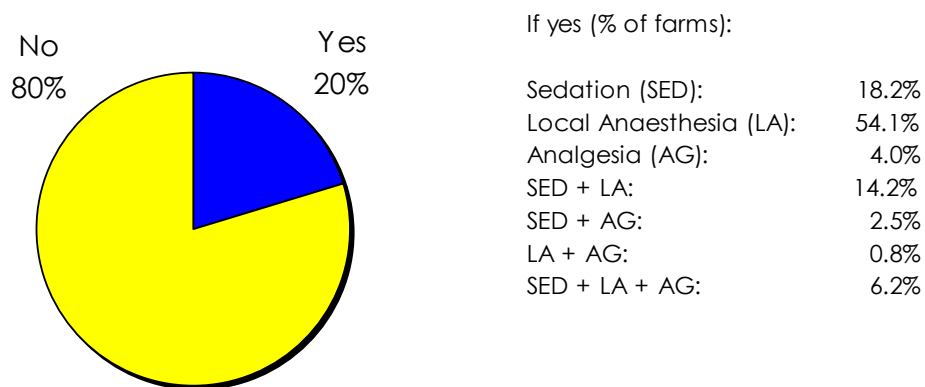
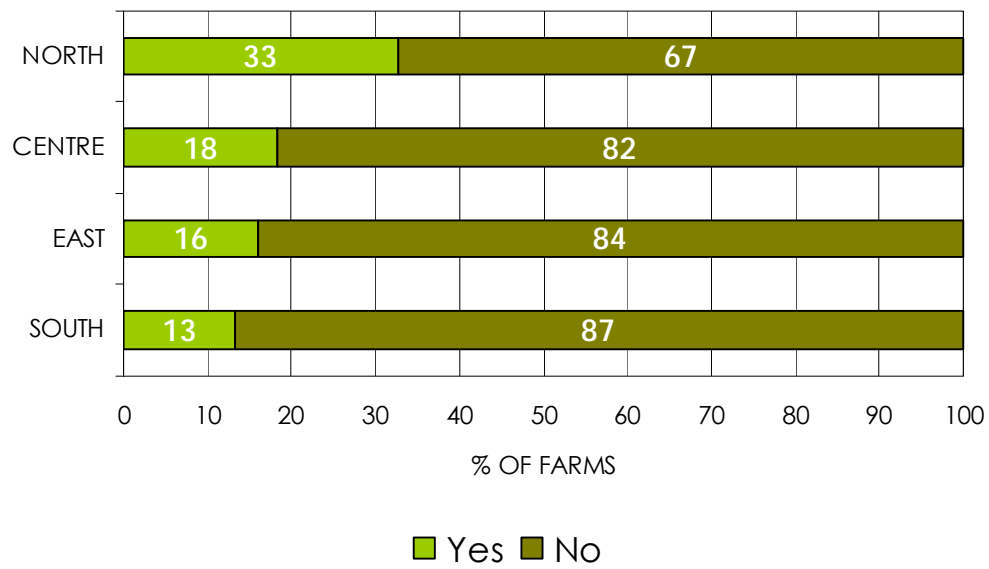


Figure 3.20. Percentage of farms using drugs during disbudding procedure in European macro-regions



## USE OF DRUGS DURING DEHORNING

Dehorning is a more invasive procedure which is usually carried out on adult animals. Thus, it is reasonable to observe a higher percentage of farms (72%) that use some kind of medication during the procedure (Figure 3.21). Dehorning requires a higher level of restraint and this justifies the increased use of sedation in comparison to disbudding (34.5 vs. 18.2%). Sedation + local anaesthesia are also used (17.9%), and sometimes a full protocol is applied (sedation, local anaesthesia and analgesia, 9.4%). However, treatment protocols appear to be inconsistent across Europe. The percentage of farms using drugs is lower in the Centre macro-region due to the limited contribution France (8%) and despite Germany where dehorning should be carried out by a vet and under anaesthesia (Figure 3.22).

Figure 3.21. Percentage of farms using drugs during dehorning procedure in surveyed European farms

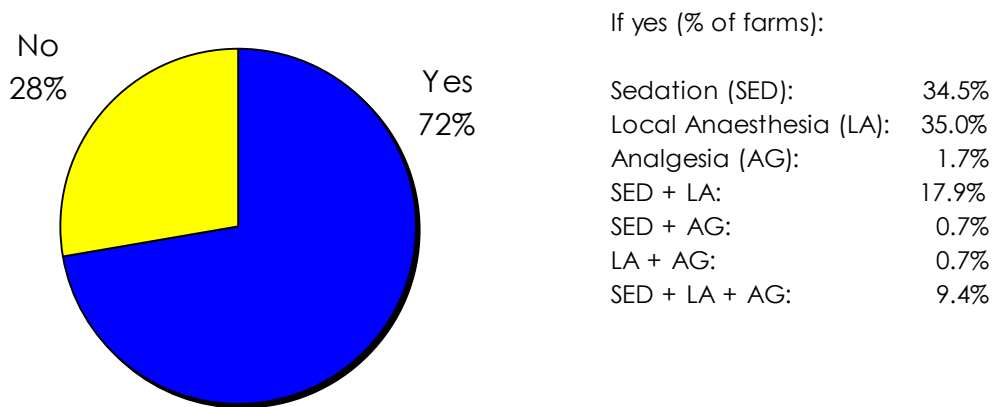
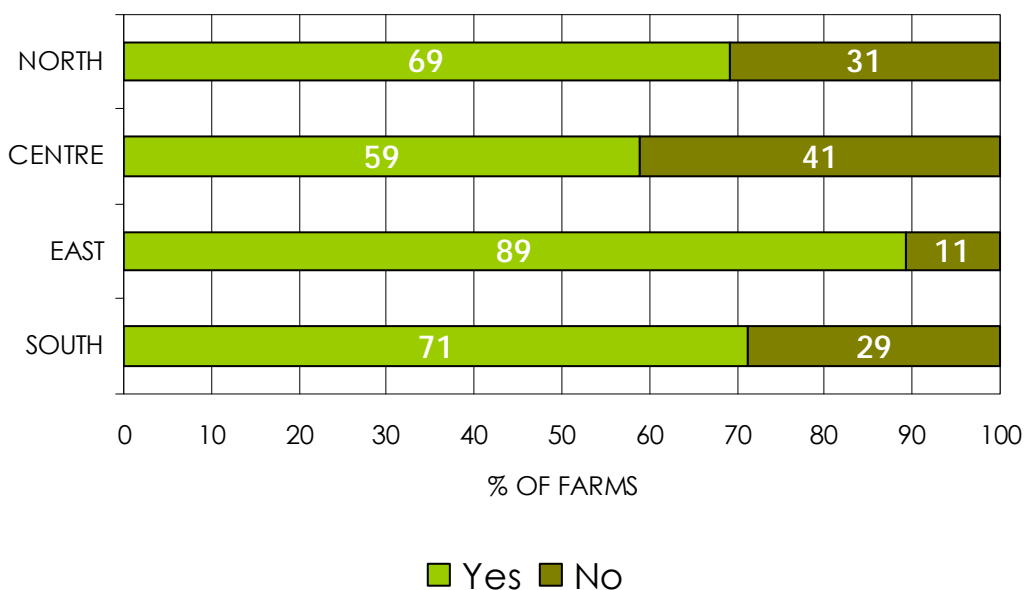


Figure 3.22. Percentage of farms using drugs during dehorning procedure in European macro-regions





PERSON CARRYING OUT DISBUDDING

In the large majority of European dairy farms, the stockman is the person carrying out the disbudding of the dairy calves, followed by the veterinarian (Figure 3.23). The East macro-region was an exception to this result. Local experts reported a higher presence of a veterinarian and a more frequent intervention of external personnel named as 'technical assistants' (Figure 3.24).

Figure 3.23. Person carrying out the disbudding procedure in Europe (% of farms)

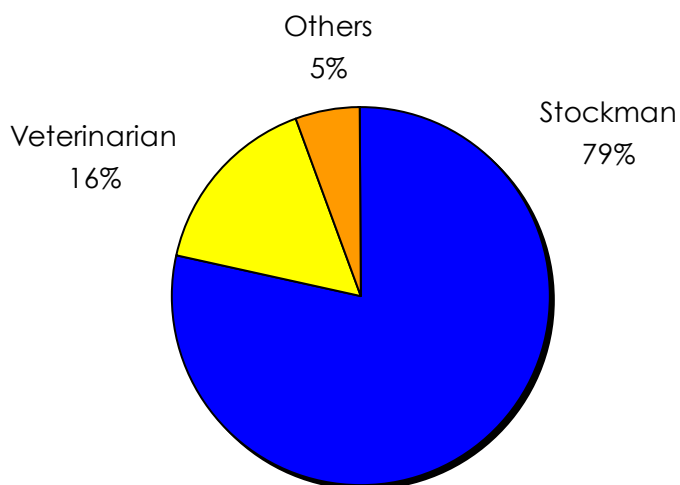
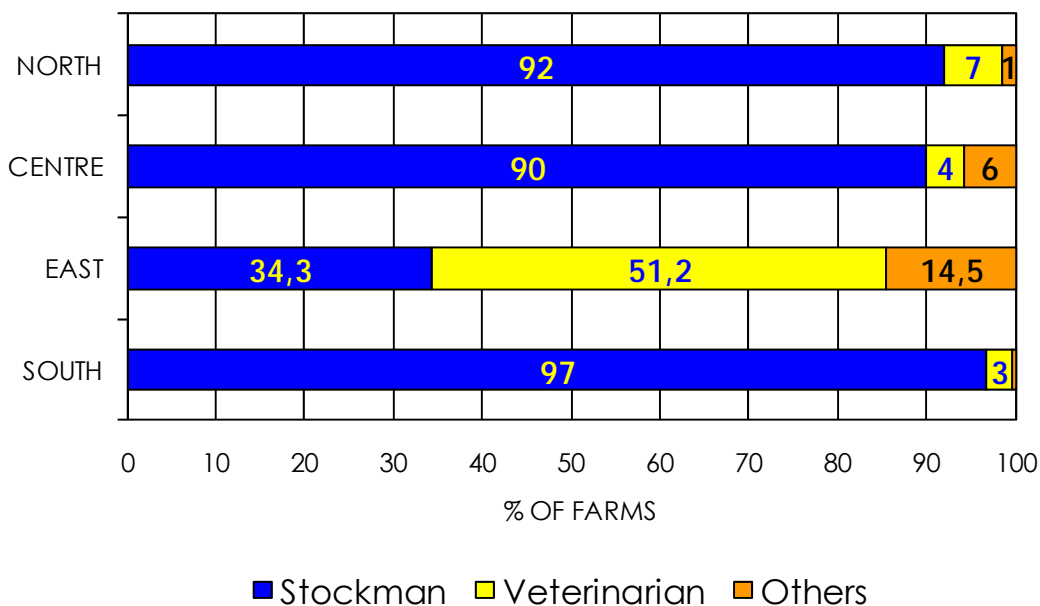


Figure 3.24. Person carrying out the disbudding procedure in different European regions (% of farms)



## PERSON CARRYING OUT DEHORNING

Dehorning is a more invasive procedure with a frequent use of drugs. Consequently, it is more consistently carried out by veterinary practitioners, often with the assistance of the stockman (Figure 3.25). This has been reported particularly for the North and East macro-regions while stockman is still the main person in charge of the procedure in the South (Figures 3.26).

Figure 3.25. Person carrying out the dehorning procedure in Europe (% of farms)

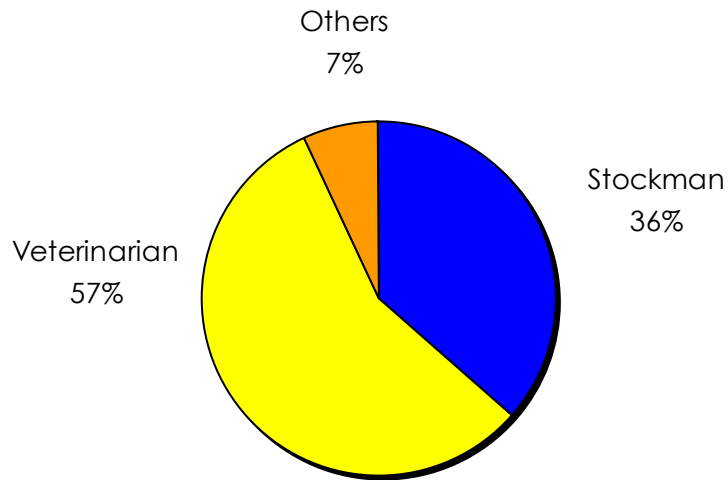
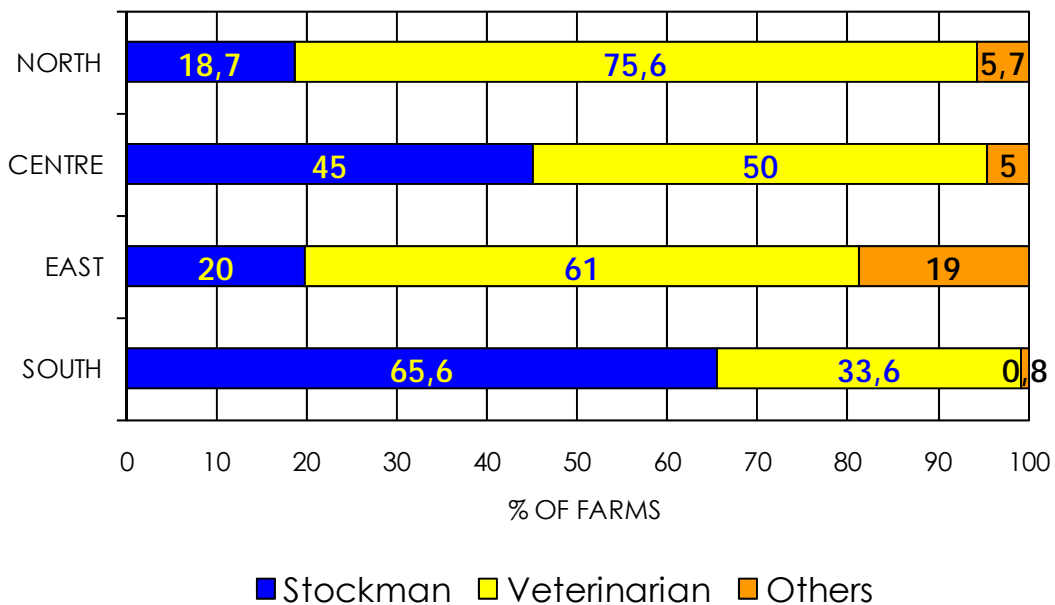


Figure 3.26. Person carrying out the dehorning procedure in different European regions (% of farms)

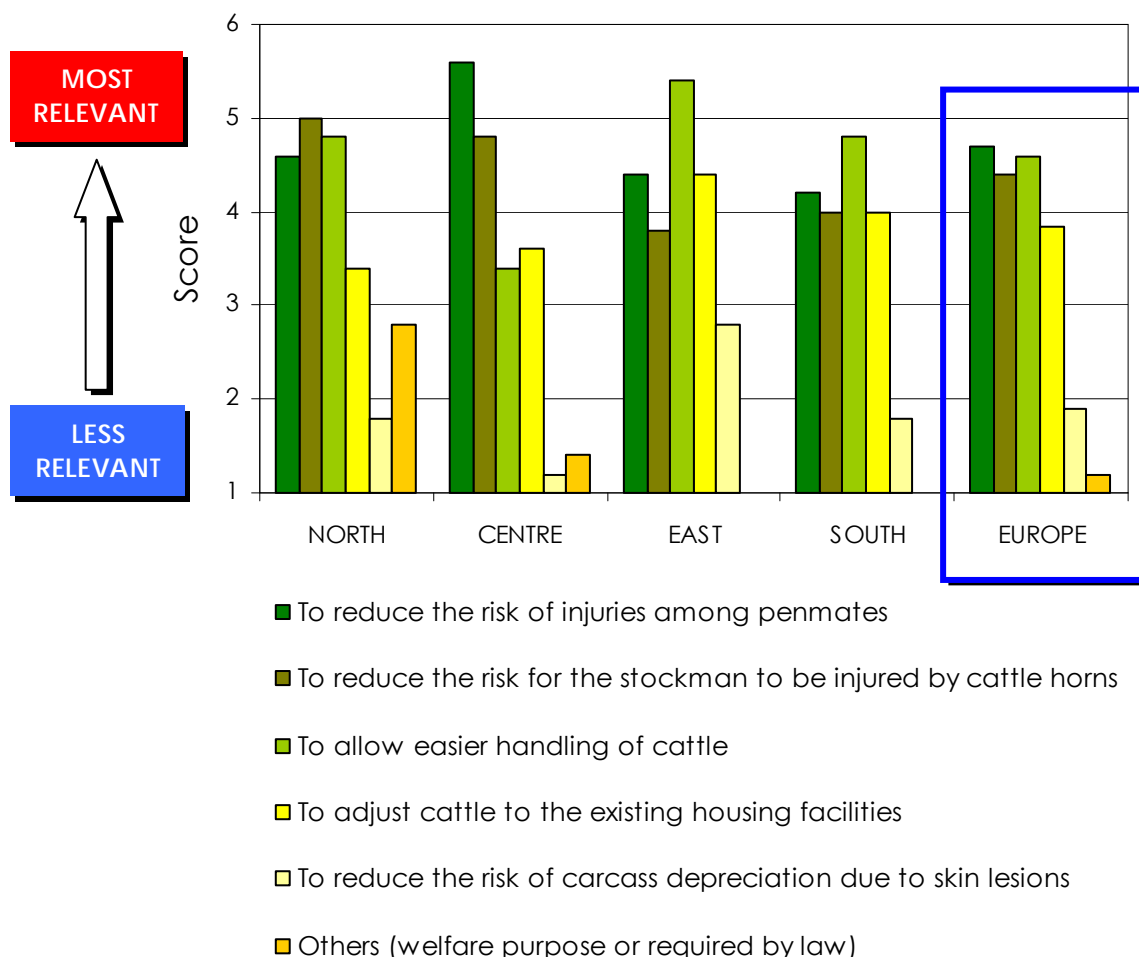


### 3.6 GENERAL QUESTIONS ON DAIRY CATTLE DISBUDDING/DEHORNING

#### Why do farmers practice disbudding/dehorning in dairy cattle?

According to the experts opinion, horns removal is considered an effective solution to reduce the risk of injuries for both cattle and stockman and to allow an easier handling of dairy cows in Europe (Figure 3.27). However, for some macro-regions, additional reasons were considered important by the experts. In the East and the South, dehorning is a way to adapt dairy cattle to existing housing facilities. Welfare purpose was not included in the questionnaire among the possible list of reasons for dehorning dairy cattle but it has been mentioned mainly in the reports from the Northern Countries.

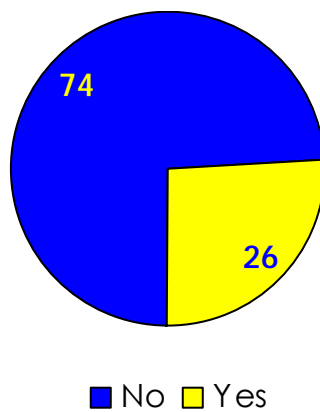
Figure 3.27. Reasons why dairy farmers practice disbudding/dehorning in Europe and in the four macro-regions (average score)



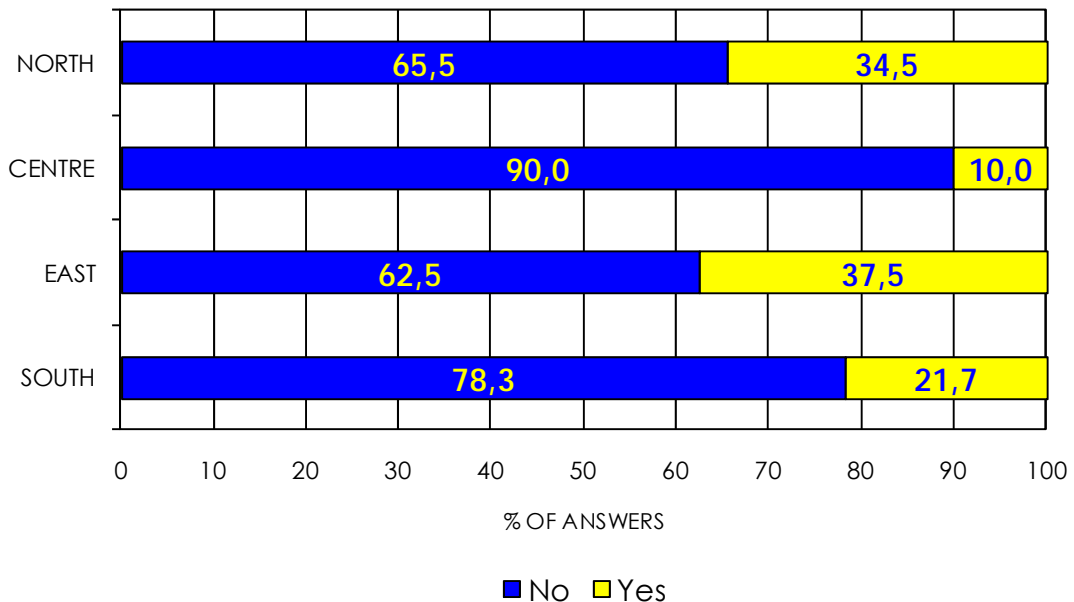
### Does cattle breed affect the farmers' decision to practice disbudding/dehorning?

Female calves of Holstein Friesian strains, the predominant dairy cattle breeds reared in Europe, are mostly routinely dehorned unless when housed in tie stalls. The decision to dehorn or not dairy cattle is more often addressed to animals belonging to dual purpose breeds (Figure 3.28). Specific rustic breeds are not routinely dehorned in several Countries belonging to different macro-regions: Alpine Grey, Rendena, Valdostana (Italy), Tarentaise, Abondance, Montbeliarde (France), Simmental (Austria, Germany, Poland, and Romania) and Tyrolean Grey (Austria).

Figure 3.28. Does cattle breed affect the farmers' decision to practice disbudding/dehorning? (% of answers)  
EUROPE



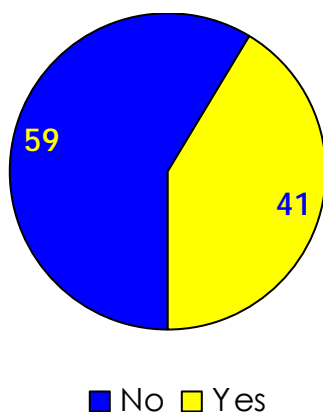
### MACRO REGIONS



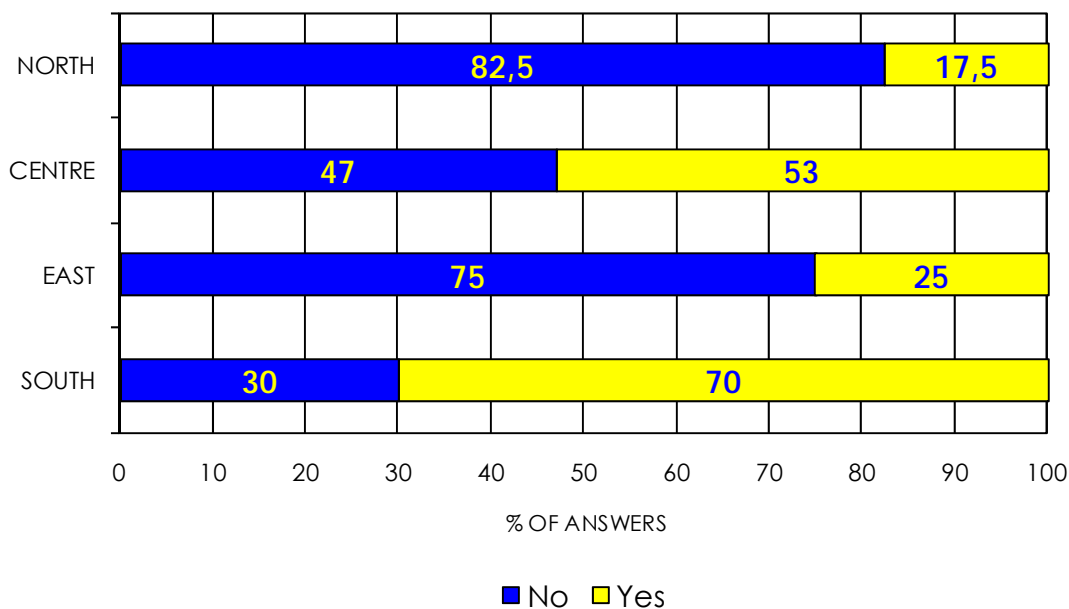
### Does cattle gender affect the farmer decisions to practice disbudding/dehorning?

At the European level, it appears that cattle gender has some influence on the decision to disbud/dehorn calves (Figure 3.29). This result arises mainly from Countries of the South and Centre where Centre female calves are more likely to be dehorned. Based on experts opinions, the North and the East macro-regions seem more addressed to routinely dehorn both male and female calves.

Figure 3.29. Does cattle gender affect the farmer decisions to practice disbudding/dehorning? (% of answers)  
EUROPE



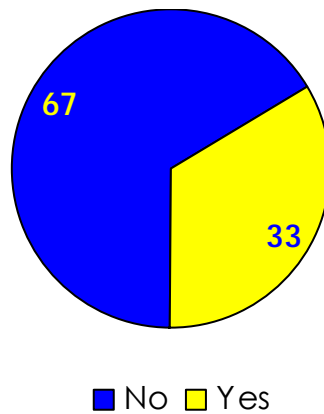
### MACRO-REGIONS



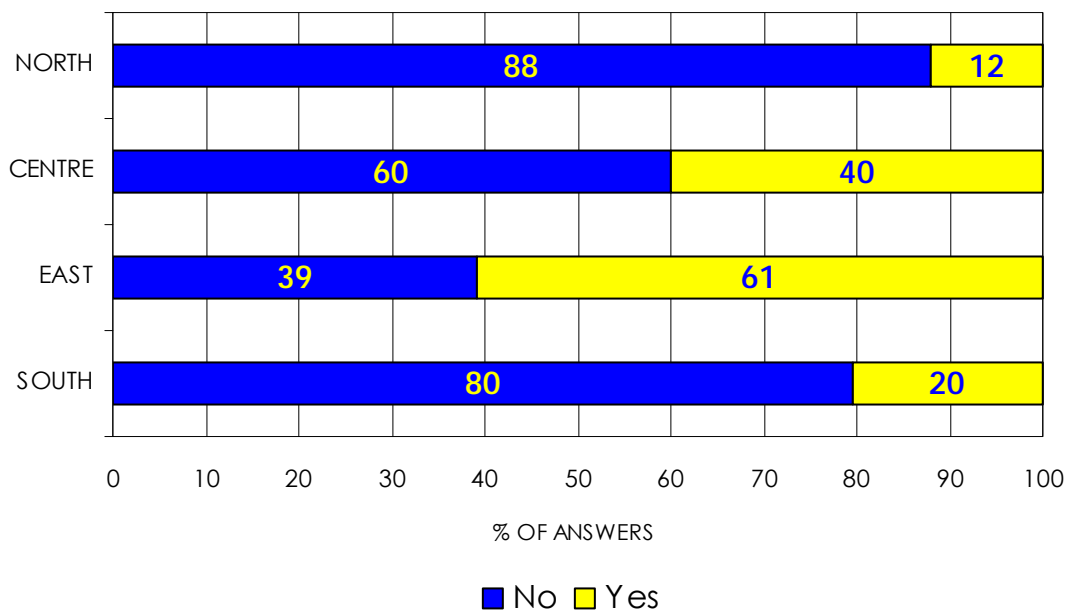
### Does farm size affect the farmers' decision to practice disbudding/dehorning?

At the European level, also farm size appears to be a factor to some degree in determining disbudding and dehorning practices (Figure 3.30). Particularly in the East and the Centre macro-regions, it has been reported that small-scale dairy farms, where tie stall system is predominant, do not usually dehorn their cattle.

Figure 3.30. Does farm size affect the farmers' decision to practice disbudding/dehorning (% of answers)?  
EUROPE



#### MACRO-REGIONS

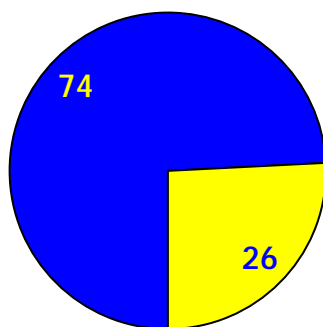


### Does the farmers' age affect the decision to practice disbudding/dehorning?

Only 26% of experts assume that the farmer's age affects disbudding/dehorning practices (Figure 3.31). However, particularly in the small farms of the East macro-region and the tie stall farms of the Centre older farmers do not dehorn their animals.

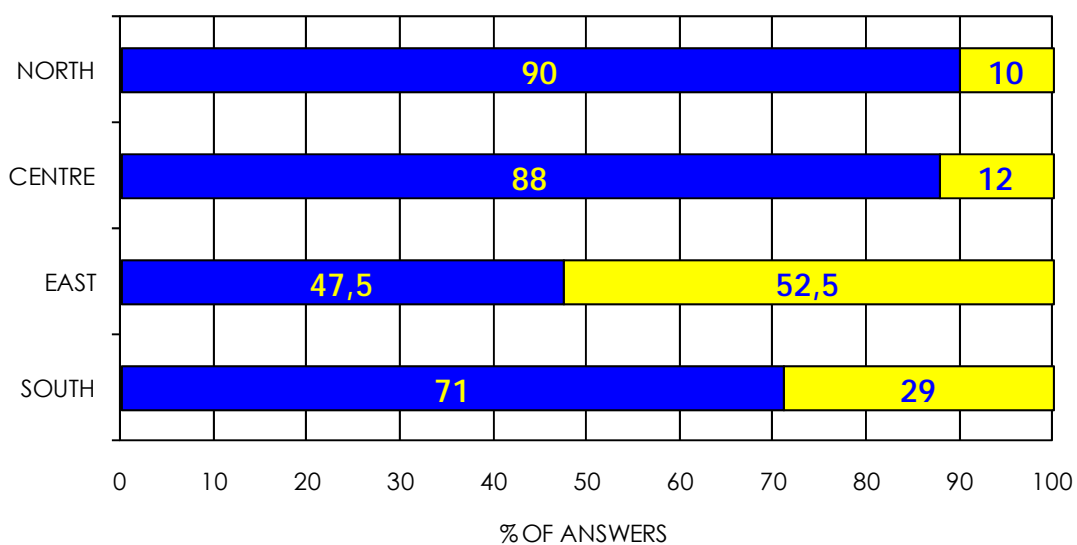
Figure 3.31. Does the farmers' age affect the decision to practice disbudding/dehorning (% of answers)?

EUROPE



■ No ■ Yes

MACRO-REGIONS



% OF ANSWERS

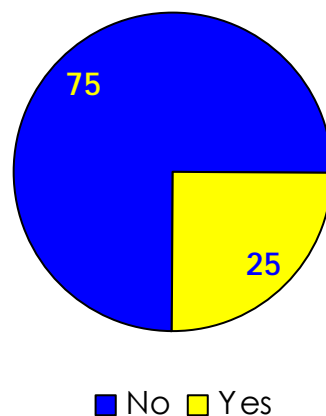
■ No ■ Yes

## Does the farmers' level of education affect the decision to practice disbudding/dehorning?

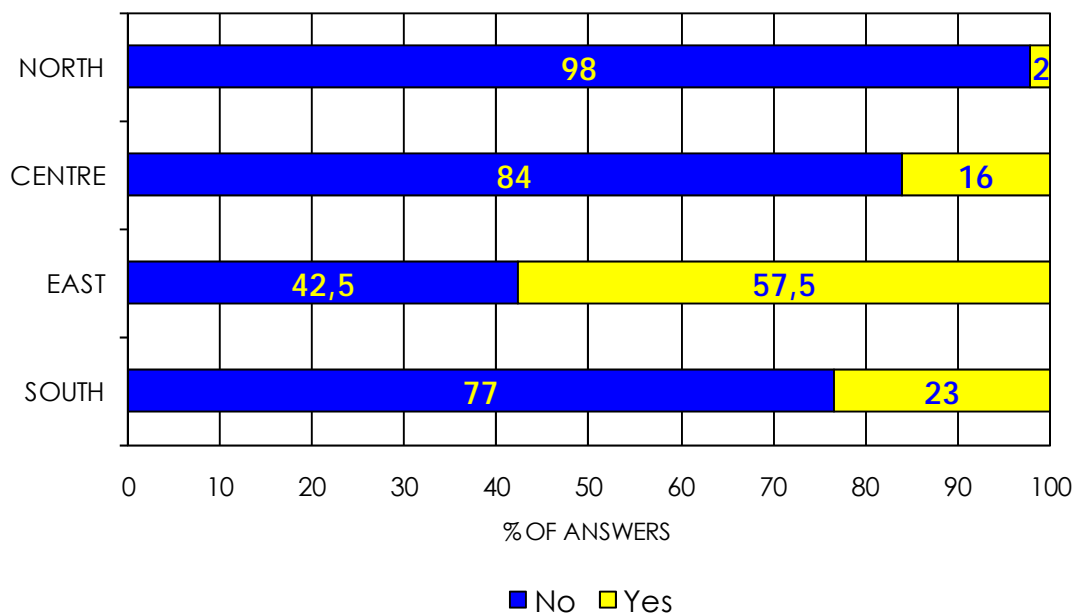
At the European level, the farmers' level of education appears to have a limited influence on dehorning practices (Figure 3.32). The level of education of the farmer seems to be relevant in the East macro-region, where it has been reported that younger, more educated generations are keener on dehorning for work safety reasons.

Figure 3.32. Does the farmers' level of education affect the decision to practice disbudding/dehorning (% of answers)?

### EUROPE



### MACRO-REGIONS



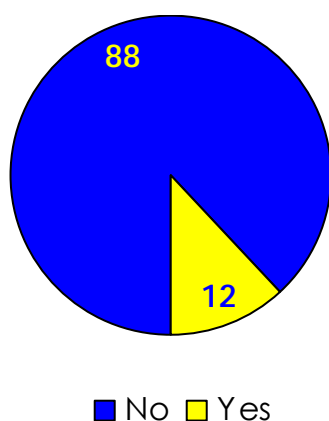


### Do the local traditions affect the farmer decision to practice disbudding/dehorning?

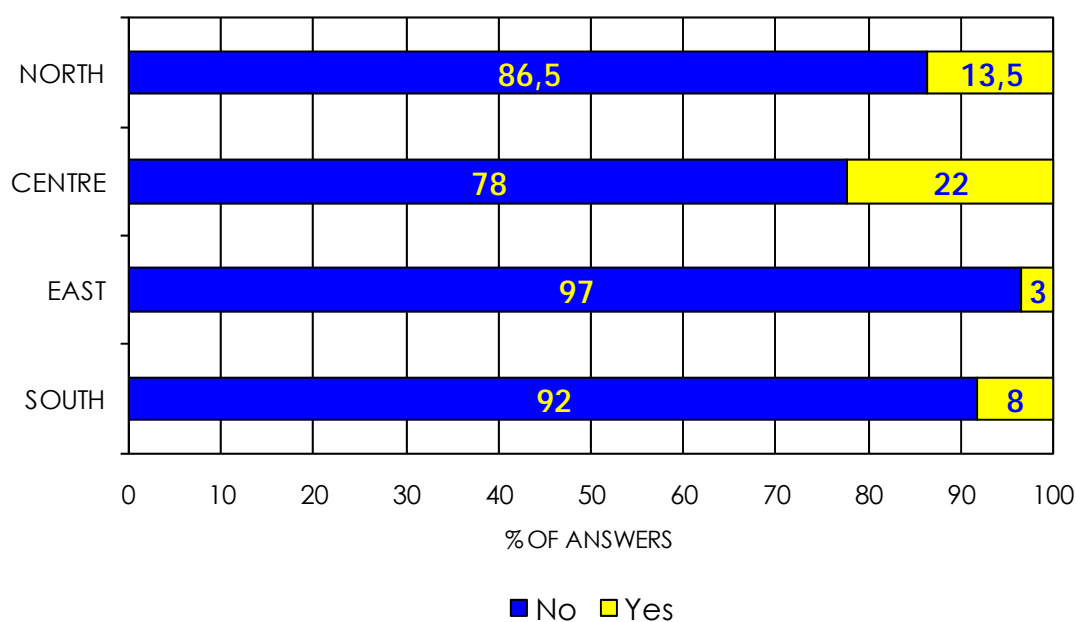
In general, local traditions have minimum effect on the decision of dehorning dairy cattle (Figure 3.33). Local traditions tend to preserve the natural look of the animals belonging to autochthonous breeds, for aesthetic reasons. In mountain regions, grazing dairy cows of rustic local breeds are traditionally not dehorned. When the macro-regions are considered, the influence of local traditions seems more relevant in the Centre, but it has been reported to a lower extent for all of them.

Figure 3.33. Do the local traditions affect the farmer decision to practice disbudding/dehorning (% of answers)?

EUROPE



MACRO-REGIONS

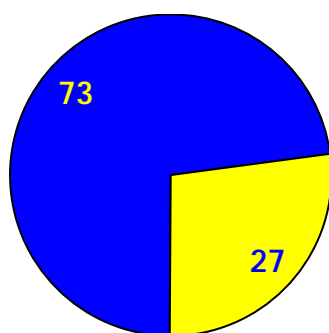


## Are there guidelines beyond legislation in force on the disbudding/dehorning practice?

In Europe there are only a few Countries in which National guidelines on cattle dehorning in addition to the existing legislation have been set and they are located in North and Centre (Figure 3.34). Guidelines try to set standards for best practices in disbudding and dehorning. Disbudding is usually recommended over dehorning as a more humane alternative. Specific information are sometimes made available online (e.g. Welfare codes of practice in the UK, <http://www.defra.gov.uk/farm/livestock/cattle-dairy/healthwelfare.htm> or farm assurance schemes like NDFAS <http://www.ndfas.org.uk/> ) and sometimes published in specialised press or by producers associations like the "French Charter of Good Practices in Cattle Production.

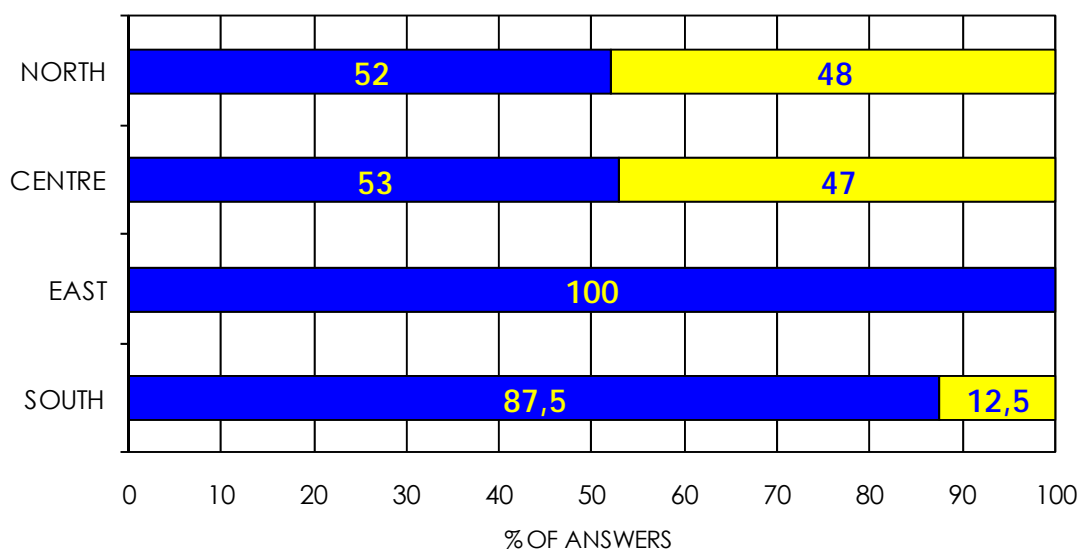
Figure 3.34. Are there guidelines beyond legislation in force on the disbudding/dehorning practice (% of answers)?

### EUROPE



■ No ■ Yes

### MACRO-REGIONS

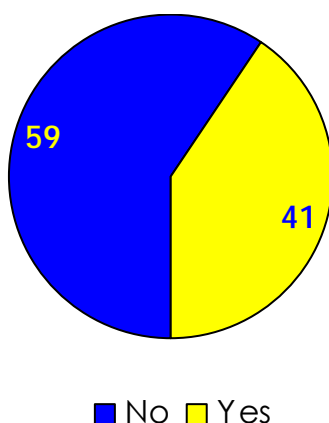


■ No ■ Yes

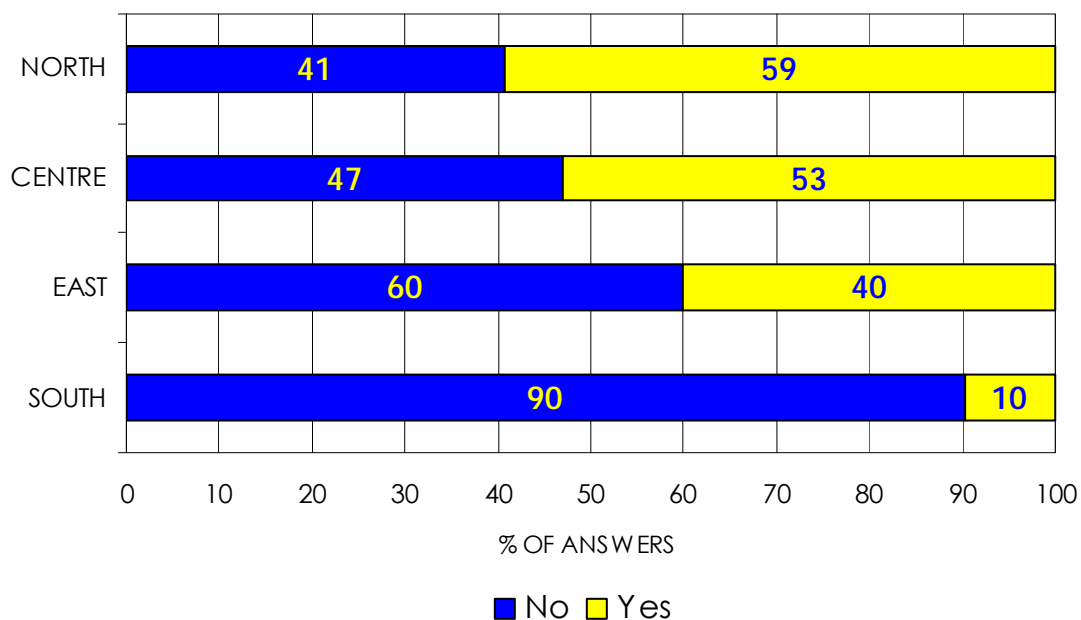
### Is there any specific training regarding the practice of disbudding/dehorning?

Some training on cattle dehorning is carried out in many European Countries. However, training opportunities appear to be less frequent in the South macro-region (Figures 3.35). Training is usually provided by agricultural schools or by veterinary practitioners. Other resources are: specialised press (breeders' associations bulletins, assurance schemes' guidelines); institutional websites; hands-on seminars by manufacturers of disbudding tools (e.g. Buddex®).

Figure 3.35. Is there any specific training regarding the practice of disbudding/dehorning (% of answers)?  
EUROPE



### MACRO-REGIONS

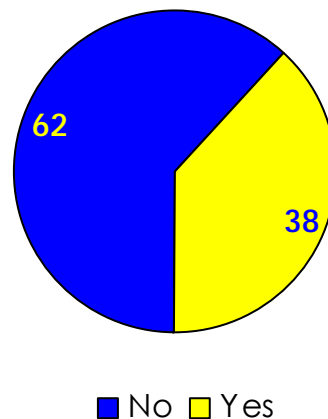


## Is there any discussion or attempt to improve the current practices of disbudding/dehorning?

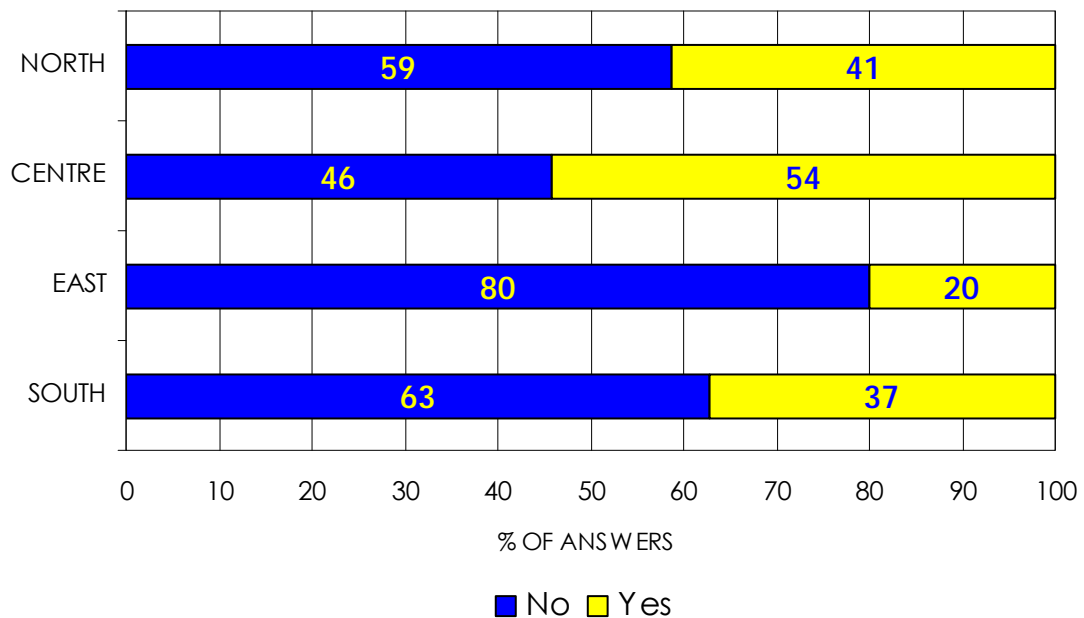
Some level of discussion is going on in Europe about the disbudding/dehorning practices, particularly concerning the use of sedation, anaesthesia and analgesia and the preference for disbudding over dehorning as a more humane option. There is also some discussion on polled genetics. Countries of the East macro-region appear less involved in these discussions (Figures 3.36).

Figure 3.36. Is there any discussion or attempt to improve the current practices of disbudding/dehorning (% of answers)?

### EUROPE



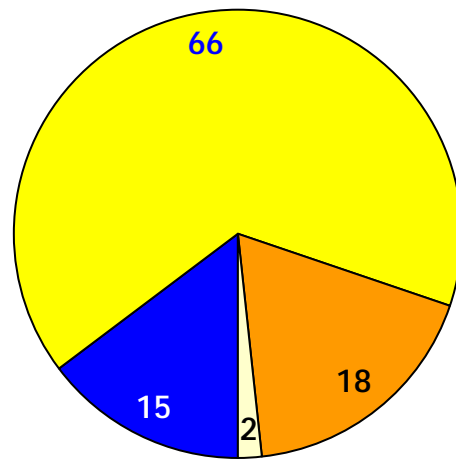
### MACRO-REGIONS



Is there any attempt to develop alternative practices to disbudding/dehorning?

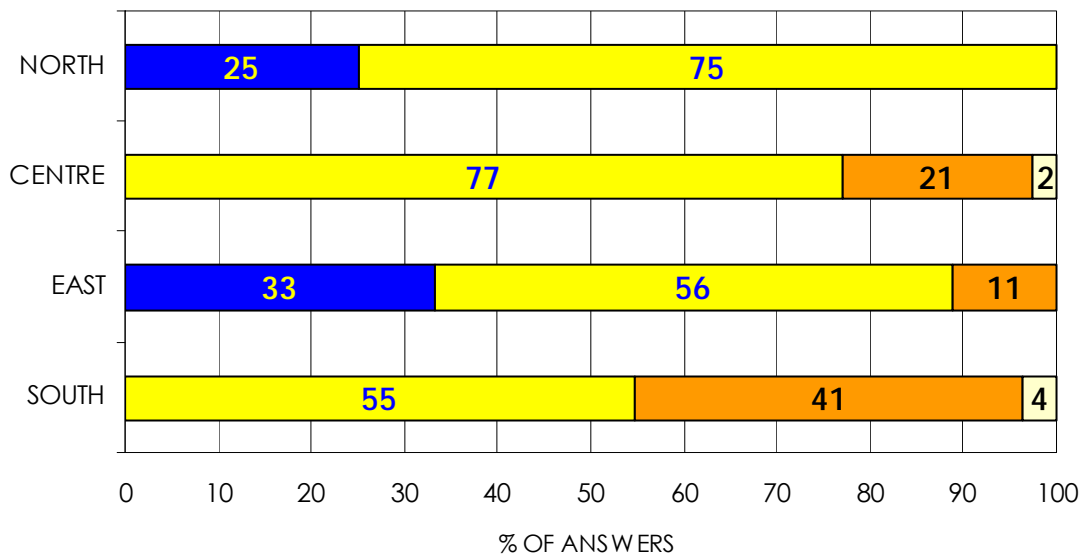
It appears that rearing polled dairy cattle is considered the most feasible alternative to dehorning in the medium/long run in Europe (Figure 3.37). This is particularly evident in the North and Centre macro-regions, where most of the polled animals are presently reared (Figure 3.2). In the South there is some interest to develop alternative housing systems capable to host horned dairy cows (Figure 3.37).

Figure 3.37. Is there any attempt to develop alternative practices to disbudding/dehorning (% of answers)?  
EUROPE



■ No
 ■ Polled cattle breeding  
■ New housing facilities
 ■ Others

MACRO-REGIONS

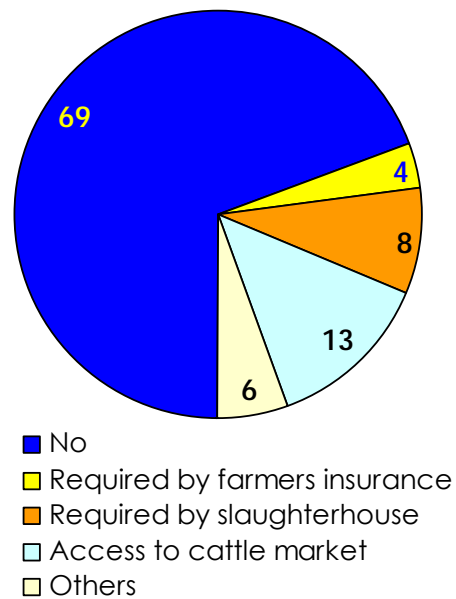


■ No
 ■ Polled cattle breeding
 ■ New housing facilities
 ■ Others

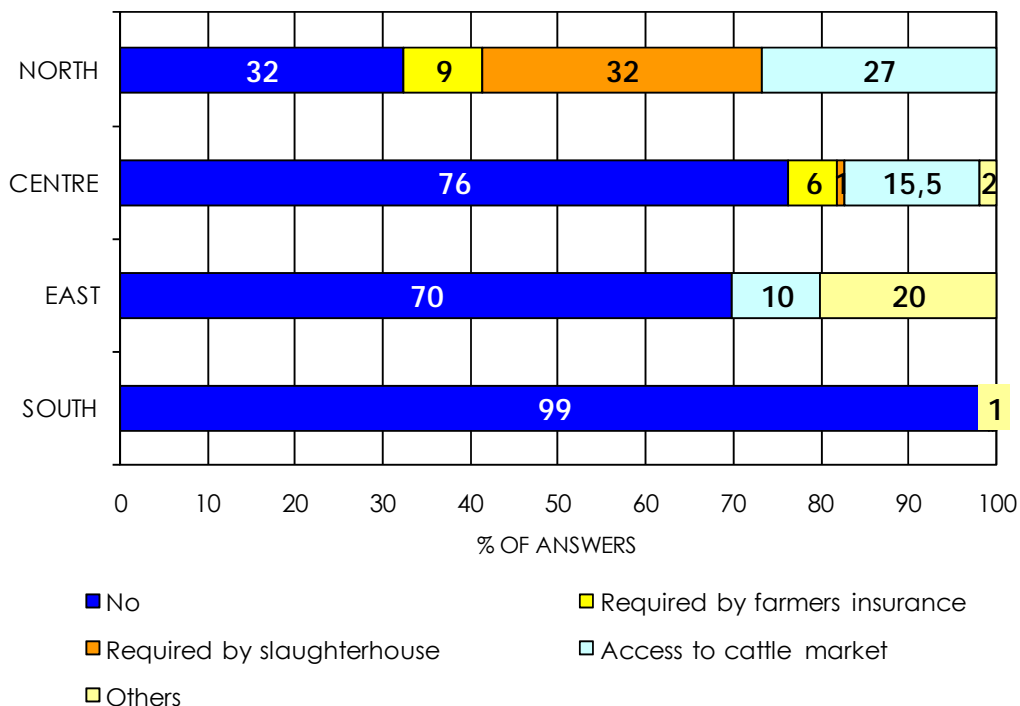
### Is there any obligation to dehorn?

In general there is no obligation to dehorn the dairy cows in Europe (Figure 3.38). However, in some Member States (including, for instance, the UK, Ireland and Austria), experts report that animals that are brought for sale at auctions or markets must be dehorned. According to the EC transport regulation (2005), it is illegal to mix horned and dehorned animals during transport and dehorning is often required by slaughter industry (Figure 3.38).

Figure 3.38. Is there any obligation to dehorn (% of answers)?  
EUROPE



MACRO-REGIONS

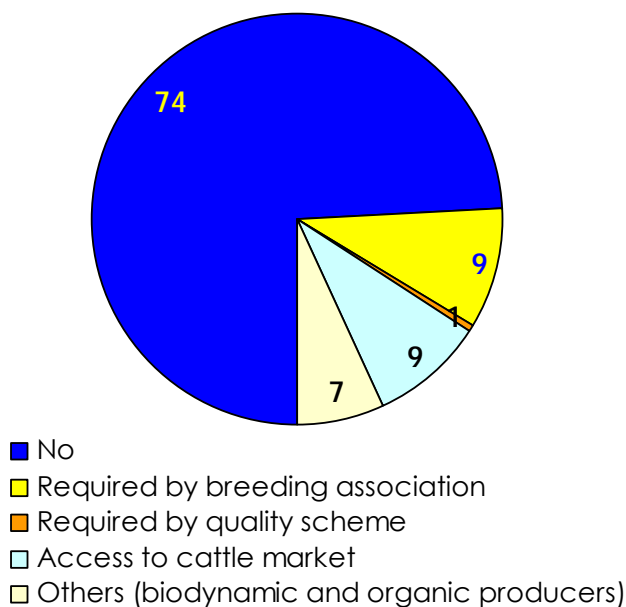


Is there any obligation not to dehorn?

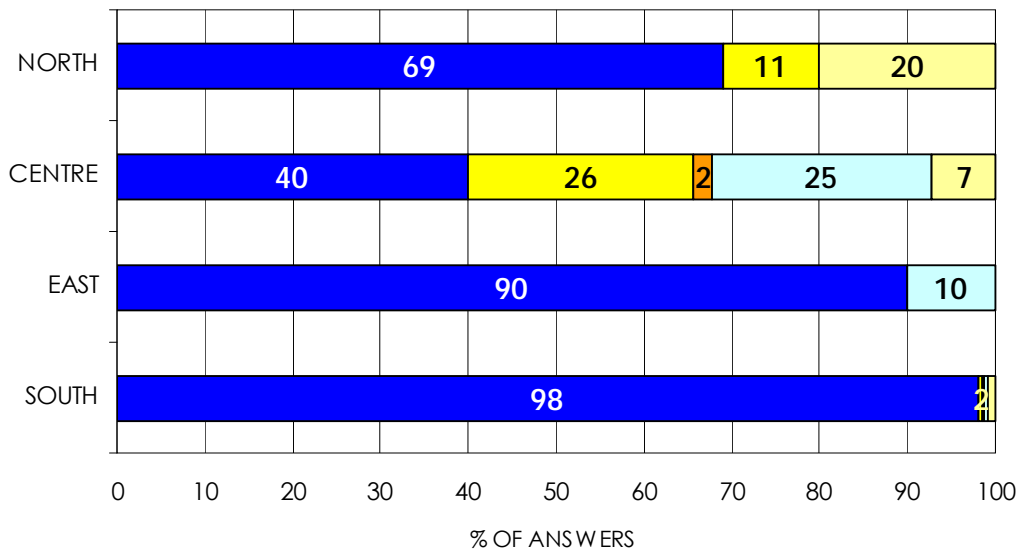
Dehorning is banned in biodynamic dairy production systems and by some organic farming schemes mainly carried out in the North and in the Centre (Figure 3.39). Horned animals are also required by some breeding standards or by local traditions which tend to preserve the natural look of cows belonging to autochthonous breeds,

Figure 3.39. Is there any obligation not to dehorn (% of answers)?

EUROPE



MACRO-REGIONS



- No
- Required by breeding association
- Required by quality scheme
- Access to cattle market
- Others (biodynamic and organic producers)



#### 4. DEHORNING IN BEEF CATTLE

Information on the source of the data collected for dairy cattle are reported in Table 4.1. Questionnaires coming from national Ministries or from other public institutions were available only in Ireland, Austria, Germany and Italy. In most Countries, information were given by experts having different expertise and background. National reports were not provided by Sweden, Czech Republic, Slovenia and Cyprus.

Table 4.1. Sources of data in different EU Member States

EU REGION	COUNTRY	Ministries of Agriculture or other governmental sources	Cattle breeding associations	Farmers or farmers' associations	(Associations of) veterinary practitioners	Other (see notes)
NORTH	Denmark		<input checked="" type="checkbox"/>			
	Estonia					<input checked="" type="checkbox"/>
	Finland					<input checked="" type="checkbox"/> <sup>2</sup>
	Ireland	<input checked="" type="checkbox"/> <sup>3</sup>				
	United Kingdom				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>4</sup>
CENTRE	Austria	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>5</sup>
	France			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <sup>6</sup>
	Germany	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
	Netherlands		<input checked="" type="checkbox"/> <sup>7</sup>		<input checked="" type="checkbox"/>	
EAST	Bulgaria			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <sup>8</sup>
	Hungary		<input checked="" type="checkbox"/>			
	Poland			<input checked="" type="checkbox"/>		
	Romania				<input checked="" type="checkbox"/>	
SOUTH	Greece		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/> <sup>9</sup>
	Italy	<input checked="" type="checkbox"/> <sup>10</sup>			<input checked="" type="checkbox"/>	
	Portugal				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>11</sup>
	Spain		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/> <sup>12</sup>

<sup>1</sup> Organization Estonian University of Life Sciences

<sup>2</sup> Finnish Center for Animal Welfare, University of Helsinki

<sup>3</sup> Teagasc, Agricultural and Food Development Authority

<sup>4</sup> University of Liverpool

<sup>5</sup> National Milk Recording Scheme (at state level)

<sup>6</sup> Extension organisations

<sup>7</sup> Federation of beef herd books

<sup>8</sup> Institute of Animal Science, Stara Zagora University

<sup>9</sup> Genetic improvement centre of Ioannina and Drama

<sup>10</sup> Public veterinary agency for cattle health

<sup>11</sup> Faculdade de Medicina Veterinaria de Lisboa

<sup>12</sup> Private companies

Some information on the sample of farms and cattle surveyed by the experts in each Country are reported in Table 4.2.

Table 4.2. Beef cattle population in EU Member States and data about the surveyed farm sample

EU REGIONS	COUNTRY	EUROSTAT 2007	SURVEYED DATA		
		Beef cattle population	Number of farms	Number of animals	Number of experts
NORTH	Denmark	400 500	1 500	250 000	1
	Estonia	57 900	-	-	1
	Finland	266 050	2 500	267 158	1
	Ireland	1 472 400	20 000	-	1
	United Kingdom	2 650 500	200	11 584	5
	<b>TOT</b>	<b>4 847 350</b>	<b>24 200</b>	<b>528 742</b>	<b>9</b>
CENTRE	Austria	535 600	396	13 130	7
	France	4 340 000	10 000	30 000	46
	Germany	3 450 000	125	4 746	4
	Netherlands	1 062 500	12 000	1 100 000	2
	<b>TOT</b>	<b>9 388 100</b>	<b>22 521</b>	<b>1 147 876</b>	<b>59</b>
EAST	Bulgaria	110 700	10	108	1
	Hungary	170 000	8	-	-
	Poland	1 198 600	-	-	-
	Romania	495 750	4	663	59
	<b>TOT</b>	<b>1 975 050</b>	<b>22</b>	<b>771</b>	<b>60</b>
SOUTH	Greece	163 500	280	17 000	3
	Italy	1 682 500	843	289 380	17
	Portugal	302 550	450	40 176	2
	Spain	1 584 550	940	75 600	7
	<b>TOT</b>	<b>3 733 100</b>	<b>2 513</b>	<b>422 156</b>	<b>29</b>
<b>TOT EU</b>	<b>19 943 600</b>	<b>49 256</b>	<b>2 099 545</b>	<b>157</b>	

Table 4.3. Reliability of the national information for beef cattle (% over 8 items)

EU REGIONS	COUNTRY	Rough estimates % of responses	Fairly reliable estimates % of responses	Census data % of responses
NORTH	Denmark		100	
	Estonia	100		
	Finland		100	
	Ireland	43	57	
	United Kingdom	40	60	
CENTRE	Austria	65	17	18
	France	50	50	
	Germany	47	50	3
	Netherlands		100	
EAST	Bulgaria		100	
	Hungary		100	
	Poland	100		
	Romania	100		
SOUTH	Greece		100	
	Italy	50	50	
	Portugal	94	6	
	Spain	23	77	

## 4.1 GENERAL RESULTS

Information on the main beef breeds reared in the different European Member States are reported in Table 4.4. Specialized French beef breeds have a wide distribution across Europe particularly in the Eastern Countries, Italy and Spain. It is interesting to notice that Charolaise and Limousine have been reported as main beef breeds also in the UK and Ireland where they have substantially replaced the native beef breeds like Hereford and Angus. Different strains of Simmental cattle are reared for beef production in Austria, Germany and Hungary.

Table 4.4. Main beef breeds reared in EU Member States according to the national experts report

EU REGIONS	COUNTRY	MAIN BEEF BREEDS REPORTED		
NORTH	Denmark	Danish Holstein	Danish Red	Crossbreeds
	Estonia	Limousine	Aberdeen Angus	Hereford
	Finland	Ayrshire	Holstein	Crossbreeds
	Ireland	Charolaise	Limousine	Hereford + Angus
	United Kingdom	Limousine	Charolaise	Aberdeen Angus
CENTRE	Austria	Simmental	Simmental + Crossbreeds	Limousine + Crossbreeds
	France	Charolaise +x-breeds	Limousine+x-breeds	Holstein+others
	Germany	Simmental	Simmental x dairy	Gelbvieh
	Netherlands	Belgian White-Blue	Improved red & white	Limousine
EAST	Bulgaria	Hereford	Limousine	-
	Hungary	Charolaise	Limousine	Simmental/Angus
	Poland	Limousine	Charolaise	Piemontese
	Romania	Charolaise	Limousine	Aberdeen Angus
SOUTH	Greece	Holstein	Beef Crossbred	-
	Italy	Charolaise	Limousine	Piemontese
	Portugal	Local breeds	Charolaise and Limousine x-breeds	Pure Charolaise and Limousine herds
	Spain	Limousine	Charolaise	Spanish breeds

### BEEF CATTLE DEHORNING IN EUROPE

Due to the small number of experts and in some countries low number of farms or cattle for which information is given in comparison to the total national population, figures may often not be representative.

Only 40% of beef farms in Europe raises dehorned beef cattle, and dehorned animals have been estimated as 39.3% of the total beef cattle population (Figure 4.1). However, clear differences can be observed among macro-regions (Figure 4.2). Dehorned beef cattle can be found mainly in the North of Europe, with the clear exception of the Denmark and Estonia where they are rare (Table 4.5). In the South dehorning is not a routine practice for beef cattle and dehorned fattening bulls and heifers are almost absent. One possible reason for this result comes from Italy which has a large finishing beef cattle population imported from France where dehorning is not frequent (Table 4.5). French data decreases also the average result of the Centre macro-region (Figure 4.2). In the East, the mean value for dehorning is around 30% for both farms and cattle population but this is the result of a are very diversified situation with Countries like Hungary which tends to dehorn more frequently and Countries like Romania that do not it (Table 4.5). The percentage of farms with polled animals and the percentage of polled cattle are low (8 and 3%, respectively) but these values are much more higher than those recorded for dairy cattle and farms (Figure 3.1). The highest frequency of polled beef cattle is likely due to the contribution of some polled breeds such as Aberdeen Angus, Hereford, Ayrshire which are reared mainly in the UK, Ireland, Finland, Estonia Bulgaria, and Romania (Table 4.4 and Figure 4.2).

Figure 4.1. Percentage of beef farms with dehorned and polled animals and percentage of dehorned and polled cattle, in Europe

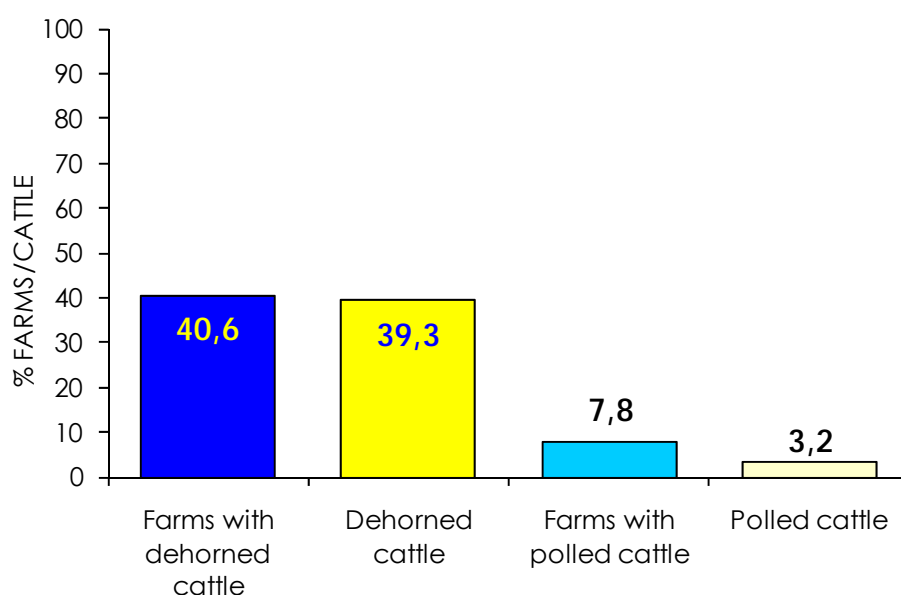


Figure 4.2. Percentage of beef farms with dehorned and polled animals and percentage of dehorned and polled cattle, in different European macro-regions

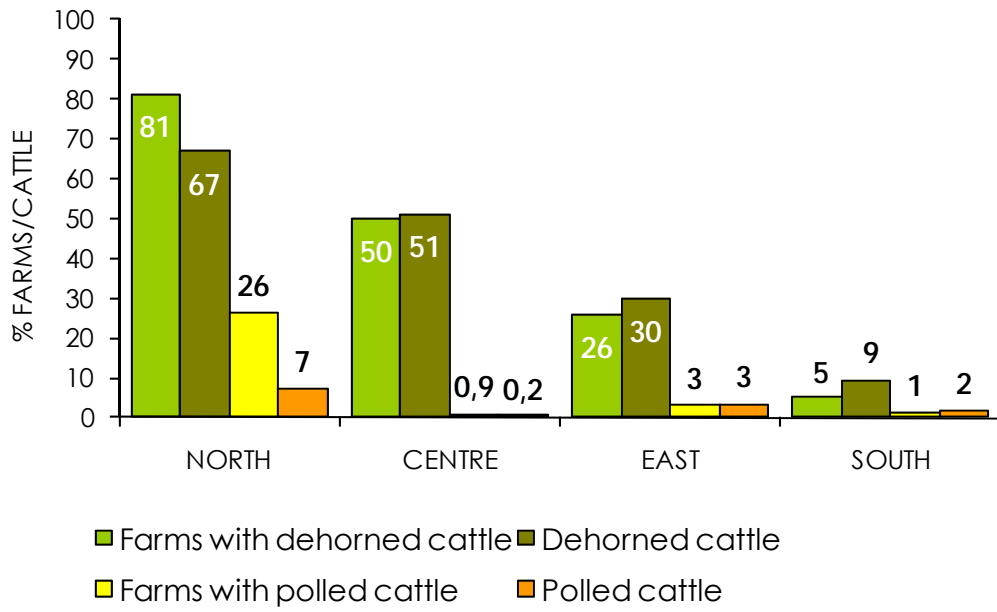


Table 4.5 Percentage of beef farms with dehorned vs. polled cattle and percentage of dehorned vs. polled cattle in EU Member States

EU REGIONS	COUNTRY	Farms with dehorned cattle	Dehorned cattle	Farms with polled cattle	Polled cattle
NORTH	Denmark	5	2	0	0
	Estonia	15	15	-	1
	Finland	96	96	1	30
	Ireland	100	90	30	10
	United Kingdom	83	62	31	5
CENTRE	Austria	76	97	2	na
	France	30	30	<1	0
	Germany	68	68	<1	<1
	Netherlands	60	60	<1	<1
EAST	Bulgaria	40	40	5	5
	Hungary	75	88	25	29
	Poland	25	30	0	0
	Romania	7.5	7.3	2.5	2.7
SOUTH	Greece	0	0	0	0
	Italy	10	17	2	3
	Portugal	5	10	5	5
	Spain	0.7	2.1	0	0

na= not available

## 4.2 BEEF CATTLE DEHORNING AND HOUSING SYSTEMS

### HOUSING SYSTEM IN THE SURVEYED BEEF FARMS

Loose housing is by far the predominant housing system for beef cattle (Figure 4.3). Beef farms with tie stall system are widespread in Estonia (Table 4.6) but this has a very limited impact on the mean value for the North macro-region (Figure 4.4). Some tie stall beef farms can be found also in Germany, the Netherlands and Bulgaria (Table 4.6 and Figure 4.4).

Figure 4.3. Housing system in the surveyed farms in Europe

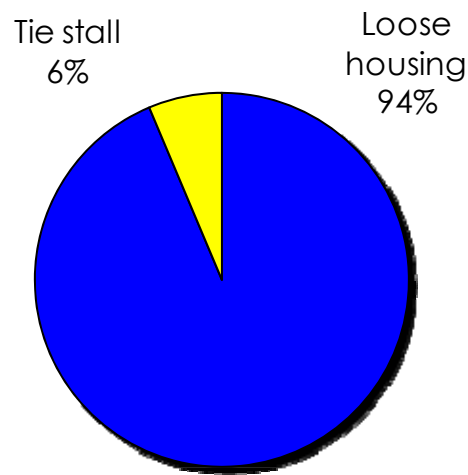


Figure 4.4. Housing system in the surveyed farms in different European macro-regions

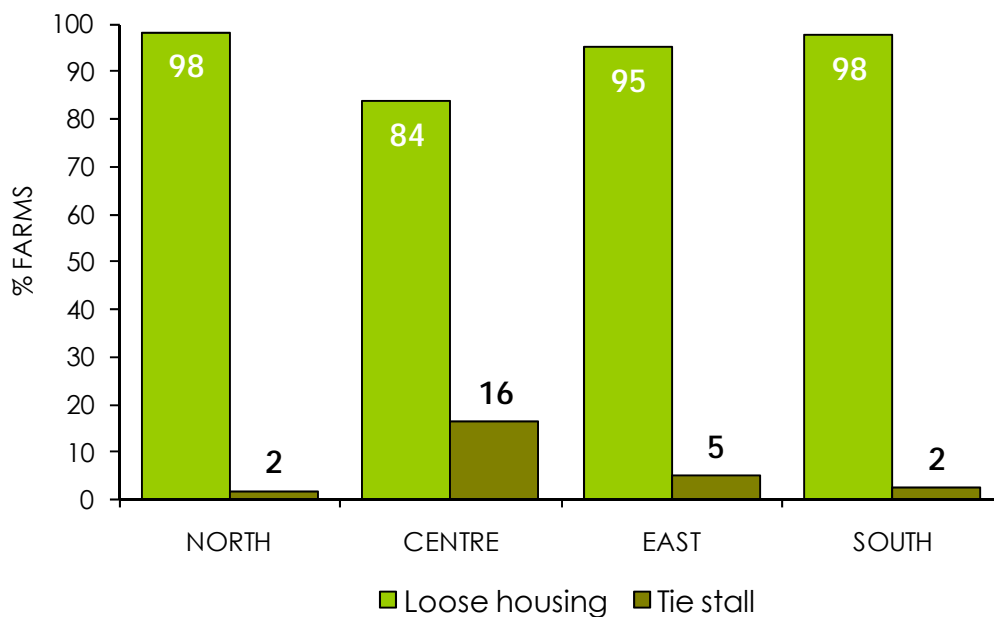




Table 4.6. Housing system and average number of beef cattle/unit in the surveyed farms in EU Member States

EU REGIONS	COUNTRY	LOOSE HOUSING		TIE STALLS	
		% farms <sup>1</sup>	Average n° of beef cattle per farm	% farms <sup>1</sup>	Average n° of beef cattle per farm
NORTH	Denmark	100	325	-	-
	Estonia	10	-	90	-
	Finland	98	100	2	20
	Ireland	100	50	-	-
	United Kingdom	99	170	1	10
CENTRE	Austria	97	35	3	30
	France	95	30	5	10
	Germany	67 <sup>2</sup>	53	33	20
	Netherlands	85	90	15	na
EAST	Bulgaria	70	12	30	8
	Hungary	62	355	38	34
	Poland	100	80	-	-
	Romania	100	166	-	-
SOUTH	Greece	100	38	-	-
	Italy	96	356	4	12
	Portugal	94	120	6	12
	Spain	99.4	76	0.6	250

na= not available

<sup>1</sup> When the sum of percentage data was different than 100, values have been corrected.<sup>2</sup> Results from a concurrent survey with 23 farmers: 85% with loose housing and 8% with tie stalls

## BEEF CATTLE DEHORNING IN LOOSE HOUSING SYSTEMS

Since loose housing is the main housing system for beef cattle, dehorning results reported for loose housed cattle in Europe and in the four macro-regions (Figures 4.5 and 4.6) are consistent with those previously discussed for the total beef cattle population (Figure 4.3 and 4.4).

Figure 4.5. European surveyed farms with dehorned and polled cattle (%), and percentage of dehorned cattle in loose housing system

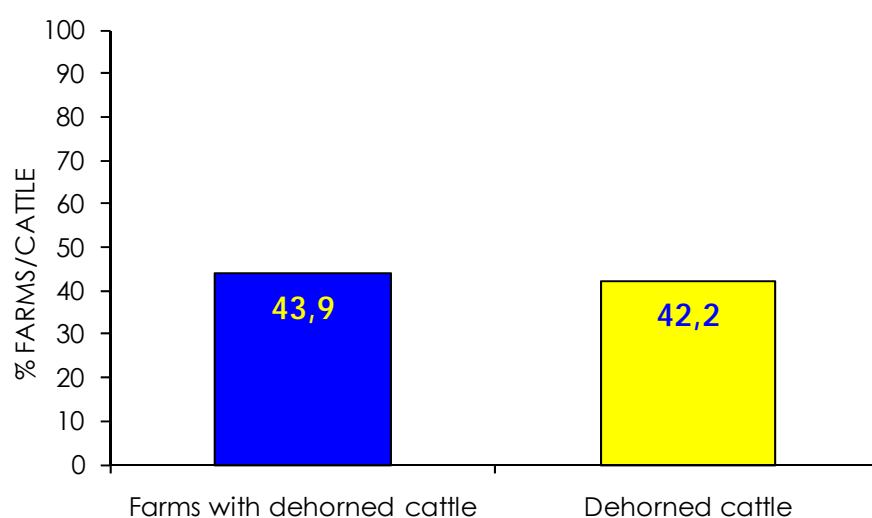
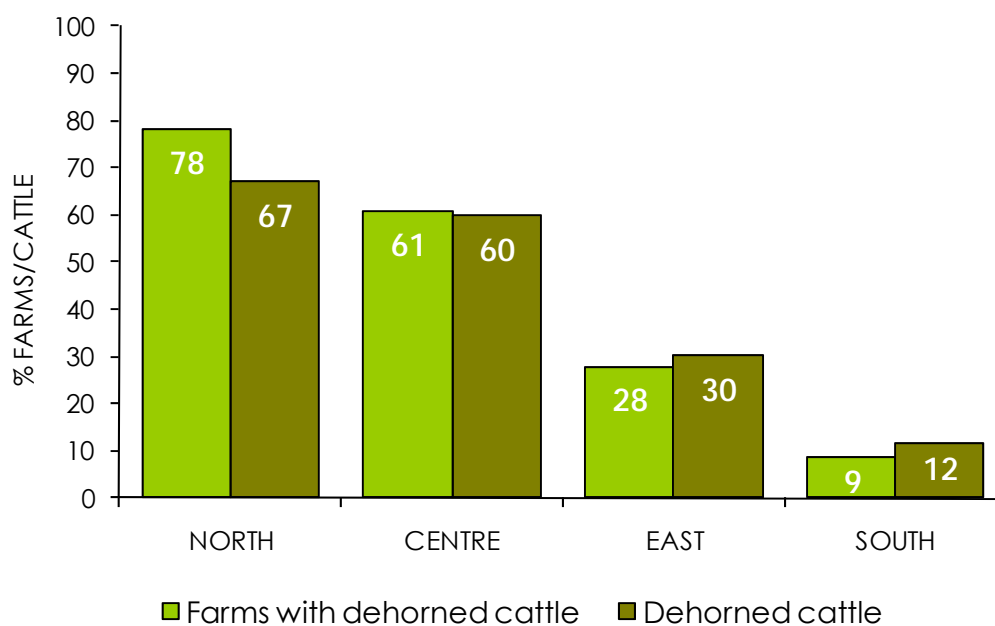


Figure 4.6. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in loose housing system in different European macro-regions



### BEEF CATTLE DEHORNING IN TIE STALL SYSTEMS

As expected, the practice of dehorning is less frequent in tie stall beef farms (Figure 4.7). Some farms with dehorned beef cattle can be found mainly in the Centre and East macro-regions as well as in Finland and Estonia (Table 4.7 and Figure 4.8).

Figure 4.7. European surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in tie stall system

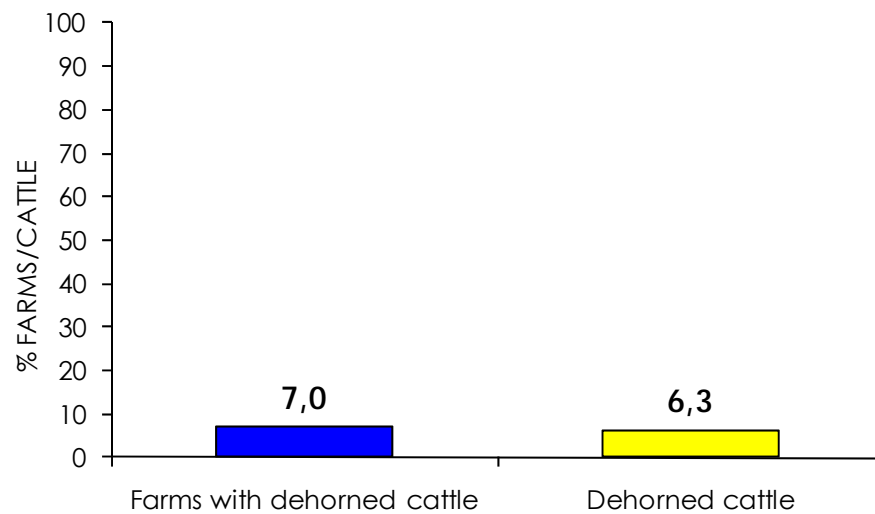


Figure 4.8. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in tie stall system in different European macro-regions

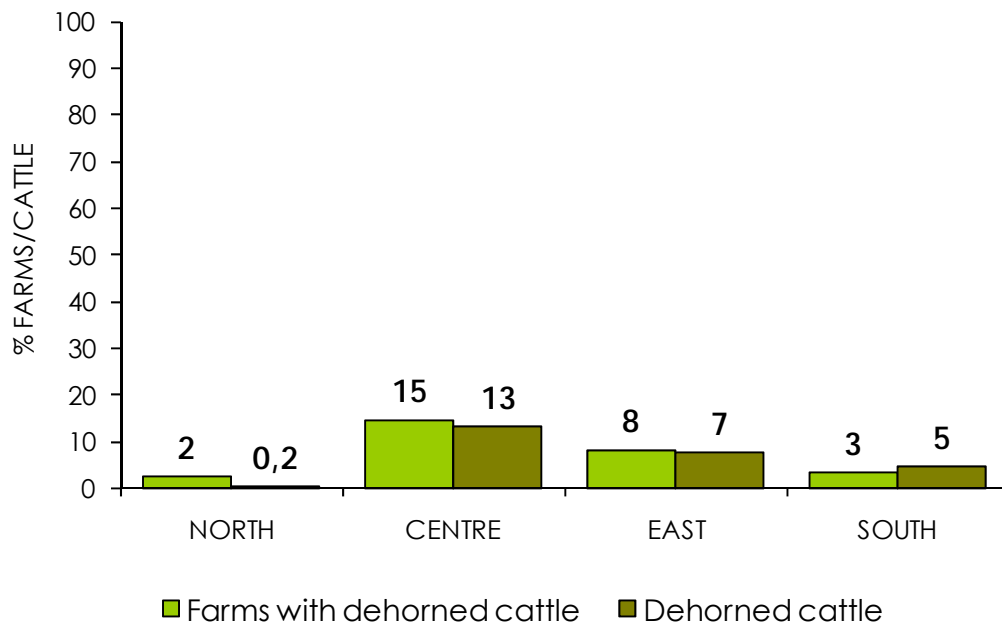


Table 4.7. Surveyed farms with dehorned cattle, percentage of dehorned cattle in different housing systems (loose housing and tie stall) in the EU Member States

EU REGIONS	COUNTRY	LOOSE HOUSING		TIE STALL	
		% of farms with dehorned cattle	% of dehorned cattle	% of farms with dehorned cattle	% of dehorned cattle
NORTH	Denmark	5	2	-	-
	Estonia	15	15	15	15
	Finland	40	99	40	1
	Ireland	100	90	-	-
	United Kingdom	82	62	-	-
CENTRE	Austria	77	92	25	8
	France	50	35	10	5
	Germany	75	89	20	25
	Netherlands	50	50	10	10
EAST	Bulgaria	40	40	40	40
	Hungary	100	92	67	61
	Poland	25	80	-	-
	Romania	8	7	-	-
SOUTH	Greece	0	0	-	-
	Italy	18	22	4	8
	Portugal	5	10	1	1
	Spain	0.6	2.2	3	2

4.3 BEEF CATTLE DEHORNING AND PRODUCTION SCHEMES

PRODUCTION SCHEME IN THE SURVEYED BEEF FARMS

The surveyed sample of beef farms showed a minimum percentage of organic farms (Figure 4.9). The percentage of organic producers was always below 5 being more noticeable only in the North and Centre macro-regions due to the contribution of single Countries like Denmark, Estonia, the UK and Austria (Table 4.8 and Figure 4.10).

Figure 4.9. Production schemes in the surveyed farms in Europe

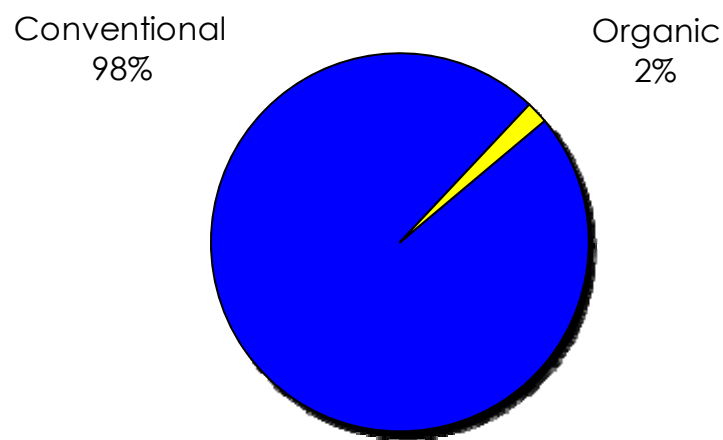


Figure 4.10. Production schemes in the surveyed farms in different European macro-regions

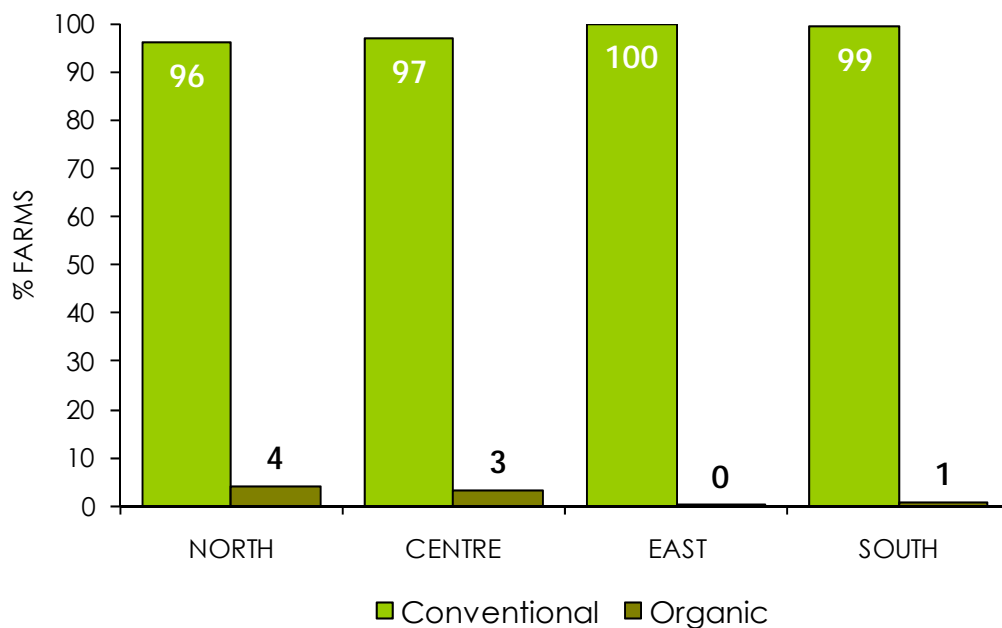


Table 4.8. Percentage of farms, average number of beef cattle/unit, and percentage of tie stalls in different production schemes in EU Member States

EU REGIONS	COUNTRY	CONVENTIONAL			ORGANIC		
		% farms	Average n° of beef cattle per farm	% of tie stalls	% farms	Average n° of beef cattle per farm	% of tie stalls
NORTH	Denmark	95	325	0	5	na	-
	Estonia	91	na	90	9	na	90
	Finland	99	150	2	0.5	100	0
	Ireland	98	50	0	2	na	-
	United Kingdom	95	173	2.4	5	na	na
CENTRE	Austria	76	20	3	24	17	0
	France	99	30	5	1	20	<1
	Germany	97	51	24	3	48	1
	Netherlands	99	90	15	1	na	na
EAST	Bulgaria	99	12	33	0.5	20	-
	Hungary	100	235	25	-	-	-
	Poland	100	80	0	-	-	-
	Romania	100	166	0	-	-	-
SOUTH	Greece	100	38	0	-	-	-
	Italy	99.7	337	4	0.3	198	6.6
	Portugal	100	120	6	-	-	-
	Spain	99	76	0.6	1	15	0

na= not available

DEHORNING IN CONVENTIONAL BEEF PRODUCTION SYSTEMS

Most beef cattle are fattened in conventional farms and therefore dehorning results reported for the conventional production system in Europe and in the four macro-regions (Figures 4.11 and 4.12) are in perfect agreement with those previously discussed for the total beef farm and cattle populations (Figures 4.3 and 4.4).

Figure 4.11. European surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in conventional production scheme

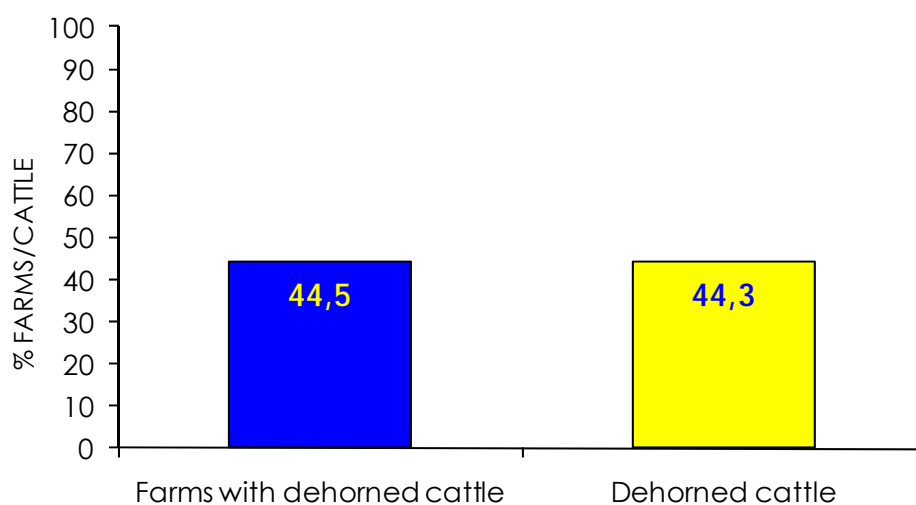
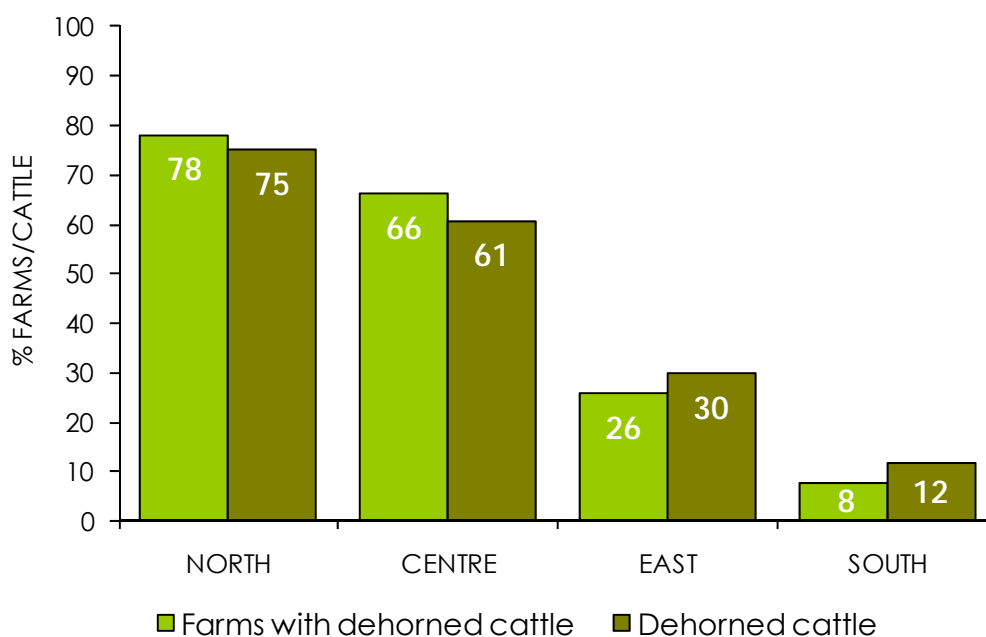


Figure 4.12. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in conventional production scheme in different European macro-regions



## DEHORNING IN ORGANIC BEEF PRODUCTION SYSTEMS

The practice of dehorning is less frequent in organic beef farms (Figure 4.13). Dehorning is widely carried out in Countries like Austria and Finland, while single organic farms fattening dehorned cattle has been found in Italy (Table 4.9 and Figure 4.14).

Figure 4.13. European surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in organic production scheme

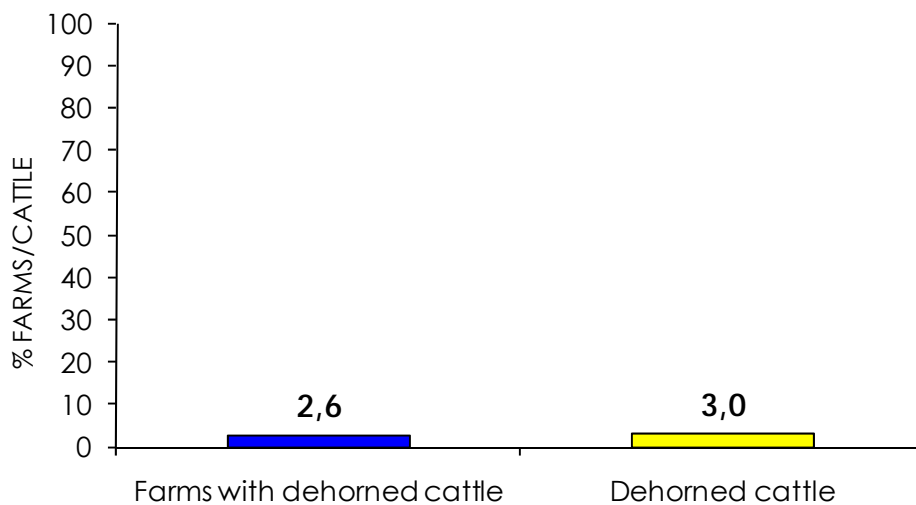


Figure 4.14. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in organic production scheme in different European macro-regions

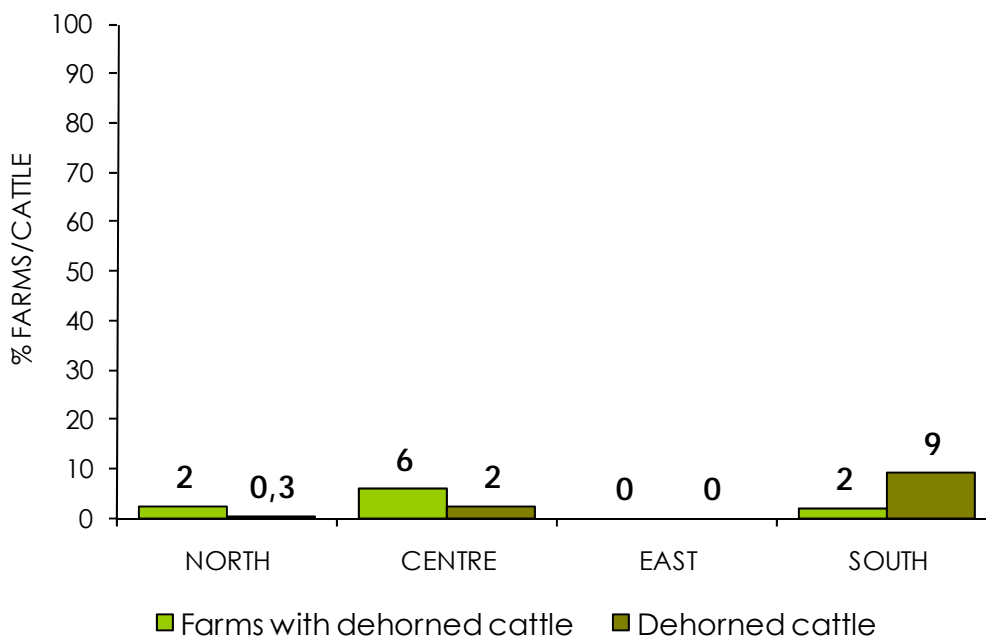




Table 4.9. Farms with dehorned cattle (%), and percentage of dehorned cattle in different production schemes (conventional and organic) in EU Member States

EU REGIONS	COUNTRY	CONVENTIONAL		ORGANIC	
		% of farms with dehorned cattle	% of dehorned cattle	% of farms with dehorned cattle	% of dehorned cattle
NORTH	Denmark	5	2	0	-
	Estonia	15	15	15	15
	Finland	40	97	40	3
	Ireland	100	90	0	-
	United Kingdom	82	77	0	-
CENTRE	Austria	76	77	83	23
	France	50	35	-	-
	Germany	90	94	0 <sup>1</sup>	0 <sup>1</sup>
	Netherlands	50	50	10	10
EAST	Bulgaria	40	40	0	-
	Hungary	75	88	-	-
	Poland	25	80	-	-
	Romania	8	7	0	-
SOUTH	Greece	0	0	0	0
	Italy	16	22	2	18
	Portugal	5	10	0	-
	Spain	0.6	2.2	2.5	2.5

<sup>1</sup> based on answer of only one expert

#### 4.4 DISBUDDING vs. DEHORNING IN BEEF FARMS

As for dairy cattle, disbudding is generally preferred to dehorning as method of horns removal (Figure 4.15). However, the percentage of beef farms using the latter method is higher than in dairy (36 vs. 11%, respectively). Data of Figure 4.16 show a clear macro-regional effect on the method of beef cattle dehorning. In the South and the East where the practice of horns removal in beef cattle is less frequent (Figure 4.2), dehorning is more used than disbudding because it is carried out only on horn-injured animals or to remove the tip of the horn for work safety reasons.

Figure 4.15. Percentage of farms practicing disbudding and dehorning in European surveyed farms

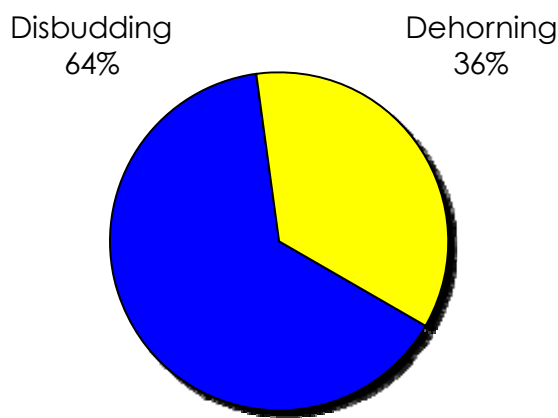
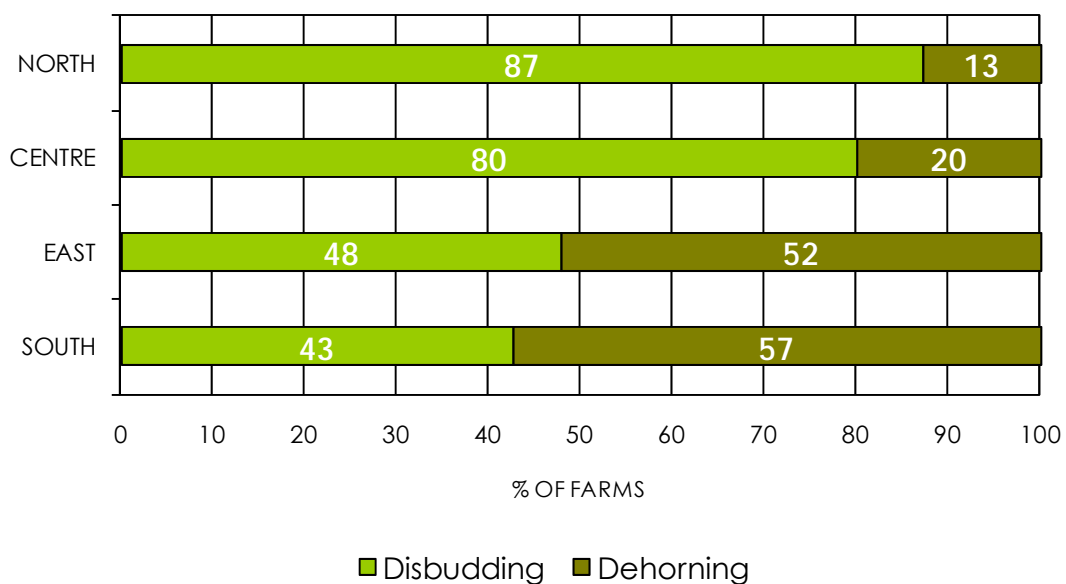


Figure 4.16. Percentage of farms practicing disbudding and dehorning in different European macro-regions



### Methods of disbudding and dehorning

Hot iron is the most used method of disbudding especially in the North and Centre macro-regions and in Italy (Table 4.10). In the South and the East, Countries like Spain, Portugal, Hungary, Poland and Romania use more frequently the caustic paste, while scoop/tube has been reported as the only method applied in Bulgaria.

The dehorning of more aged beef cattle is carried out particularly in the South and the East macro-regions (Table 4.10). The wire/saw is the most frequent method of dehorning across Europe. However some Countries report the use of other instruments (guillotine, dehorning shears).

Table 4.10. Methods used disbudding/dehorning for EU Member States where horns removal is carried out in beef cattle (%of farms)

EU REGIONS	COUNTRY	DISBUDDING	METHODS			DEHORNING	METHODS	
		% of farms	Hot iron	Caustic paste	Scoop/ tube	% of farms	Wire/ saw	Other
NORTH	Denmark	90	100	0	0	10	7	93
	Estonia	99	100	0	0	1	100	0
	Finland	98	100	0	0	2	100	0
	Ireland	90	95	5	0	10	60	40
	United Kingdom	84	87	8	5	16	28	72
	MEAN	87.3	91.2	6.1	2.7	12.7	40.5	59.5
CENTRE	Austria	93	100	0	0	7	100	0
	France	70	70	30	0	30	40	60
	Germany	85 <sup>1</sup>	98	2	0	15 <sup>1</sup>	100	0
	Netherlands	99	100	0	0	1	100	0
	MEAN	80.1	85.4	14.6	0.0	19.9	72.3	27.7
EAST	Bulgaria	90	0	0	100	10	0	100
	Hungary	75	0	87	13	25	100	0
	Poland	20	0	100	0	80	100	0
	Romania	97	0	100	0	3	100	0
	MEAN	48.0	0.0	93.3	6.7	52.0	94.4	5.6
SOUTH	Italy	27	71	19	10	73	81	19
	Portugal	91	4	70	26	9	50	50
	Spain	50	0	100	0	50	100	0
	MEAN	42.6	33.8	59.2	7.0	57.4	86.8	13.2
MEAN EU		64.5	52.6	43.3	4.1	35.5	73.5	26.5

<sup>1</sup> results from a concurrent survey with 23 farmers: 93% disbudding and 7% dehorning (but less than 25% of the animals on the farm get dehorned)

## PERCENTAGE OF DISBUDDED vs. DEHORNING CATTLE IN THE BEEF SECTOR

Results based on the percentage of cattle (Table 4.11 and Figures 4.17 and 4.18) were consistent with what was reported for farms (Table 4.10 and Figures 4.15 and 4.16).

Figure 4.17. Percentage of disbudded or dehorned beef cattle in European surveyed farms

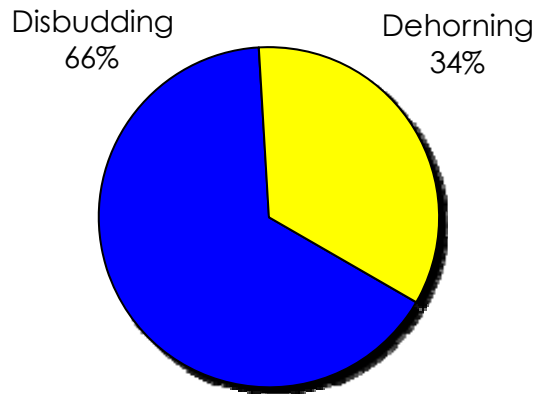


Figure 4.18. Percentage of disbudded or dehorned beef cattle in different European macro-regions

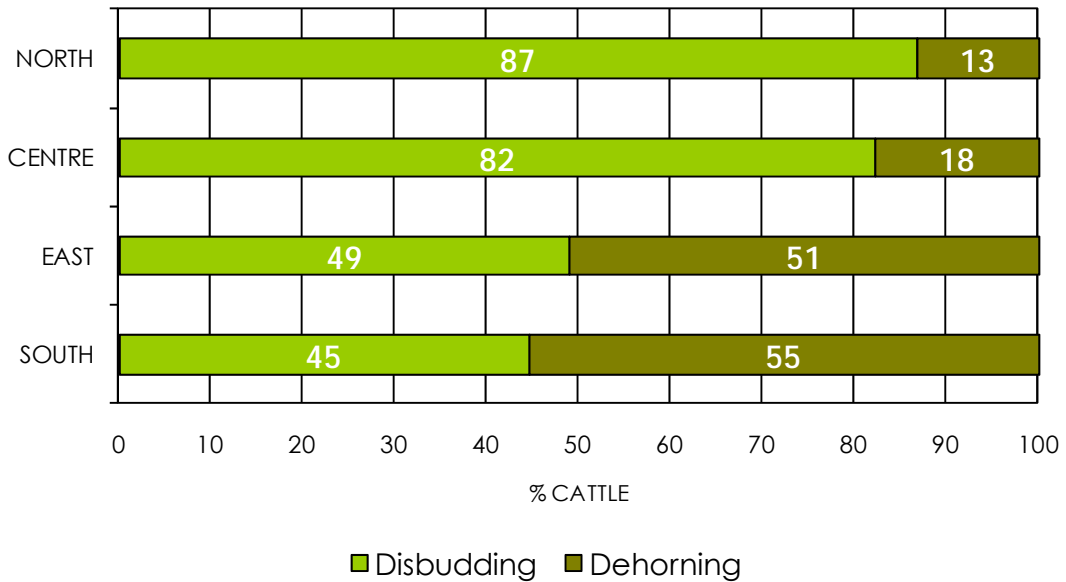


Table 4.11. Methods used for disbudding and dehorning in EU Member States (% of cattle)

EU REGIONS	COUNTRY	DISBUDDING % of cattle	METHODS (%)			DEHORNING % of cattle	METHODS (%)	
			Hot iron	Caustic paste	Scoop/tube		Wire/saw	Other
NORTH	Denmark	90	100	0	0	10	7	93
	Estonia	99	100	0	0	1	100	0
	Finland	98	100	0	0	2	100	0
	Ireland	85	95	5	0	15	50	50
	United Kingdom	86	87	8	5	14	41.5	58.5
	MEAN	86.8	91.2	6.1	2.7	13.2	45.1	54.9
CENTRE	Austria	93	100	0	0	7	100	0
	France	70	70	30	0	30	40	60
	Germany	91	99	1	0	9	100	0
	Netherlands	99	100	0	0	1	100	0
	MEAN	82.3	85.8	14.2	0.0	17.7	72.3	27.7
EAST	Bulgaria	90	0	0	100	10	0	100
	Hungary	88	0	98	2	12	100	0
	Poland	20	0	100	0	80	100	0
	Romania	97	0	100	0	3	100	0
	MEAN	49.1	0.0	94.2	5.8	50.9	94.4	5.6
SOUTH	Italy	31	71	19	10	69	74	26
	Portugal	92	4	48	48	8	50	50
	Spain	50	0	100	0	50	100	0
	MEAN	44.6	33.8	57.4	8.8	55.4	83.7	16.3
MEAN EU		65.7	52.7	43.0	4.3	34.3	73.9	26.1

## 4.5 USE OF DRUGS AND PERSON IN CHARGE OF THE PROCEDURE

### USE OF DRUGS DURING DISBUDDING

At European level, the percentage of farms using some kind of anaesthetic and/or analgesic treatment prior to and/or after disbudding is around 35% (Figure 4.19). However, treatment protocols are inconsistent. According to the experts, local anaesthesia is the most frequent pre-treatment (58% of the farms) follow by sedation + local anaesthesia (17%). In comparison with the dairy results (Figure 3.20), the percentage of farms using drugs for the disbudding of beef cattle is higher in all four macro-regions (Figure 4.20). However many differences have been reported among Countries due to the method of disbudding and to the legislation in force.

Figure 4.19. Percentage of farms using drugs during disbudding procedure in European surveyed beef farms

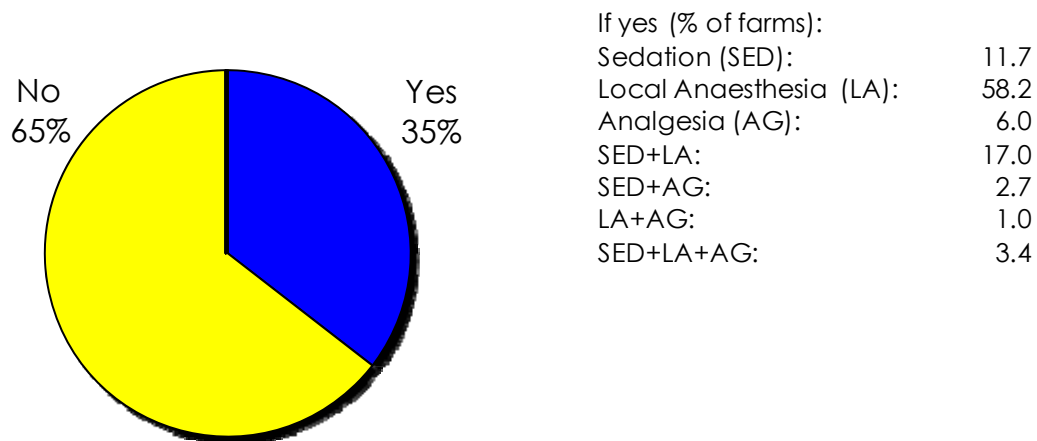
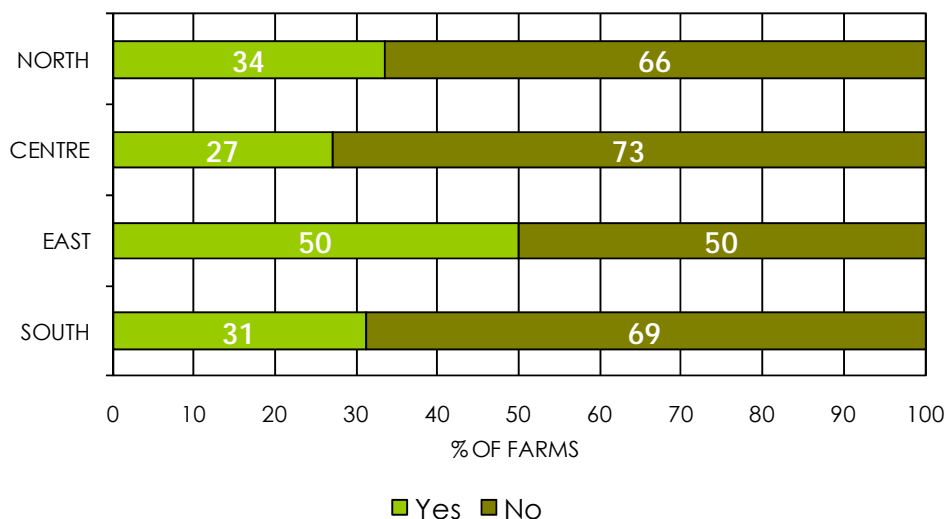


Figure 4.20. Percentage of farms using drugs during disbudding procedure in European macro regions



USE OF DRUGS DURING DEHORNING

Dehorning is a more invasive procedure carried out on more aged animals. Therefore, it is reasonable to observe a higher percentage of farms (52%) that report the use of some kind of medication during the procedure (Figure 4.21). Local anaesthesia (34%) and sedation + local anaesthesia (25%) are the more frequently applied protocols. However, as is the case of disbudding, treatment protocols appear to be inconsistent among geographical areas of Europe (Figure 4.22). The percentage of farms using drugs is particularly low in the East and this result appears inconsistent with what reported for disbudding (Figure 4.20).

Figure 4.21. Percentage of farms using drugs during dehorning procedure in surveyed European farms

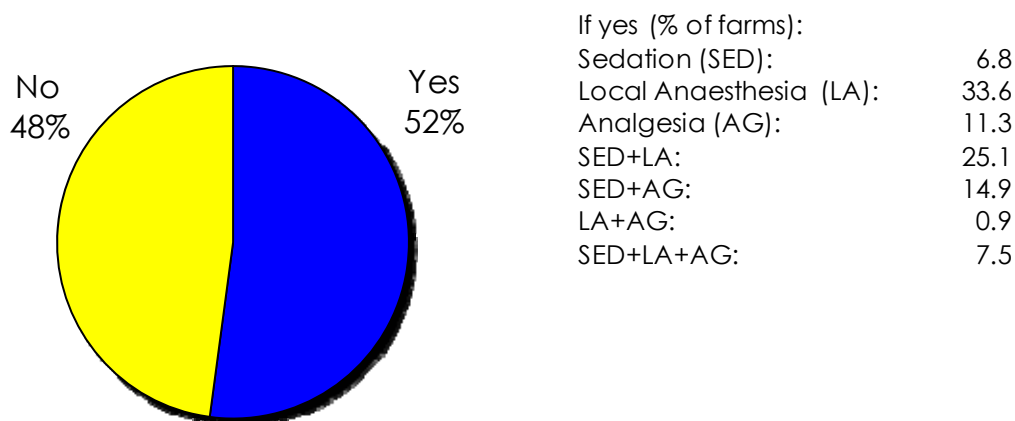
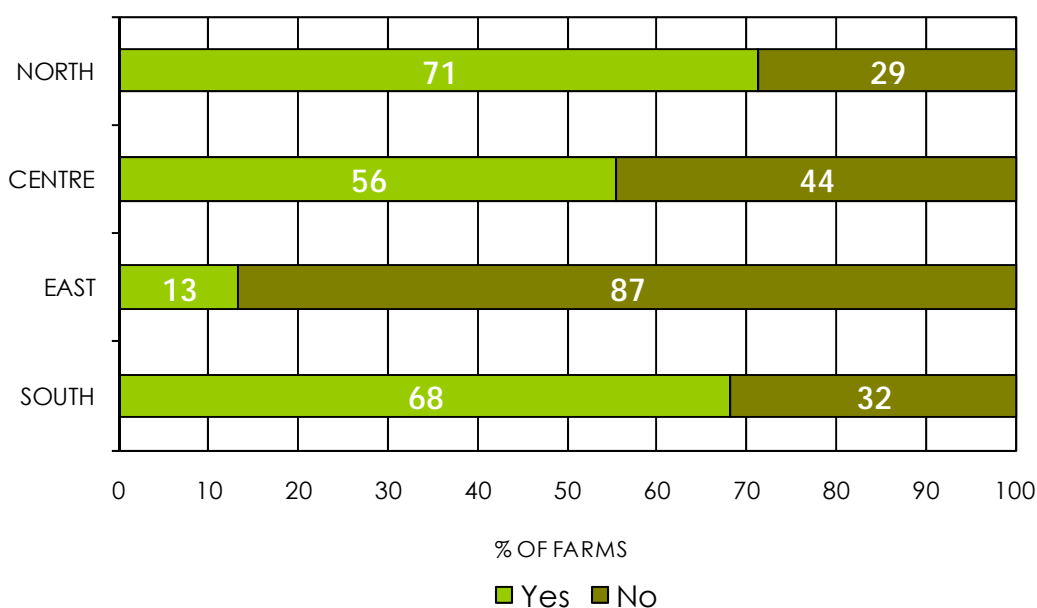


Figure 4.22. Percentage of farms using drugs during dehorning procedure in European macro-regions



## PERSON CARRYING OUT DISBUDDING

In the large majority of European beef farms, the stockman is the person carrying out the disbudding of the beef calves, followed by the veterinarian (Figure 4.23). However, differences have been reported among macro-regions as shown in Figure 4.24. The presence of a veterinarian appears more frequent in the East while in the North the intervention of other persons has frequently reported in Ireland.

Figure 4.23. Person carrying out the disbudding procedure in Europe (% of farms)

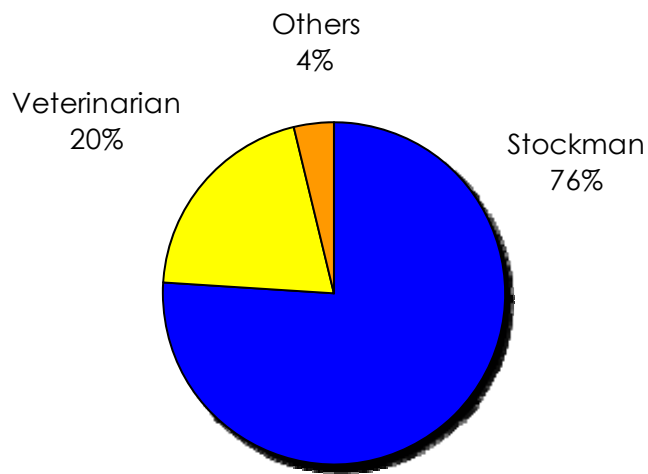
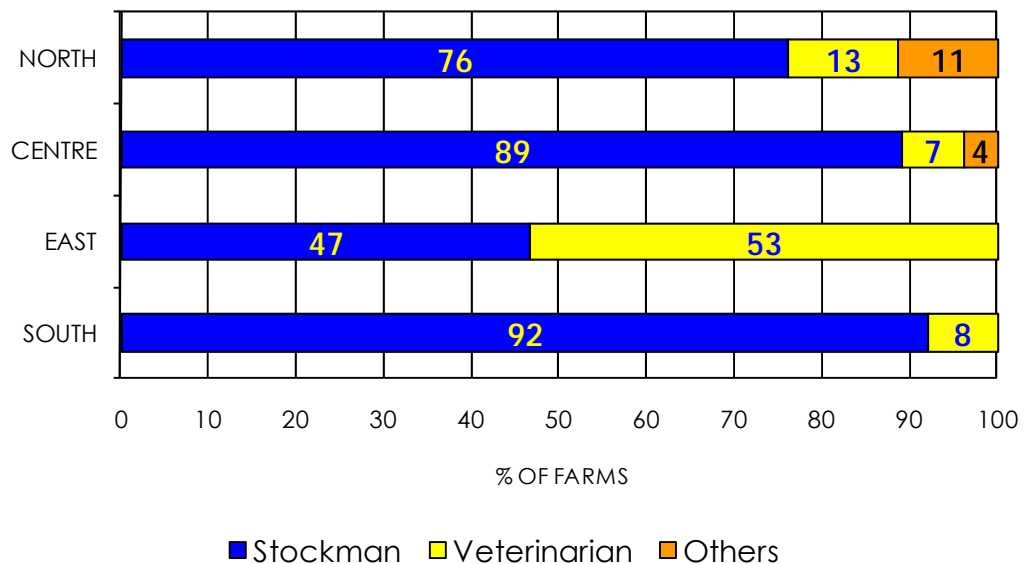


Figure 4.24. Person carrying out the disbudding procedure in different European regions (% of farms)





PERSON CARRYING OUT DEHORNING

Dehorning is a more invasive procedure and this could explain why it is more consistently carried out by veterinary practitioners, often with the assistance of the stockman (Figure 4.25). This has been reported particularly for Centre and East regions (Figures 4.26). In the South, instead, where dehorning is carried out only on horn-injured animals or to remove the tip of the horn, the stockman is still main person in charge of the procedure.

Figure 4.25. Person carrying out the dehorning procedure in Europe (% of farms)

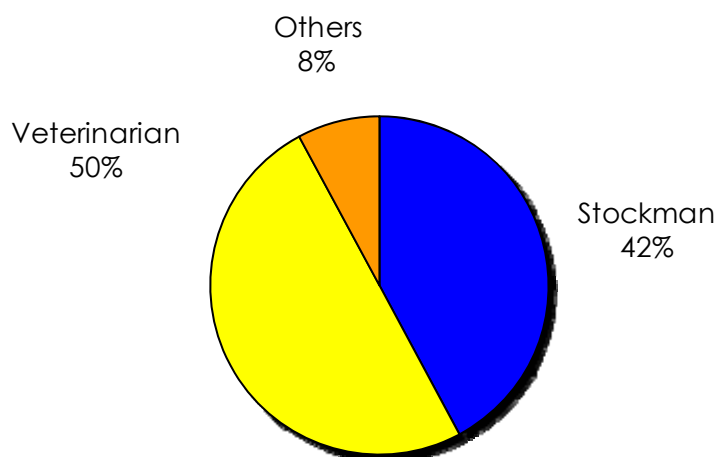
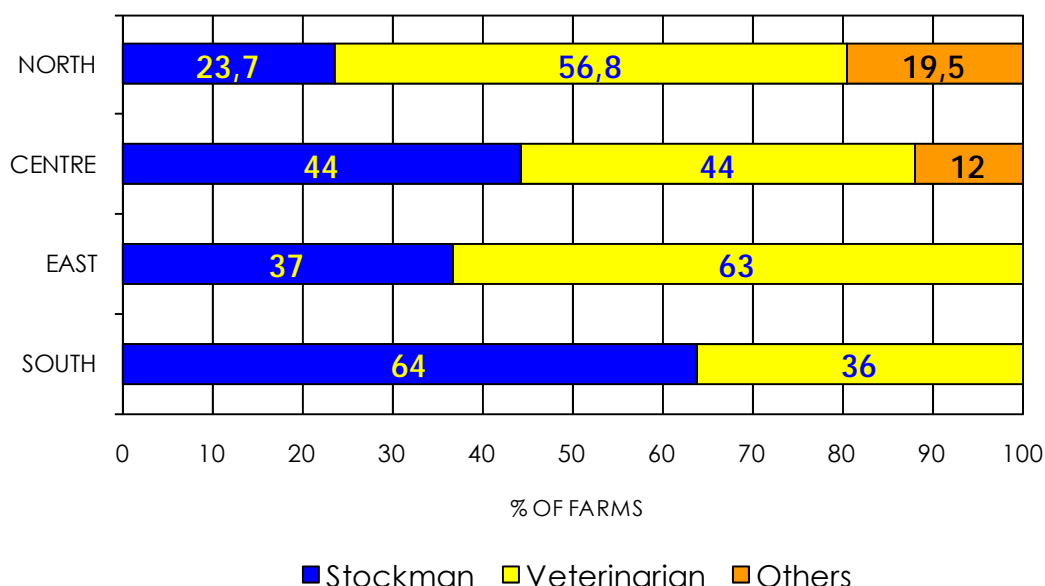


Figure 4.26. Person carrying out the dehorning procedure in different European regions (% of farms)

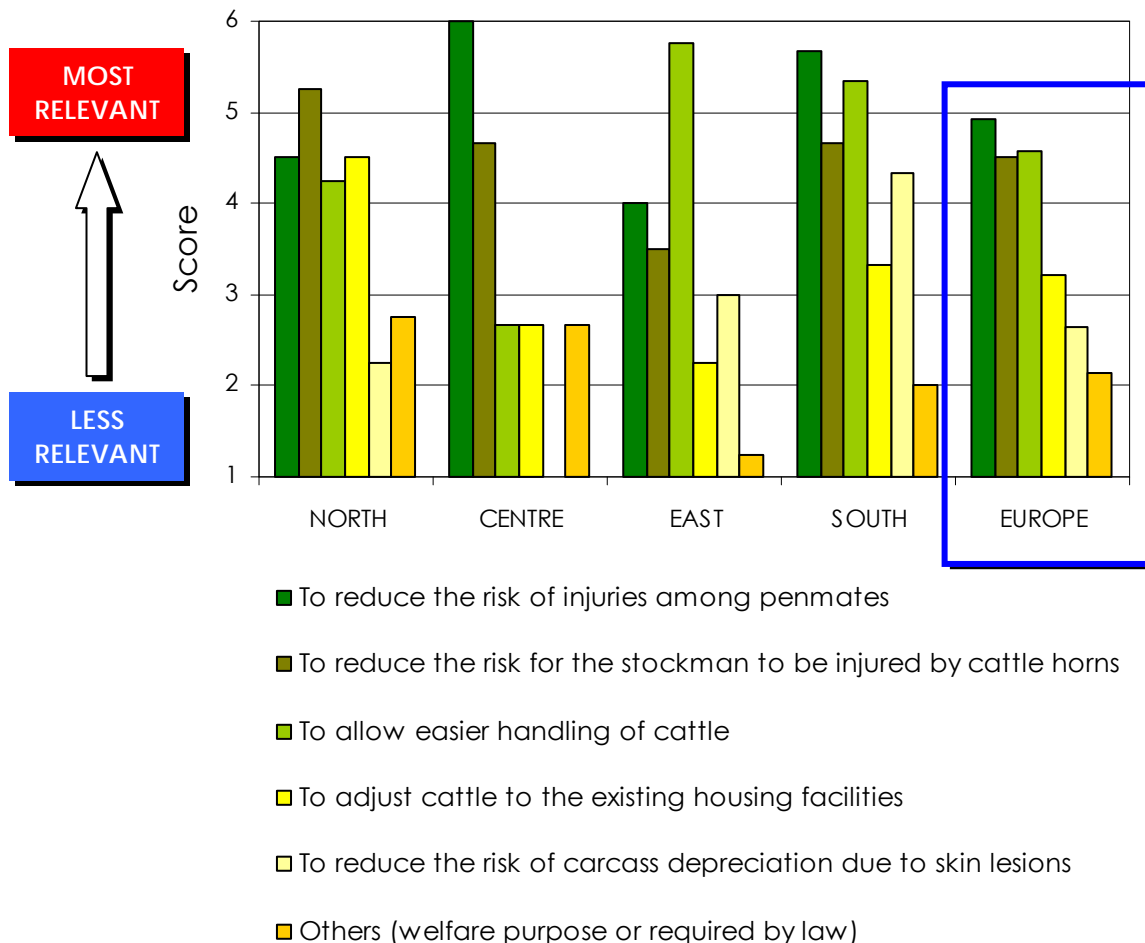


## 4.6 GENERAL QUESTIONS ON BEEF CATTLE DISBUDDING/DEHORNING

### Why do farmers practice disbudding/dehorning in beef cattle?

According to the experts opinion, in Europe horns removal is considered an effective solution for the safety of cattle and farm crew and to allow an easier handling of beef cows (Figure 4.27). However, the same reasons had a different importance moving from a given macro-region to another. The easier handling of cattle was particularly relevant in the East and the South while to reduce the risk of injuries among pen-mates was predominant in the Centre and the South. It is interesting to notice that dehorning was considered important to lower the carcass depreciation due to skin lesions only by the experts of the South but it has never been mentioned in the reports of the Centre.

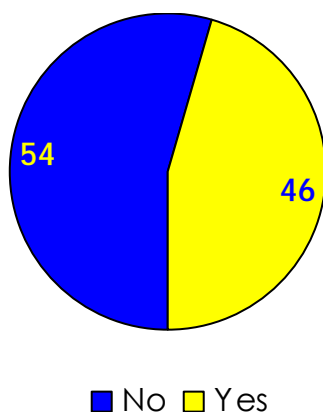
Figure 4.27. Reasons why dairy farmers practice disbudding/dehorning in Europe and in the four macro-regions (average score)



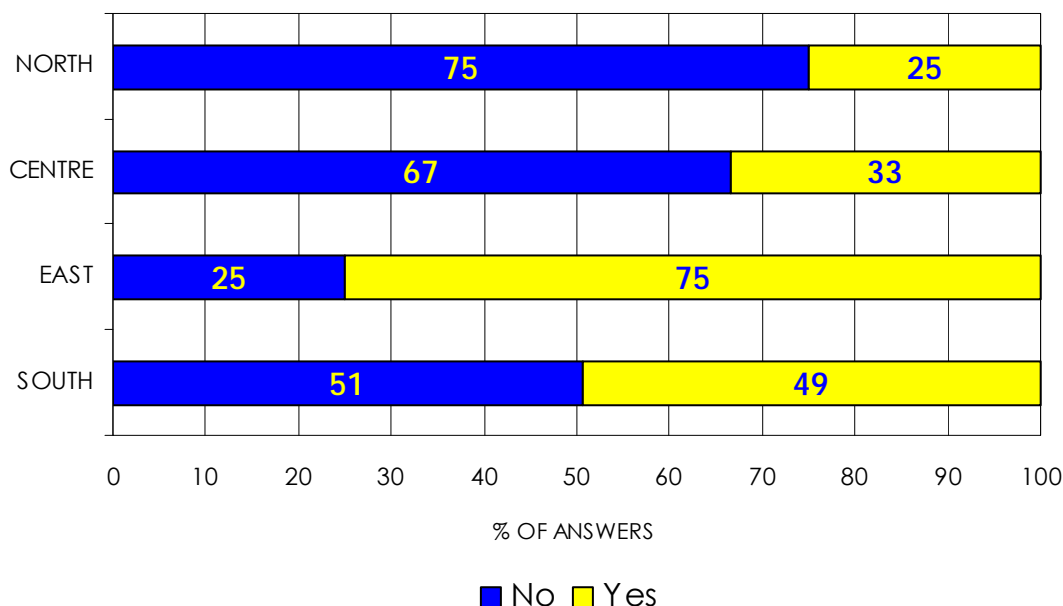
Does cattle breed affect the farmers' decision to practice disbudding/dehorning?

Nearly 45% of experts judge the decision to dehorn beef cattle to be dependent on their breed but the results obtained in the 4 macro-regions are inconsistent (Figure 4.28). Differences among macro-regions are especially due to breeds that are not routinely dehorned: Chianina, Piemontese, Maremmana, Marchigiana (Italy), Simmental (Germany, Austria and the East) Tyrolean Grey (Austria), Scottish Highland (UK).

Figure 4.28. Does cattle breed affect the farmers' decision to practice disbudding/dehorning? (% of answers)  
EUROPE



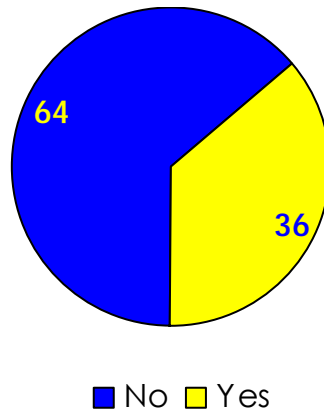
MACRO-REGIONS



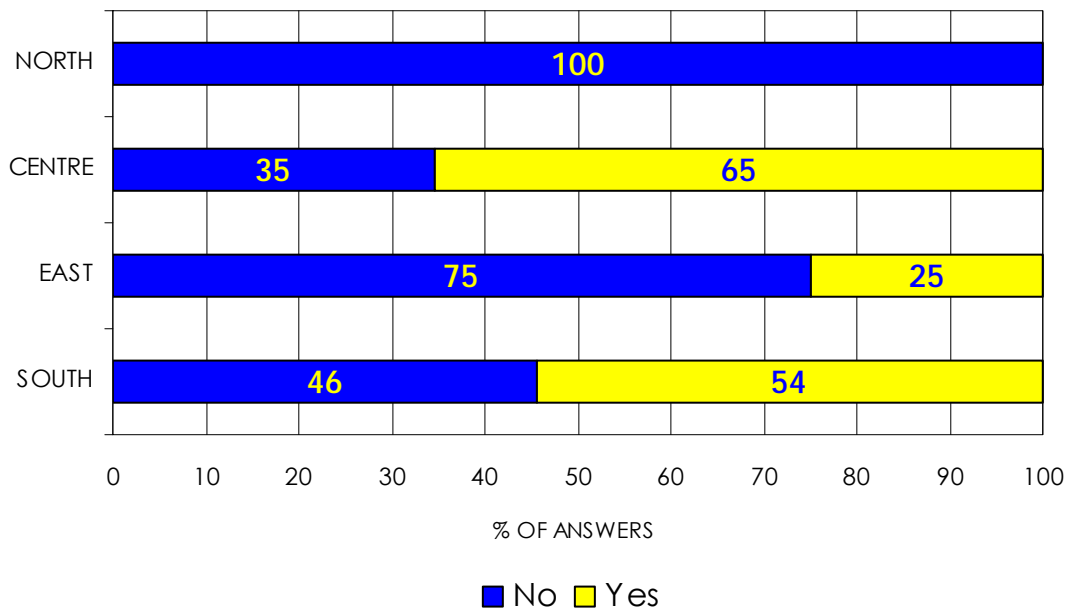
## Does cattle gender affect the farmer decisions to practice disbudding/dehorning?

At the European level, it appears that cattle gender has a certain effect on the decision to practice to disbud/dehorn beef calves (Figure 4.29). Based on experts opinions, the North and the East macro-regions seems more addressed to dehorn or not to dehorn beef cattle regardless of their gender.

Figure 4.29. Does cattle gender affect the farmer decisions to practice disbudding/dehorning? (% of answers)  
EUROPE



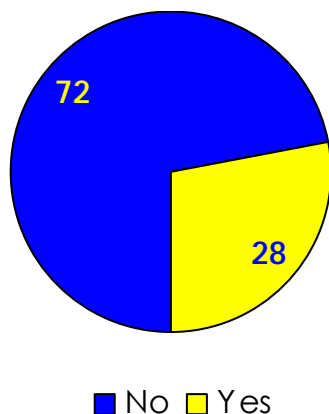
### MACRO-REGIONS



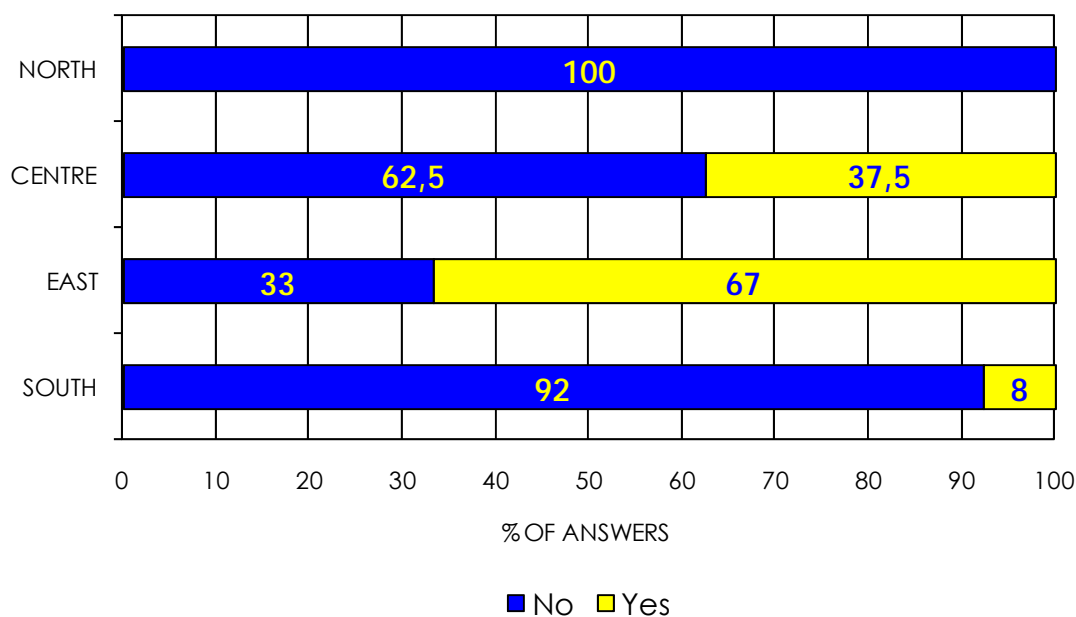
Does farm size affect the farmers' decision to practice disbudding/dehorning?

At the European level, appears to be a less important factor in determining disbudding and dehorning practices in beef cattle farms (Figure 4.30). However, consistent with the dairy, it has been reported that smaller farms in the East and the Centre macro-regions tend to dehorn less consistently.

Figure 4.30. Does farm size affect the farmers' decision to practice disbudding/dehorning (% of answers)?  
EUROPE



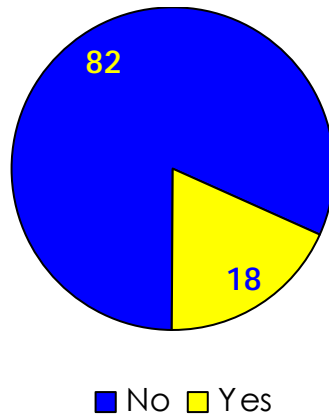
MACRO-REGIONS



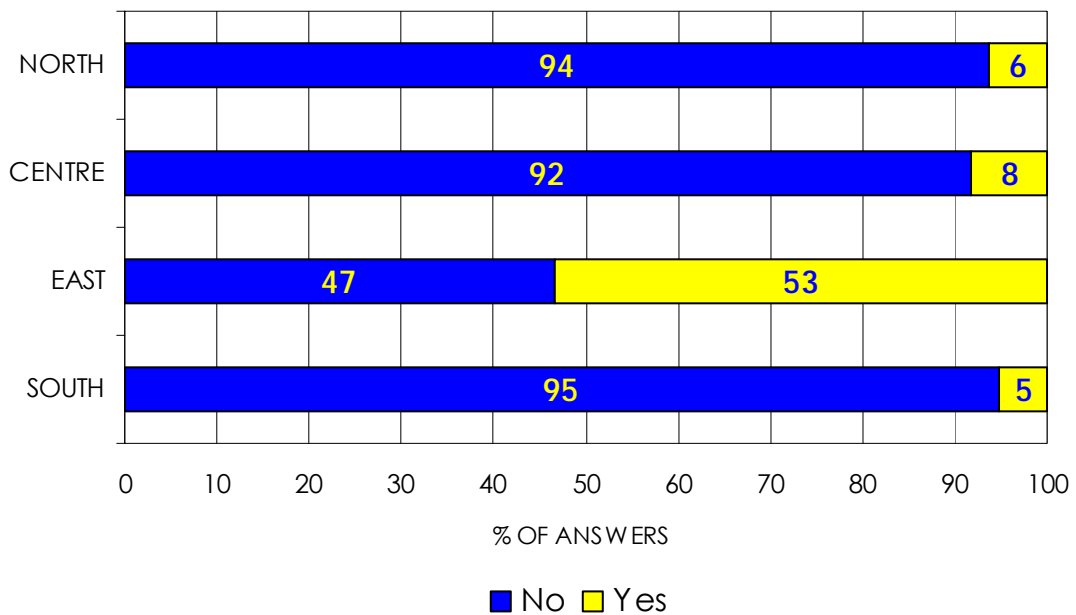
### Does the farmers' age affect the decision to practice disbudding/dehorning ?

The farmer's age appears affect disbudding/dehorning practices to a smaller degree (Figure 4.31). However, particularly in the East macro-region where small scale farms are prevailing, older farmers tend not to dehorn their animals.

Figure 4.31. Does the farmers' age affect the decision to practice disbudding/dehorning (% of answers)?  
EUROPE



### MACRO-REGIONS

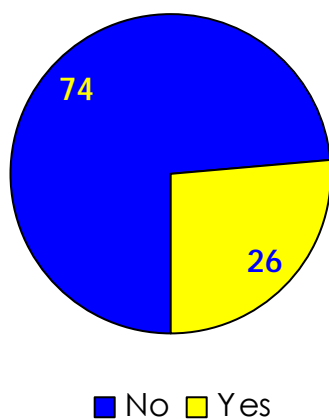


Does the farmers' level of education affect the decision to practice disbudding/dehorning?

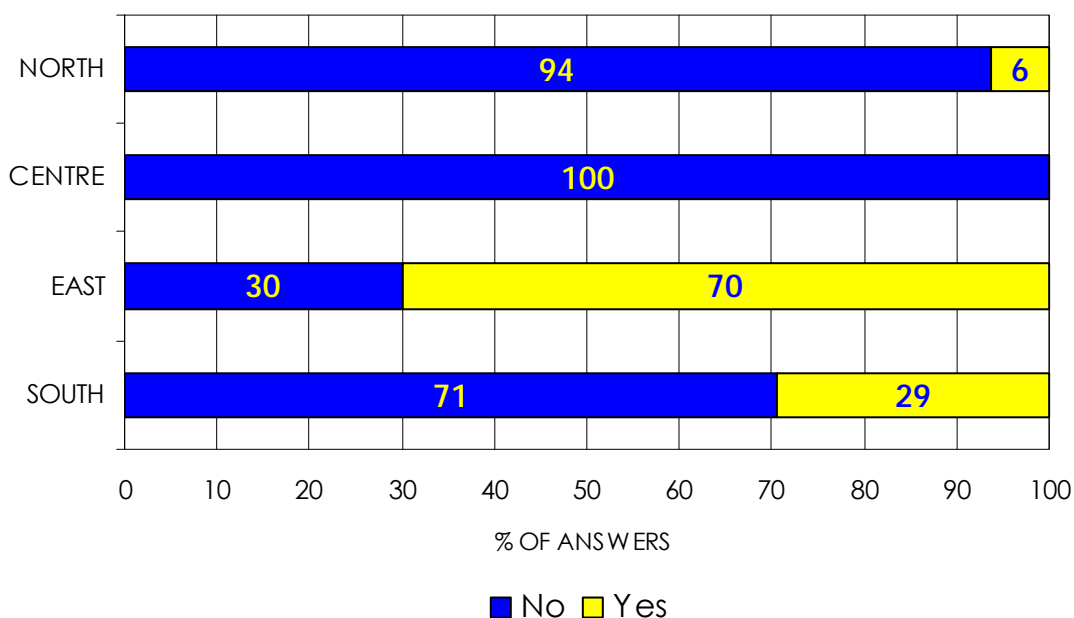
In Europe level, the farmers' level of education appears to have a limited influence on dehorning practices (Figure 4.32). The effect of the level of education seems to be far more relevant in the East macro-region, where it is reported that younger, more educated generations are keener on dehorning for work safety reasons.

Figure 4.32. Does the farmers' level of education affect the decision to practice disbudding/dehorning (% of answers)?

EUROPE



MACRO-REGIONS

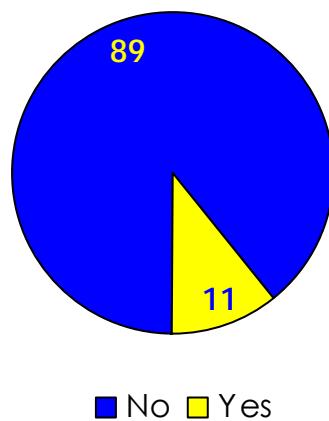


## Do the local traditions affect the farmer decision to practice disbudding/dehorning?

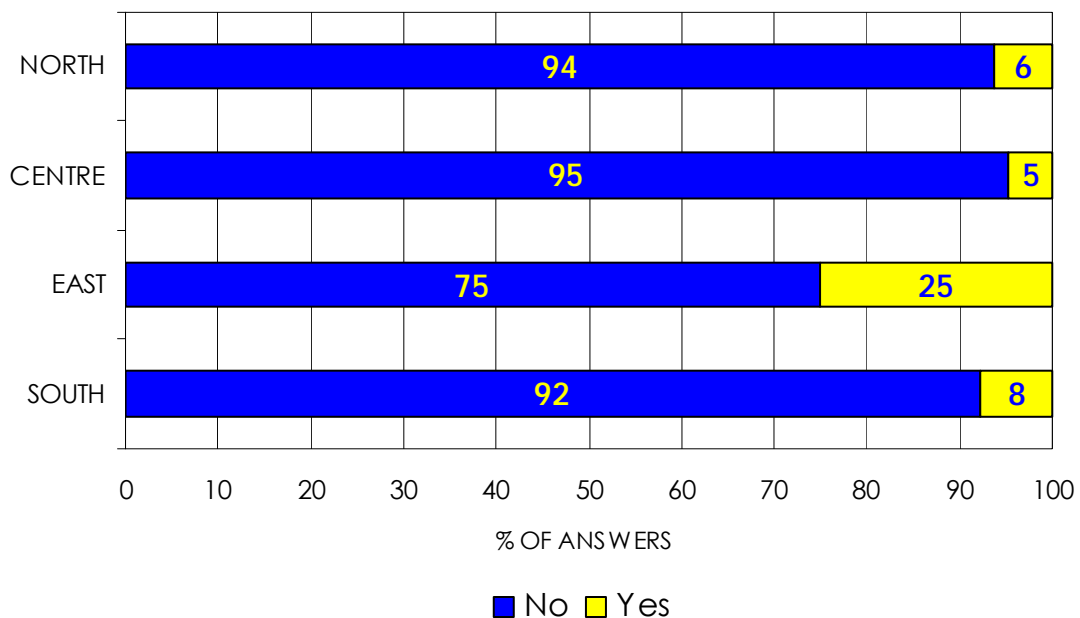
In general, only few experts judged local traditions to have an effect on the practice of dehorning beef cattle (Figure 4.33). Traditions tend to preserve the natural look of the animals, for aesthetic reasons and particularly where tie stall systems prevail. In beef farms, an industrial management system has progressively taken place deleting most of the existing traditions.

Figure 4.33. Do the local traditions affect the farmer decision to practice disbudding/dehorning (% of answers)?

EUROPE



MACRO-REGIONS

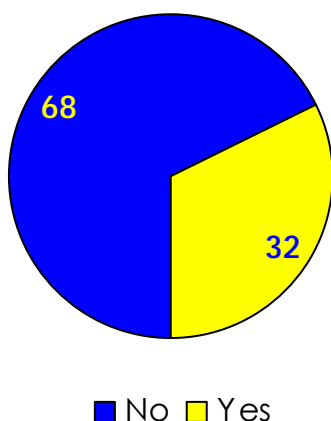




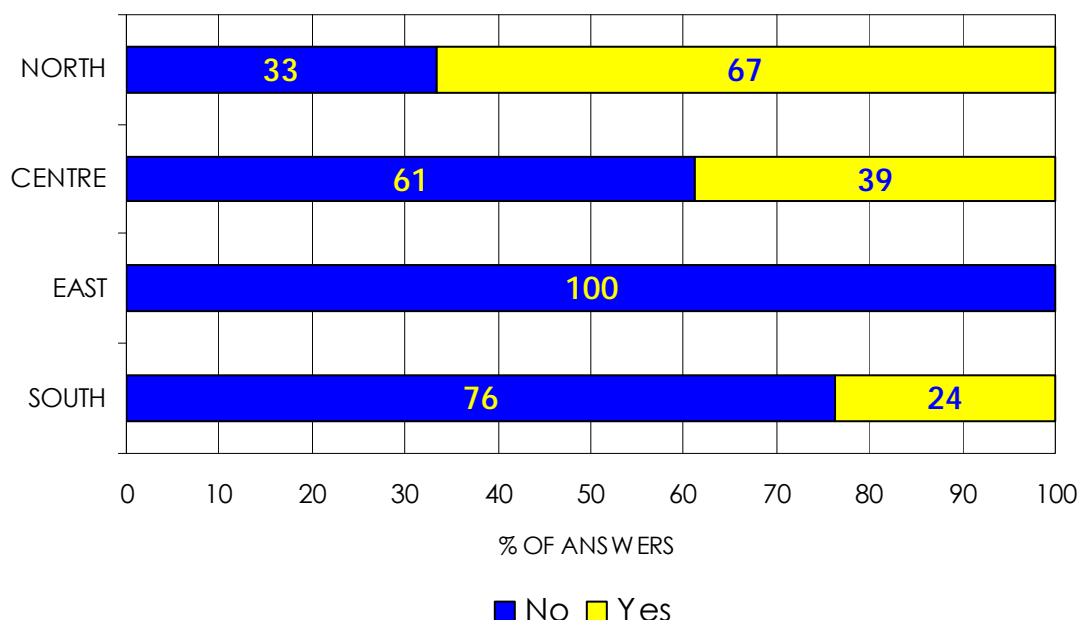
### Are there guidelines beyond legislation in force on the disbudding/dehorning practice?

Dehorning is regulated by law only in a few Member States, but national guidelines exist particularly in the North to set standards for best practices in disbudding and dehorning of beef cattle (Figure 4.34). Disbudding is usually recommended over dehorning as a more humane alternative. Specific information are sometimes made available online or by farm assurance schemes and sometimes they are published in specialised press.

Figure 4.34. Are there guidelines beyond legislation on disbudding/dehorning practice (% of answers)?  
EUROPE



### MACRO-REGIONS

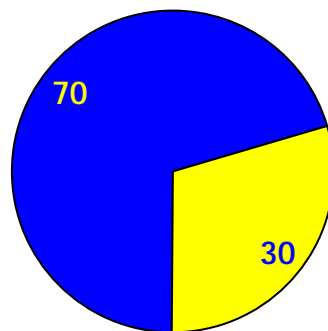


### Is there any specific training regarding the practice of disbudding/dehorning ?

Consistent with the lower percentage of dehorned animals, training on how to dehorn cattle is less frequent in beef than in dairy (Figure 4.35) . Usually training is provided by agricultural schools or by veterinary practitioners. Other resources are: specialised press (breeders' associations bulletins, assurance schemes' guidelines); institutional websites; hands-on seminars by manufacturers of disbudding tools (e.g. Buddex®). Training opportunities appear to be more available in the North macro-region where beef cattle are more frequently dehorned.

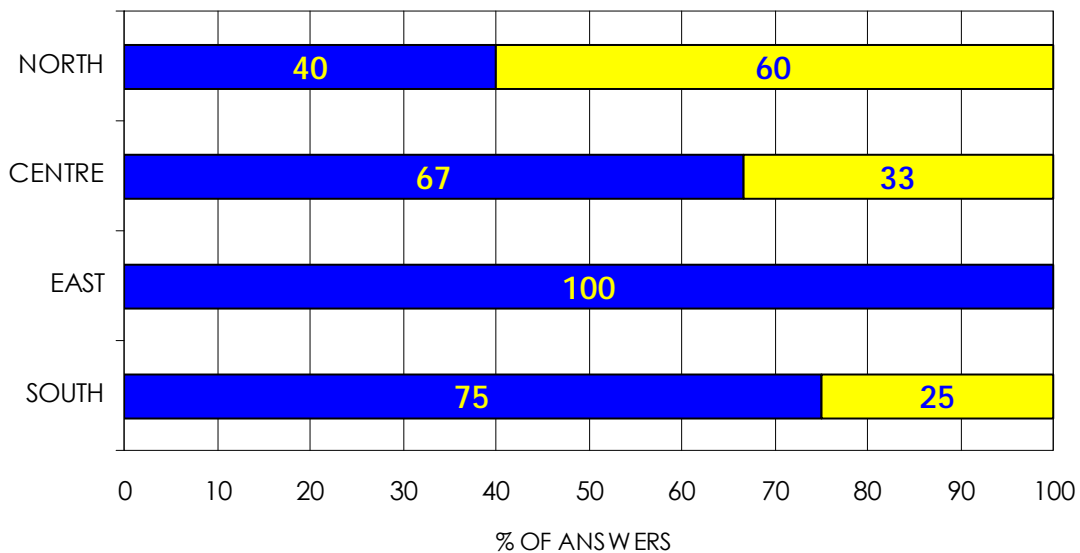
Figure 4.35. Is there any specific training regarding the practice of disbudding/dehorning (% of answers)?

EUROPE



■ No ■ Yes

MACRO-REGIONS



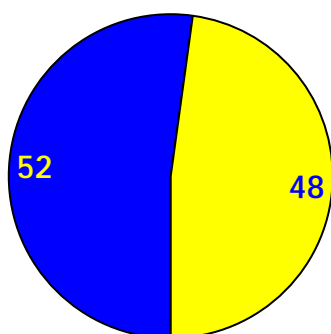
■ No ■ Yes

Is there any discussion or attempt to improve the current practices of disbudding/dehorning ?

There is some level of discussion going on across Europe about disbudding and dehorning practices in beef cattle (Figure 4.36). The discussion particularly concern the use of sedation, anaesthesia and analgesia and the preference for disbudding over dehorning as less invasive option. There is also some discussion on polled genetics.

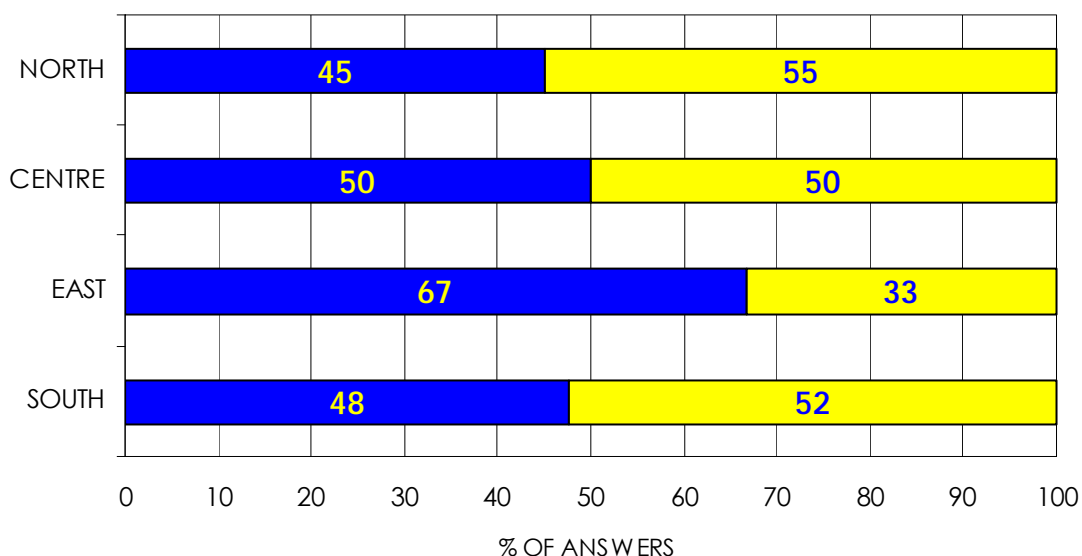
Figure 4.36. Is there any discussion or attempt to improve the current practices of disbudding/dehorning (% of answers)?

EUROPE



■ No ■ Yes

MACRO-REGIONS

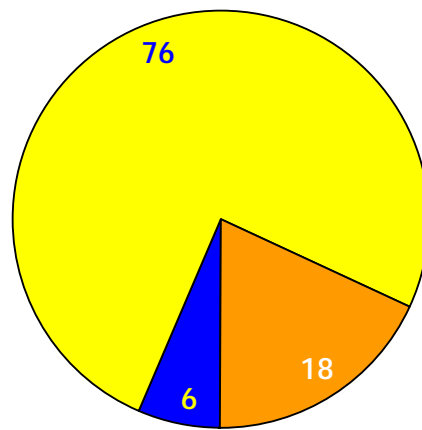


■ No ■ Yes

### Is there any attempt to develop alternative practices to disbudding/dehorning?

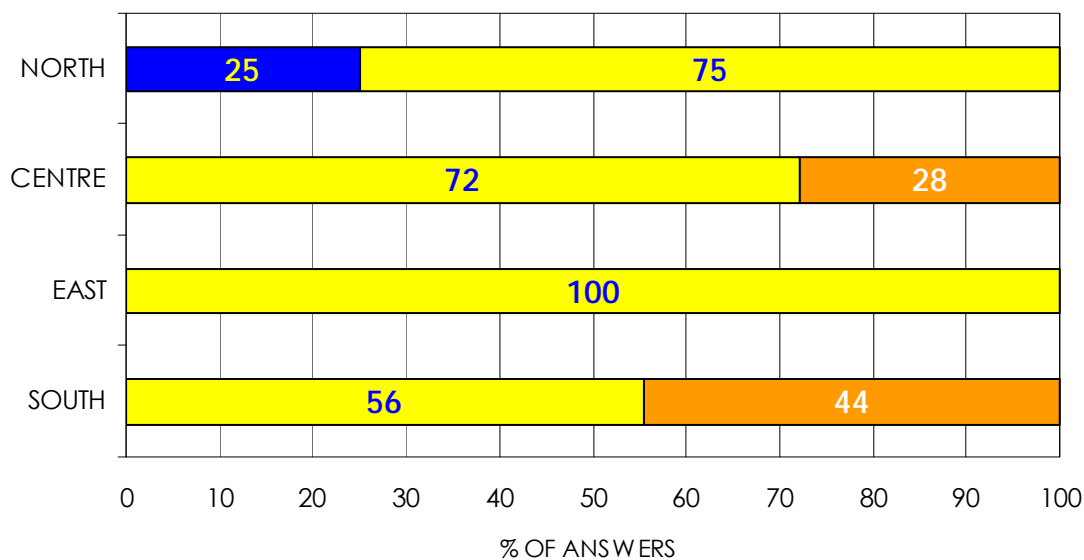
It appears that rearing polled cattle is considered the most viable alternative to the dehorning of beef cattle in Europe (Figure 4.37). This is particularly evident in the North and East macro-regions, where most of the polled beef breeds are presently reared (see Figure 4.2). In the South and the Centre some interest has been reported to the design of housing systems more suitable to host horned cattle.

Figure 4.37. Is there any attempt to develop alternative practices to disbudding/dehorning (% of answers)?  
EUROPE



■ No ■ Polled cattle breeding ■ New housing facilities

### MACRO-REGIONS



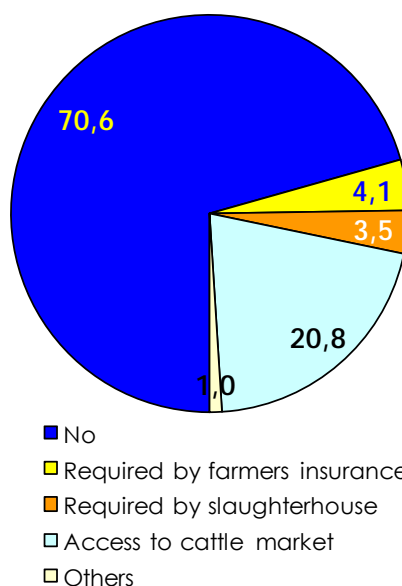
■ No ■ Polled cattle breeding ■ New housing facilities

### Is there any obligation to dehorn?

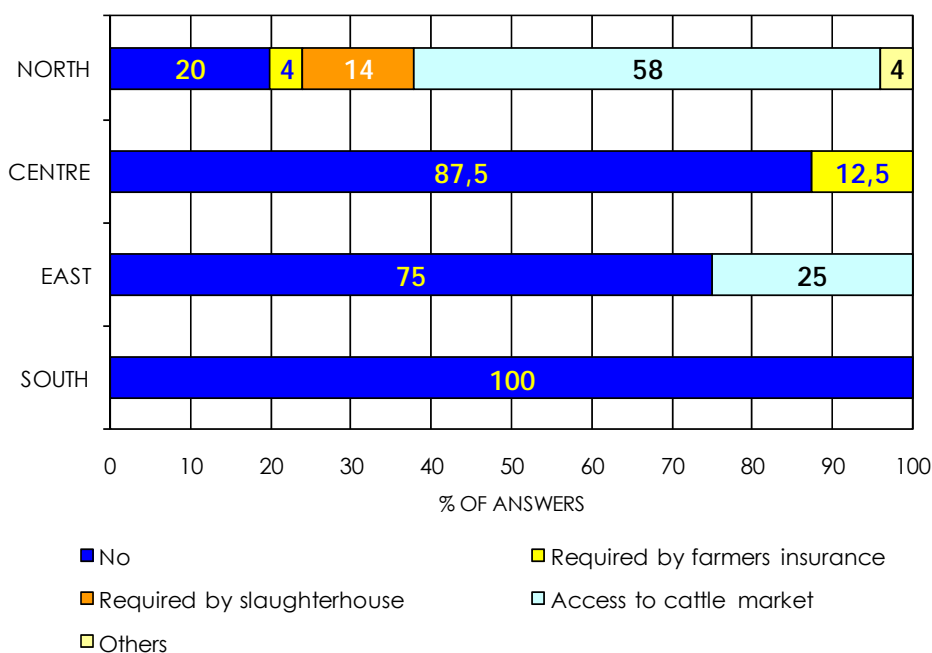
In general there is no obligation to dehorn beef cattle in Europe (Figure 4.38). However, in some Member States of the North (including, for instance, the UK and Ireland) experts report that animals that are brought at auctions or markets for sale must be dehorned. In the same macro-region, dehorning is also required by some slaughterhouses and in the North and Centre by farmer insurance companies. A growing demand of dehorn young stock for beef production has been reported in Hungary.

Figure 4.38. Is there any obligation to dehorn (% of answers)?

#### EUROPE



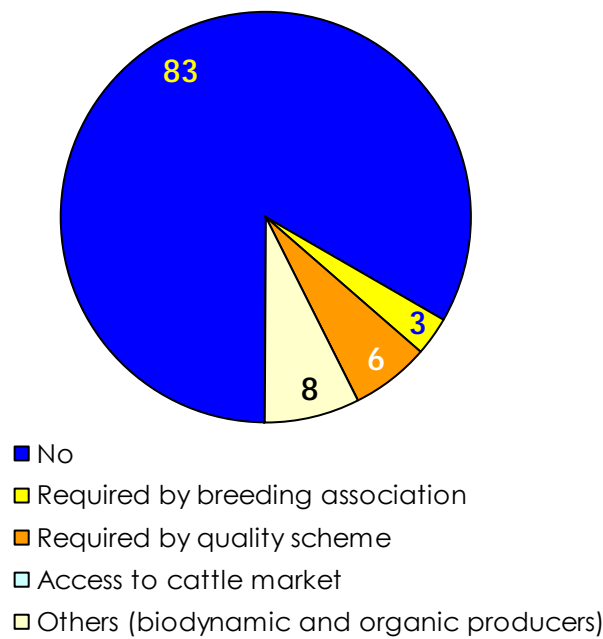
#### MACRO-REGIONS



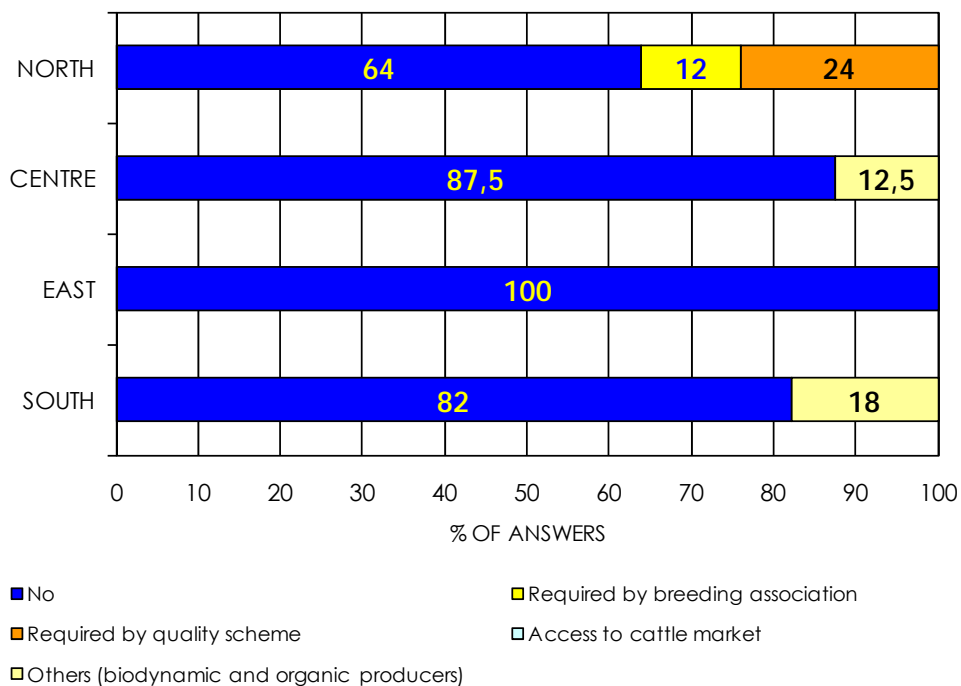
## Is there any obligation not to dehorn?

Obligations not to dehorn beef cattle can be found in the North and they are required by some breed standards associations (e.g. Scottish Highland Cattle) or by specific quality schemes like for some meat brands in Denmark (Figure 4.39). Dehorning is banned in biodynamic systems (like the Demeter scheme) and by organic farming schemes operating in Spain and Italy.

Figure 4.39. Is there any obligation not to dehorn (% of answers)?  
EUROPE



## MACRO-REGIONS



## 5. DEHORNING IN SUCKLER HERDS

Information on the source of the data collected for dairy cattle are reported in Table 5.1. Questionnaires coming from agricultural public institutions were available only in a few Countries. In most Countries, information were given by experts having different expertise and background.

Table 5.1. Sources of data in different EU Member States

EU REGION	COUNTRY	Ministries of Agriculture or other governmental sources	Cattle breeding associations	Farmers or farmers' associations	(Associations of) veterinary practitioners	Other (see notes)
NORTH	Denmark		<input checked="" type="checkbox"/>			
	Estonia		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
	Finland					<input checked="" type="checkbox"/> <sup>1</sup>
	Ireland				<input checked="" type="checkbox"/>	
	Sweden	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/> <sup>2</sup>
	United Kingdom				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>3</sup>
CENTRE	Austria	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>4</sup>
	France		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <sup>5</sup>
	Germany	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
	Netherlands		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
EAST	Bulgaria			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <sup>6</sup>
	Hungary		<input checked="" type="checkbox"/>			
	Poland			<input checked="" type="checkbox"/>		
	Romania			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>7</sup>
	Slovenia	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <sup>8</sup>
SOUTH	Greece		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/> <sup>9</sup>
	Italy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Portugal					<input checked="" type="checkbox"/> <sup>10</sup>
	Spain		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

<sup>1</sup> Finnish Center for Animal Welfare, University of Helsinki

<sup>2</sup> Swedish meats

<sup>3</sup> University of Liverpool

<sup>4</sup> National milk recording scheme (at state level)

<sup>5</sup> Extension organisations

<sup>6</sup> Institute of Animal Science, Stara Zagora University

<sup>7</sup> University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca

<sup>8</sup> Control bodies

<sup>9</sup> Genetic improvement center of Ioannina and Drama

<sup>10</sup> Faculty of Veterinary Medicine of Lisboa

Some information on the sample of farms and cattle surveyed in each Country by the experts are reported in Table 5.2.

Table 5.2. Suckler herds population in EU Member States

EU REGIONS	COUNTRY	EUROSTAT 2007	SURVEYED DATA		
		Suckler herds population	Number of farms	Number of animals	Number of experts
NORTH	Denmark	105 000	9 200	105 000	1
	Estonia	8 600	-	-	-
	Finland	44 600	2 000	44 600	1
	Ireland	1 117 000	115	na	na
	Sweden	182 000	50	830	1
	United Kingdom	1 665 000	917	100 288	8
	<b>TOT</b>	<b>3 122 200</b>	<b>12 282</b>	<b>250 718</b>	<b>12</b>
CENTRE	Austria	271 300	2 440	24 400	13
	France	4 162 600	15 000	500 000	17
	Germany	724 900	55	957	3
	Netherlands	89 000	12 000	1 100 000	2
	<b>TOT</b>	<b>5 247 800</b>	<b>29 495</b>	<b>1 625 357</b>	<b>35</b>
EAST	Bulgaria	14 000	79	380	
	Hungary	57 000	18	-	-
	Poland	61 300	-	-	-
	Romania	30 600	5	380	5
	Slovenia	60 400	3	66	1
	<b>TOT</b>	<b>223 300</b>	<b>105</b>	<b>826</b>	<b>6</b>
SOUTH	Greece	145 000	1 893	13 450	3
	Italy	441 000	1 119	59 143	12
	Portugal	417 600	120	11 100	2
	Spain	1 959 000	35	1 683	6
	<b>TOT</b>	<b>2 962 600</b>	<b>3 167</b>	<b>85 376</b>	<b>23</b>
<b>TOT EU</b>		<b>11 555 900</b>	<b>45 049</b>	<b>1 962 277</b>	<b>76</b>

na= not available



Table 5.3. Reliability of the national information for suckler herds (% over 7 items)

EU REGIONS	COUNTRY	Rough estimates % of responses	Fairly reliable estimates % of responses	Census data % of responses
NORTH	Denmark		100	
	Estonia	100		
	Finland		100	
	Ireland	50	50	
	Sweden	100		
	United Kingdom	49	44	7
CENTRE	Austria	59	41	
	France	50	50	
	Germany	10	85	5
	Netherlands		100	
EAST	Bulgaria		100	
	Hungary		100	
	Poland	100		
	Romania		100	
	Slovenia		100	
SOUTH	Greece		100	
	Italy	30	70	
	Portugal	100		
	Spain	36	64	

## 5.1 GENERAL RESULTS

Information on the main cattle breeds raised in the suckler herds in the different European Member States are reported in Table 5.4. Specialized French beef breeds have a wide distribution across Europe particularly in the Eastern Countries and Spain. Charolaise and Limousine and their crosses have replaced part of the native suckler breeds in the UK and Ireland. However, Hereford and Aberdeen Angus are still raised in the North. Strains of Simmental cattle are reared as suckler cows in Austria, Germany, Denmark, Hungary and Slovenia. Local beef breeds are still raised for beef production in the South.

Table 5.4. Main suckler herds breeds reared in EU Member States

EU REGIONS	COUNTRY	MAIN SUCKLER HERDS BREEDS REPORTED		
NORTH	Denmark	Limousine	Simmental	Hereford
	Estonia	Limousine	Aberdeen Angus	Hereford
	Finland	Hereford	Aberdeen Angus	Charolaise
	Ireland	Charolaise + crossbreds	Limousine + crossbreds	-
	Sweden	Hereford	Charolaise	Aberdeen Angus
	United Kingdom	Limousine	Aberdeen Angus	Simmental
CENTRE	Austria	Simmental	Limousine + crossbreds	Angus+crossbreds
	France	Charolaise	Limousine	Blonde d'Aquitaine
	Germany	Simmental	Charolaise	Braunvieh
	Netherlands	Belgian Blue	Improved red & white	Limousine
EAST	Bulgaria	Hereford	Limousine	Local breeds
	Hungary	Charolaise	Simmental	Aberdeen Angus
	Poland	Limousine	Charolaise	Piemontese
	Romania	Charolaise	Limousine	Aberdeen Angus
	Slovenia	Limousine	Simmental	-
SOUTH	Greece	Local crossbreds	-	-
	Italy	Piemontese	Simmental	Limousine
	Portugal	National breeds	Limousine	Charolaise
	Spain	Limousine (Holstein)	Spanish breeds	Charolaise

### DEHORNING IN SUCKLER HERDS IN EUROPE

More than 65% of the suckler herds show dehorned cattle in Europe and dehorned animals have been estimated as 66% of the total cattle population from suckler herds (Figure 5.1). However, clear differences were observed among macro-regions (Figure 5.2). Suckler herds with dehorned cattle can be found mainly in the North of Europe, with a great contribution from Denmark, Ireland and the UK (Table 5.5). However in the same macro-region, farms with dehorned suckler cows are instead less frequent in Sweden and Estonia. The average percentage of suckler herds with dehorned cattle is around 60% in all the other macro-regions but, within each of them, the contribution from a given Country can be extremely different as in the case of the East (Table 5.5). When cattle population is taken into account, the percentage of dehorned suckler cows is the lowest in the South (Figure 5.2 and Table 5.5). The percentage of herds with polled cattle and the percentage of polled suckler cows are low (7.2 and 7.7%, respectively). Polled suckler cows are raised mainly in the Countries where polled cattle breeds such as Aberdeen Angus, Hereford, Galloway are used for calves production (Tables 5.4 and 5.5 and Figure 5.2).

Figure 5.1. Percentage of suckler herds with dehorned and polled animals and percentage of dehorned and polled cattle from suckler herds, in Europe

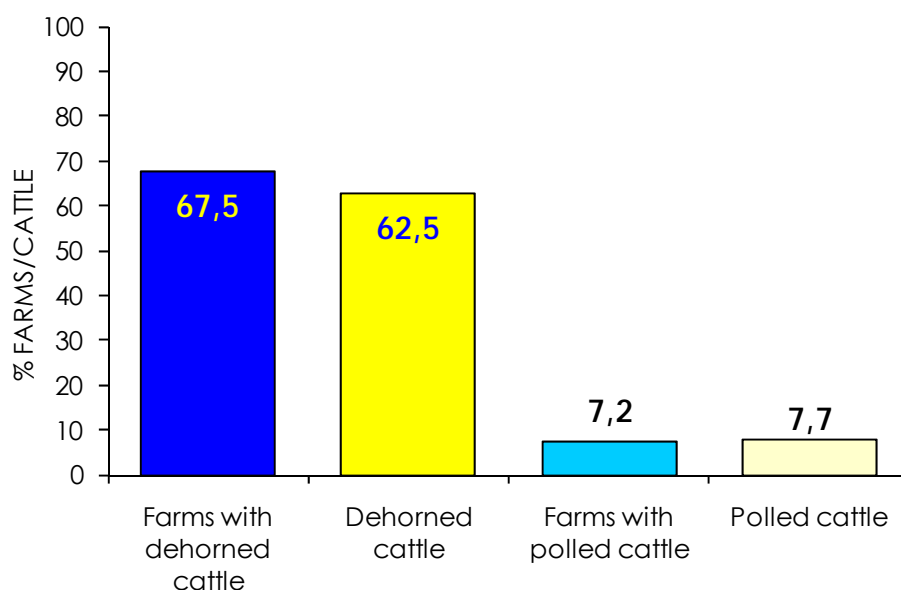


Figure 5.2. Percentage of suckler herds with dehorned and polled animals and percentage of dehorned and polled cattle from suckler herds in different European macro-regions

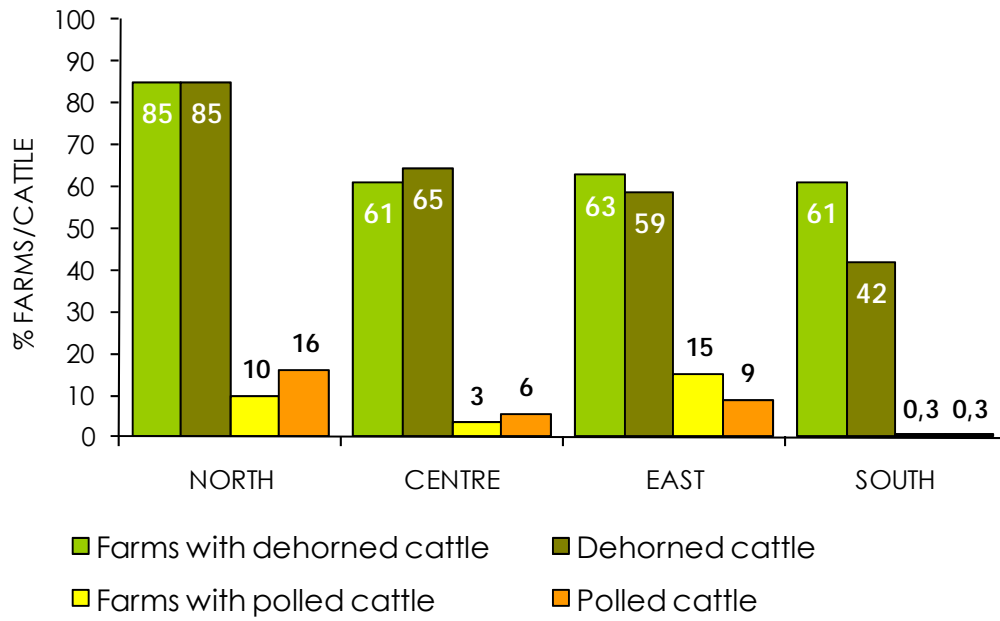


Table 5.5. Percentage of suckler herds farms with dehorned vs. polled cattle and percentage of dehorned vs. polled cattle in EU Member States

EU REGIONS	COUNTRY	FARMS WITH DEHORNED CATTLE	DEHORNED CATTLE	FARMS WITH POLLED CATTLE	POLLED CATTLE
NORTH	Denmark	87	40	10	40
	Estonia	15	15	-	1
	Finland	50	50	20	30
	Ireland	91	91	3	3
	Sweden	2	32	8	37
	United Kingdom	91	91	15	21
CENTRE	Austria	74	73	2	12
	France	65	70	1	1
	Germany	34 <sup>1</sup>	30	19 <sup>1</sup>	30
	Netherlands	60	60	1	1
EAST	Bulgaria	40	40	5	5
	Hungary	100	78	56	32
	Poland	25	80	0	0
	Romania	6	7	4	3
	Slovenia	100	100	na	na
SOUTH	Greece	0	0	0	0
	Italy	39	25	1	1
	Portugal	50	50	1	1
	Spain	73	47	0	0

na= not available

<sup>1</sup> results from a concurrent survey with 19 farmers: 56% farms with dehorned and 0% with polled cattle

## 4.2 SUCKLER COWS DEHORNING AND HOUSING SYSTEMS

### HOUSING SYSTEM IN THE SURVEYED SUCKLER HERDS

Loose housing is by far the predominant housing system for suckler herds in Europe (Figure 5.3), but 18% of the surveyed herds were kept on pasture. Suckler herds confined in tie stalls are less frequent and they can be found in specific Countries like Estonia, Austria and Italy (Figure 5.4 and Table 5.6)

Figure 5.3. Housing system in the surveyed farms in Europe

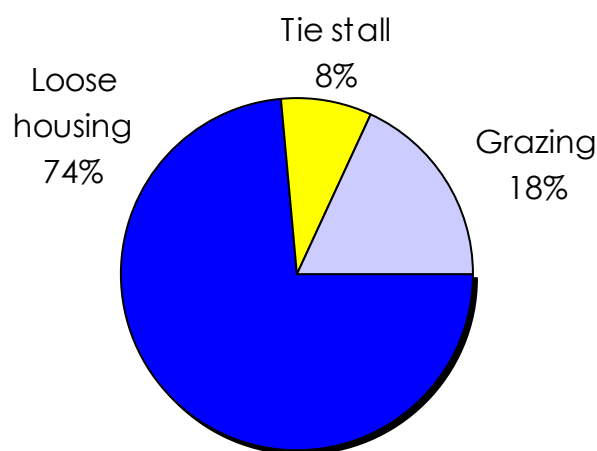


Figure 5.4. Housing system in the surveyed farms in different European macro-regions

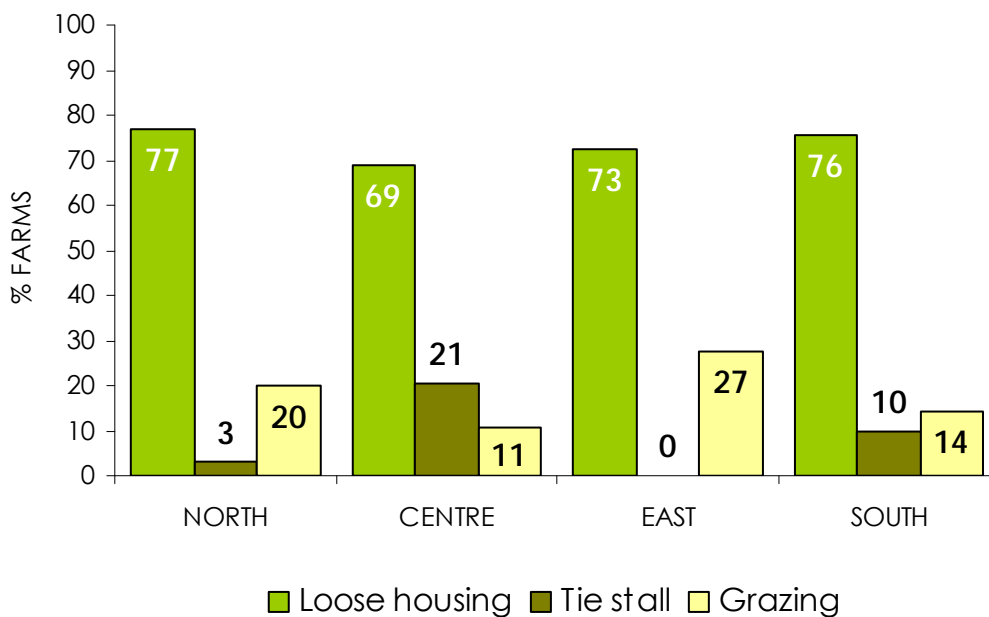


Table 5.6. Housing system and average number of suckler cows/unit in the surveyed farms in EU Member States

EU REGIONS	COUNTRY	LOOSE HOUSING		TIE STALLS		PERMANENT GRAZING	
		% farms <sup>1</sup>	Average n° of suckler cows per farm	% farms <sup>1</sup>	Average n° of suckler cows per farm	% farms <sup>1</sup>	Average n° of suckler cows per farm
NORTH	Denmark	70	12	30	8	0	-
	Estonia	10	16	90	16	0	-
	Finland	98	30	2	12	0	-
	Ireland	100	54	0	-	0	-
	Sweden	30	17	25	10	45	20
	United Kingdom	67	110	0.5	20	32.5	208
CENTRE	Austria	56	18	42	8	2	12
	France	75	60	20	25	5	50
	Germany	36 <sup>2</sup>	28	17 <sup>2</sup>	11	48 <sup>2</sup>	16
	Netherlands	85	90	15	na	0	-
EAST	Bulgaria	0	-	0	-	100	10
	Hungary	17	87	0	-	83	286
	Poland	100	80	0	-	0	-
	Romania	100	83	0	-	0	-
	Slovenia	100	22	0	-	0	-
SOUTH	Greece	0	-	0	-	100	93
	Italy	59	66	39	34	2	37
	Portugal	90	100	10	25	0	-
	Spain	82	40	4	120	14	33

na= not available

<sup>1</sup> When the sum of percentage data was different than 100, values have been corrected.<sup>2</sup> results from a concurrent survey with 19 farmers: 61% loose housing, 11% tie stalls and 28% permanent grazing, a survey done with 155 suckler herd farms gave 45% loose housing, 7% tie stalls and 48% permanent grazing. (Hörning 2007)

## DEHORNING IN LOOSE HOUSED SUCKLER HERDS

Since loose housing is the main housing system for suckler herds cattle, dehorning results reported for this type of housing in Europe and in the four macro-regions (Figures 5.5 and 5.6) are quite consistent with those previously discussed for the total population of suckler herds (Figure 5.1 and 5.2). The only exception to this general trend can be found in the Centre where there is the tendency to increase the practice of dehorning in loose housed suckler herds (Figures 5.6 and 5.2).

Figure 5.5. European surveyed farms with dehorned suckler herds (%), and percentage of dehorned cattle in loose housing system

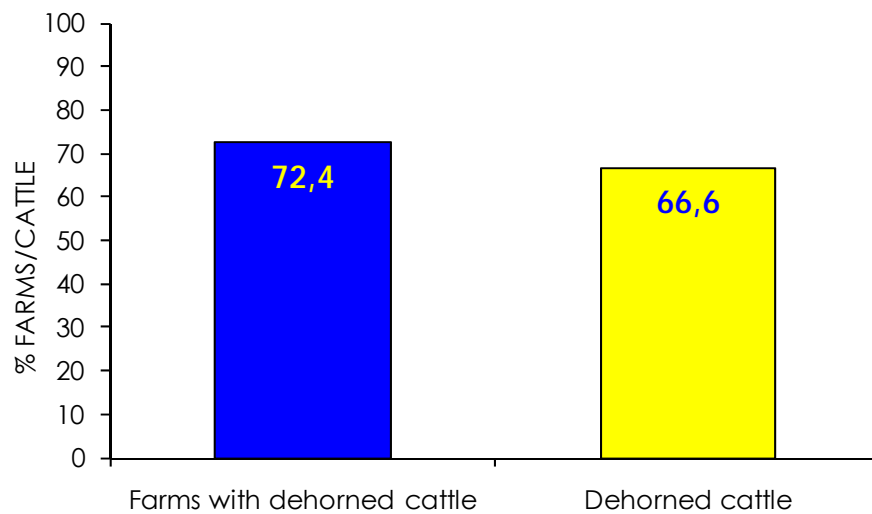
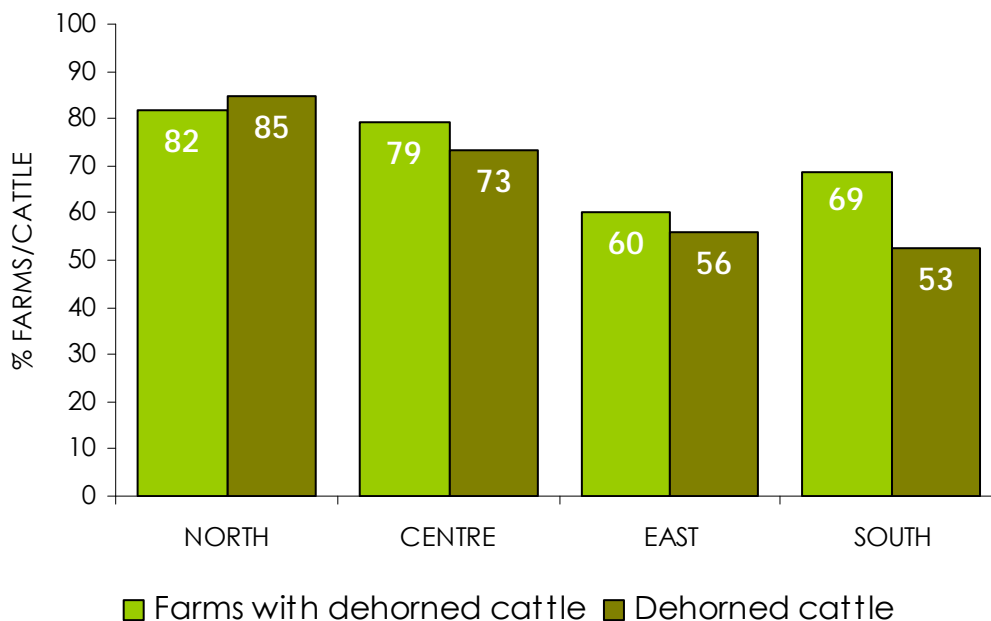


Figure 5.6. Surveyed farms in different European macro-regions with dehorned cattle (%), and percentage of dehorned cattle in loose housing system





DEHORNING IN TIED SUCKLER HERDS

Dehorning is less frequent in suckler herds housed in tie stalls (Figures 5.7). Farms with tie stalls housing dehorned suckler cows can be found in the South (Spain and Portugal) and in the North, particularly in the UK and Denmark (Figure 5.8 and Table 5.7).

Figure 5.7. European surveyed farms with dehorned suckler herds (%), and percentage of dehorned cattle in tie stall system

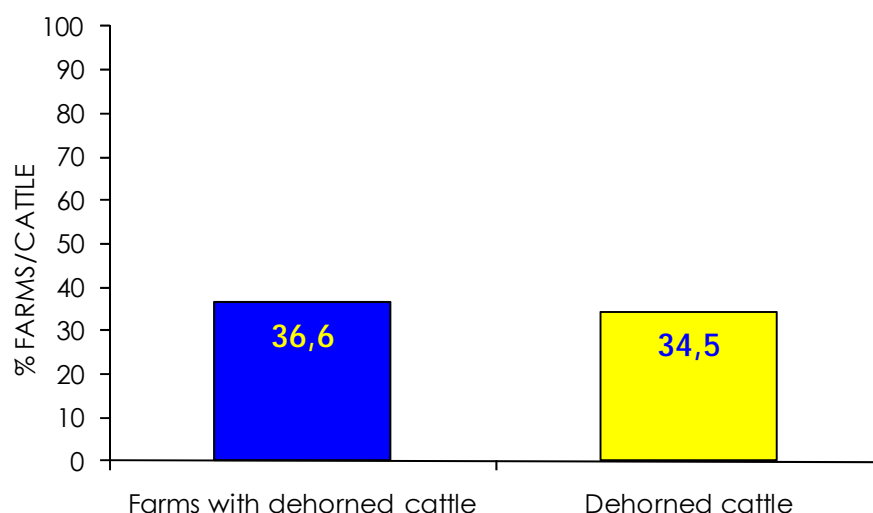
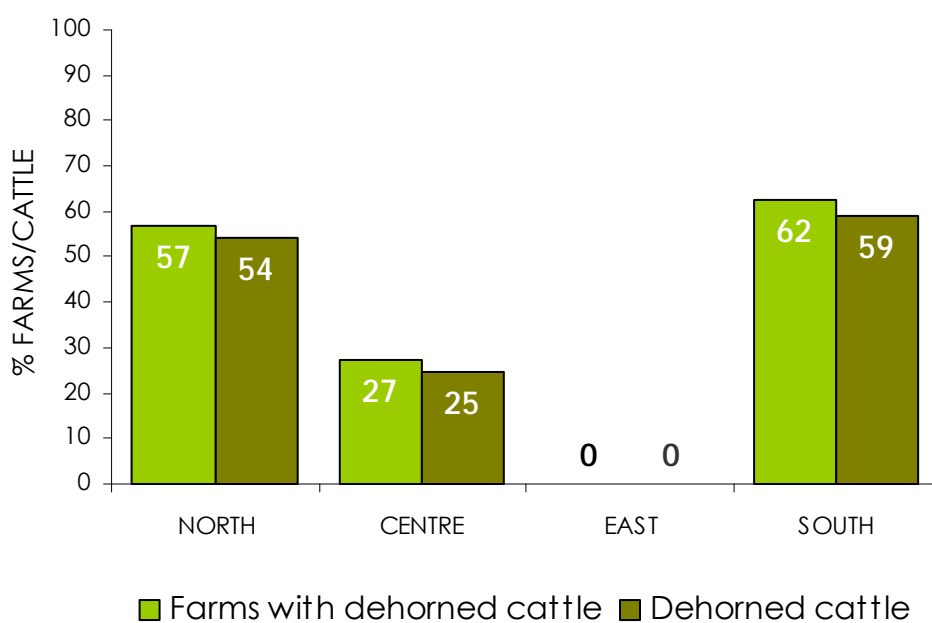


Figure 5.8. Surveyed farms in different European macro regions with dehorned cattle (%), and percentage of dehorned cattle in tie stall system



## DEHORNING IN GRAZING SUCKLER HERDS

Dehorning is less frequent in grazing suckler herds and farms with dehorned cattle are around 30% in Europe (Figure 5.9). However, according to data of Table 5.7 pasture grazing dehorned suckler herds can be found only in some EU Countries.

Figure 5.9. European surveyed farms with grazing dehorned cattle (%), and percentage of dehorned grazing suckler herds

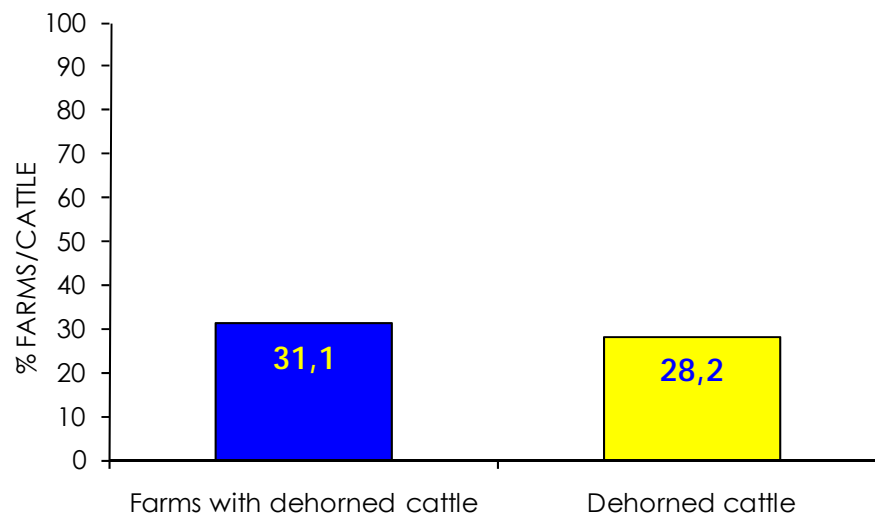


Figure 5.10. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in tie stall system in different European macro-regions

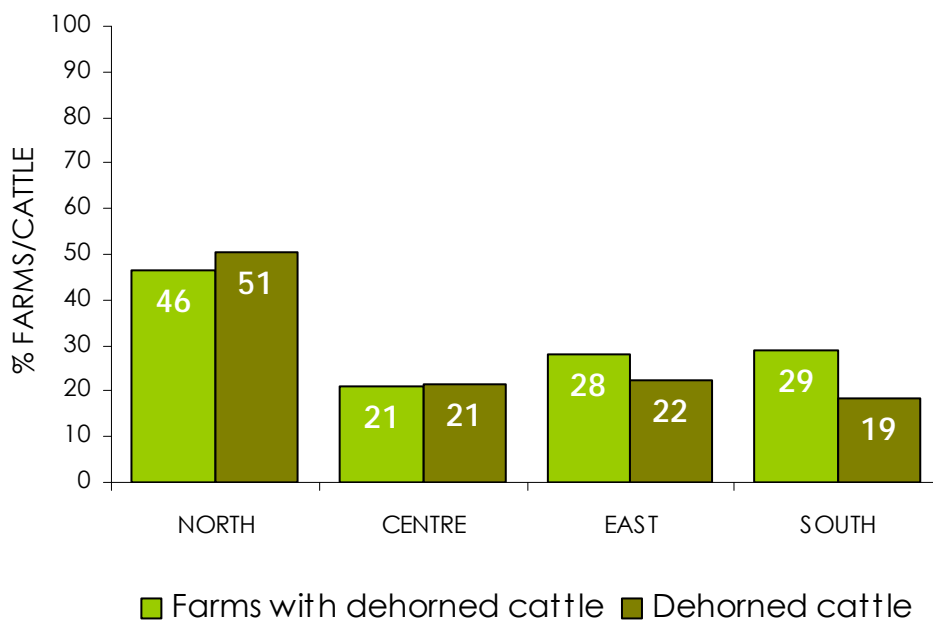


Table 5.7. Surveyed farms with dehorned cattle and percentage of dehorned cattle in different housing systems in EU Member States.

EU REGIONS	COUNTRY	LOOSE HOUSING		TIE STALL		PERMANENT GRAZING	
		% of farms with dehorned cattle	% of dehorned cattle	% of farms with dehorned cattle	% of dehorned cattle	% of farms with dehorned cattle	% of dehorned cattle
NORTH	Denmark	90	80	80	20	-	-
	Estonia	15	15	15	15	-	-
	Finland	50	99	50	1	-	-
	Ireland	91	91	-	-	-	-
	Sweden	3	57	1	9	1	34
	United Kingdom	85	84	100	99	87	91
CENTRE	Austria	88	92	57	18	17	0
	France	80	85	30	30	20	20
	Germany	73	0	4	0	31	40
	Netherlands	60	60	na	na	-	-
EAST	Bulgaria	-	-	-	-	40	40
	Hungary	100	76	-	-	100	78
	Poland	25	30		--	-	-
	Romania	5	8	-	-	-	-
	Slovenia	100	100	-	-	-	-
SOUTH	Greece	-	-	-	-	0	0
	Italy	58	61	16	18	0	0
	Portugal	50	75	50	25	-	-
	Spain	80	50	80	80	44	28

na= not available

### 5.3 SUCKLER COWS DEHORNING AND PRODUCTION SCHEMES

#### PRODUCTION SCHEME IN THE SURVEYED SUCKLER HERDS

Conventional farms were predominant in the surveyed sample of suckler herds (Figure 5.11). The surveyed organic suckler herds were 7% of the total sample and the main contribution came from Sweden and the UK in the North, from Austria (Centre), Slovenia (East) and Greece (South) (Table 5.8 and Figure 5.12).

Figure 5.11. Production schemes in the surveyed farms in Europe

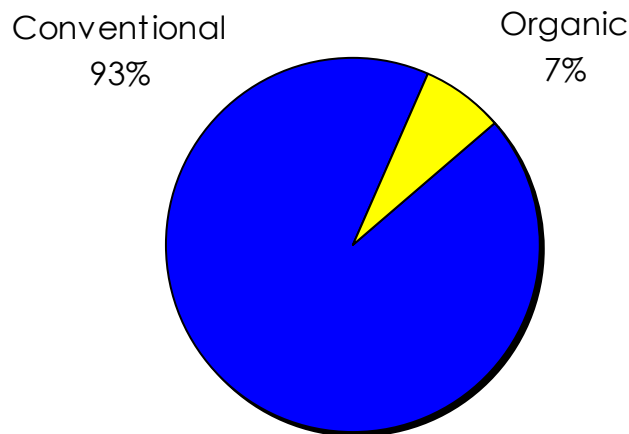


Figure 5.12. Production schemes in the surveyed farms in different European macro-regions

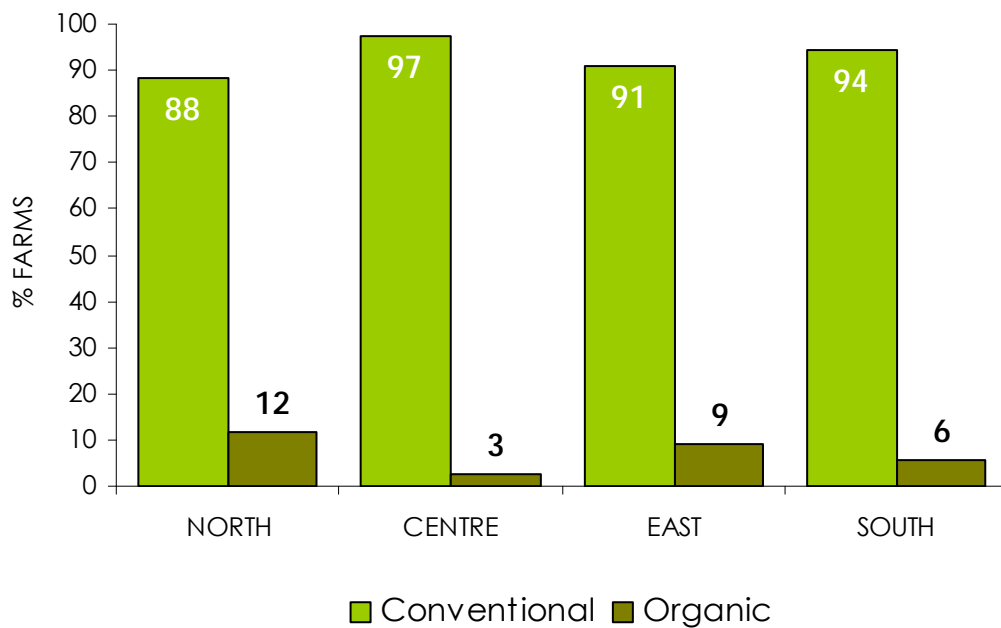


Table 5.8. Percentage of farms, average number of suckler herds cattle/unit, and percentage of tie stalls in different production schemes in EU Member States

EU REGIONS	COUNTRY	CONVENTIONAL			ORGANIC		
		% farms	Average n° of suckler herds cattle per farm	% of tie stalls	% farms	Average n° of suckler herds cattle per farm	% of tie stalls
NORTH	Denmark	93	10	40	7	10	0
	Estonia	91	16	90	9	-	-
	Finland	98	30	80	2	40	20
	Ireland	100	54	0	0	-	-
	Sweden	80	16	85	20	20	15
	United Kingdom	81	94	0.6	19	320	100
CENTRE	Austria	69	17	63	31	17	35
	France	99	50	20	1	35	0.2
	Germany	98 <sup>1</sup>	19	37	2	15	0
	Netherlands	99	na	15	1	na	na
EAST	Bulgaria	99.7	9	0	0.3	20	-
	Hungary	100	253	0	0	-	-
	Poland	100	80	0	0	-	-
	Romania	100	83	0	0	-	-
	Slovenia	66	20	0	34	24	-
SOUTH	Greece	20	93	0	80	93	-
	Italy	99	58	39	1	15	-
	Portugal	99	100	10	1	30	na
	Spain	98	48	3	2	60	na

na= not available

<sup>1</sup> estimations from other sources are lower: 82% (ZMP 2006)

## DEHORNING IN CONVENTIONAL SUCKLER HERDS

Most suckler herds are raised in conventional farms and therefore their dehorning results (Figures 5.13 and 5.14) do not substantially differ from those previously discussed for the total suckler herds population (Figures 5.1 and 5.2).

Figure 5.13. European surveyed suckler herds with dehorned cattle (%), and percentage of dehorned suckler cows in conventional production scheme

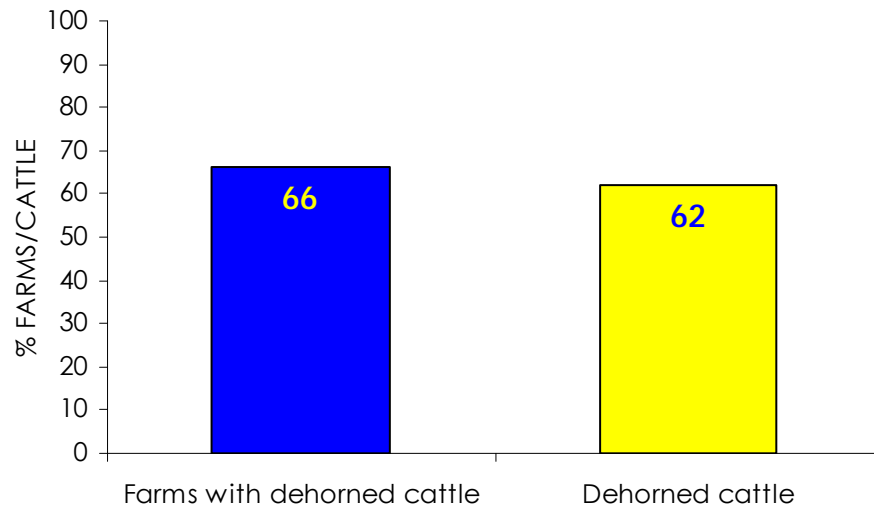
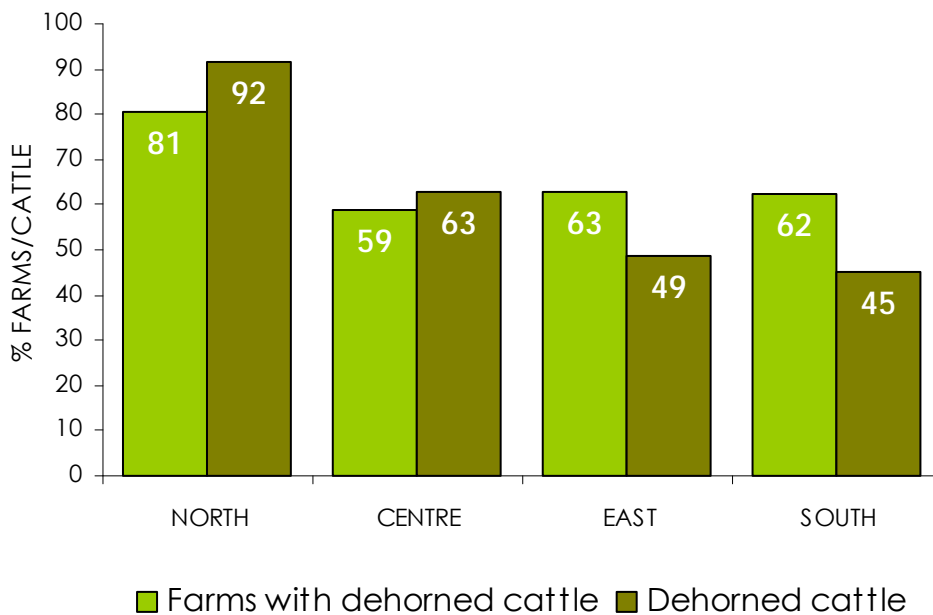


Figure 5.14. Surveyed conventional suckler herds with dehorned cattle (%), and percentage of dehorned suckler cows in conventional farms of different European macro-regions



DEHORNING IN ORGANIC SUCKLER HERDS

The practice of dehorning is less frequent in organic suckler herds (Figure 5.15). It is interesting to notice that for the suckler herds there is a clear difference between the value recorded for dehorning as % of farms and that as % of animals (Figure 5.15). This is because in many EU Countries (Denmark, Finland, Austria, Slovenia and Spain) the practice of dehorning seems to be performed only on a small part of the herd-mates. (Table 5.9 and Figure 5.16).

Figure 5.15. Surveyed organic suckler herds with dehorned cattle (%), and percentage of dehorned cows in organic production scheme

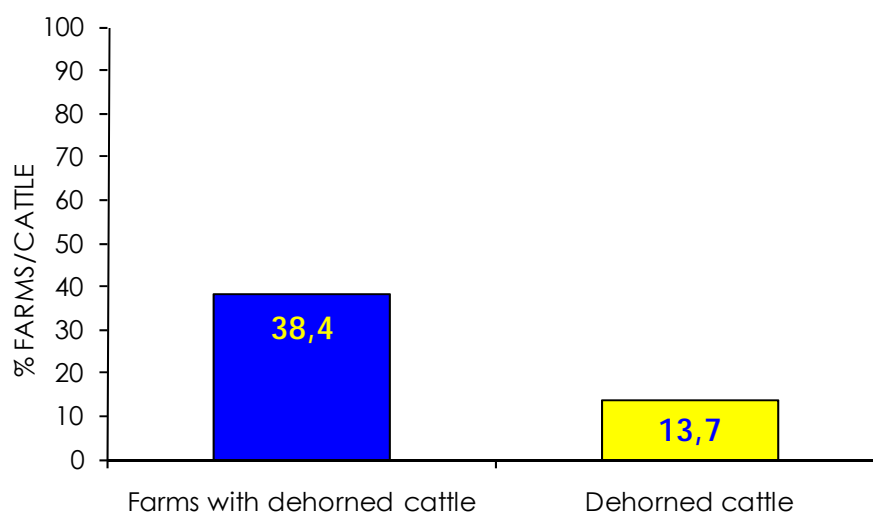


Figure 5.16. Surveyed farms with dehorned cattle (%), and percentage of dehorned cattle in organic production scheme in different European macro-regions

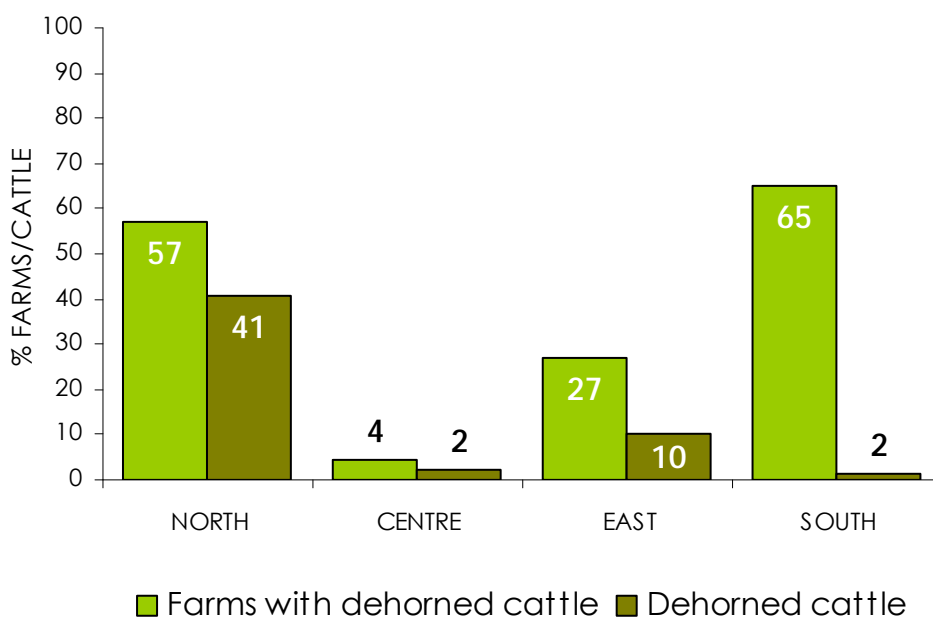


Table 5.9. Farms with dehorned cattle (%), and percentage of dehorned cattle in different production schemes (conventional and organic) in EU Member States

EU REGIONS	COUNTRY	CONVENTIONAL		ORGANIC	
		Farms with dehorned cattle (%)	Dehorned cattle (%)	Farms with dehorned cattle (%)	Dehorned cattle (%)
NORTH	Denmark	90	93	90	7
	Estonia	15	15	15	15
	Finland	50	97	50	3
	Ireland	91	91	-	-
	Sweden	4	93	1	7
	United Kingdom	83	92	100	75
CENTRE	Austria	66	67	71	33
	France	64	69	0.6	0.7
	Germany	23	25	-	-
	Netherlands	60	60	10	10
EAST	Bulgaria	40	40	na	na
	Hungary	100	78	-	-
	Poland	25	80	-	-
	Romania	5	8	0	0
	Slovenia	100	63	100	37
SOUTH	Greece	0	0	0	0
	Italy	42	47	1	1.5
	Portugal	50	50	na	na
	Spain	74	47	98	2

na= not available



### 5.4 DISBUDDING vs. DEHORNING IN SUCKLER HERDS

Disbudding is generally preferred to dehorning as method of horns removal also in suckler herds (Figure 5.17). However, the percentage of suckler herds using the latter method is higher than in the surveyed dairy (11%) and beef farms (33%). On this result there is a clear macro-regional effect (Figure 5.18) due to single Countries, like Poland (East), France (Centre), Spain and Portugal (South) where dehorning is more frequent because it is carried out only on horn-injured animals or to remove the horns from more aggressive cows or heifers (i.e. Limousine) for work safety reasons.

Figure 5.17. Method of horns removal in the surveyed sample of suckler herds in Europe

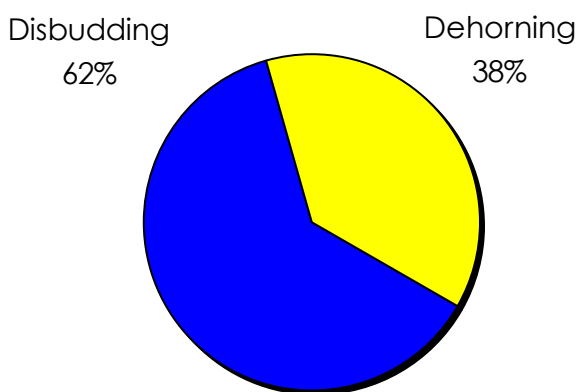
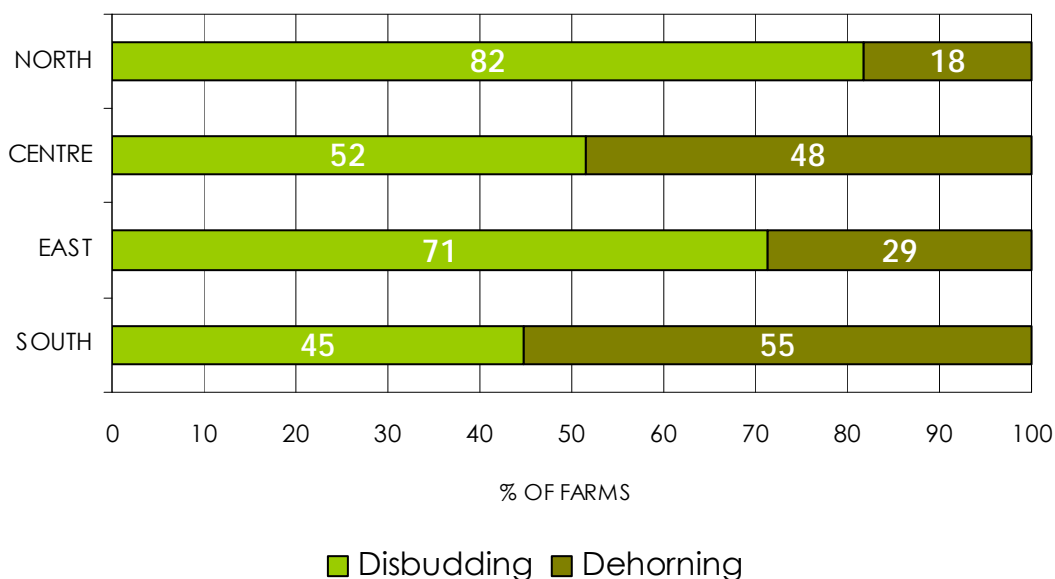


Figure 5.18. Method of horns removal in the suckler herds of different European macro-regions



## Methods of disbudding and dehorning

Hot iron is the most used method of disbudding young cattle from suckler herds in the Countries belonging to the North and the Centre macro-regions and in Slovenia (Table 5.10). Caustic paste is instead more frequently used in most Countries of the East and the South macro-regions. Scoop/tube has been reported as the only method applied in Bulgaria.

The dehorning of more aged cattle from suckler herds is carried out particularly in the South and in the Centre macro-regions (Table 5.10). Wire/saw is the predominant tool used for this practice, but there are Countries where other instruments (guillotine, dehorning shears) are more frequently utilized.

Table 5.10. Methods used in EU Member States to remove horns in suckler herds (%of farms)

EU REGIONS	COUNTRY	DISBUDDING		METHODS			DEHORNING		METHODS	
		% of farms	Hot iron	Caustic paste	Scoop /tube	% of farms	Wire/saw	Other		
NORTH	Denmark	95	100	0	0	5	10	90		
	Estonia	99	100	0	0	1	100	0		
	Finland	100	100	0	0	0	100	0		
	Ireland	94	98	2	0	6	100	0		
	Sweden	70	100	0	0	30	90	10		
	United Kingdom	73	78	20	2	27	51	49		
	<b>MEAN</b>	<b>81.7</b>	<b>87.7</b>	<b>11.4</b>	<b>0.9</b>	<b>18.3</b>	<b>69.9</b>	<b>30.1</b>		
CENTRE	Austria	97	97	1	2	3	100	0		
	France	40	60	40	0	60	30	70		
	Germany	95	97	0	0	5 <sup>1</sup>	3.4	0		
	Netherlands	100	100	0	0	<1	<1	0		
	<b>MEAN</b>	<b>51.5</b>	<b>68.1</b>	<b>31.8</b>	<b>0.1</b>	<b>48.5</b>	<b>44.5</b>	<b>55.5</b>		
EAST	Bulgaria	90	0	0	100	10	0	100		
	Hungary	76	0	83	17	24	100	0		
	Poland	20	0	100	0	80	100	0		
	Romania	100	50	50	0	0	0	0		
	Slovenia	100	100	0	0	0	-	-		
	<b>MEAN</b>	<b>71.3</b>	<b>33.9</b>	<b>55.5</b>	<b>10.6</b>	<b>28.7</b>	<b>93.7</b>	<b>6.3</b>		
SOUTH	Greece	0	-	-	-	0	-	-		
	Italy	85	28	49	23	15	100	0		
	Portugal	27	5	85	10	75	99	-		
	Spain	40	25	75	0	60	85	17		
	<b>MEAN</b>	<b>44.9</b>	<b>22.6</b>	<b>72.4</b>	<b>5.1</b>	<b>55.1</b>	<b>89.4</b>	<b>10.6</b>		
<b>MEAN EU</b>		<b>62.3</b>	<b>53.1</b>	<b>42.8</b>	<b>4.2</b>	<b>37.7</b>	<b>74.4</b>	<b>25.6</b>		

<sup>1</sup> less than 25% of the animals on the farm get dehorned (concurrent survey of 19 farmers)

PERCENTAGE OF DISBUDDED vs. DEHORNING CATTLE IN SUCKLER HERDS

Results reported in Table 5.11 and Figures 5.19 and 5.20 regard the percentage of dehorned cattle in the suckler herds and they are in close agreement with what has been previously reported considering the percentage of herds (farms) (Table 5.10 and Figures 5.17 and 5.18).

Figure 5.19. Percentage of cattle disbudded and dehorned in European surveyed farms

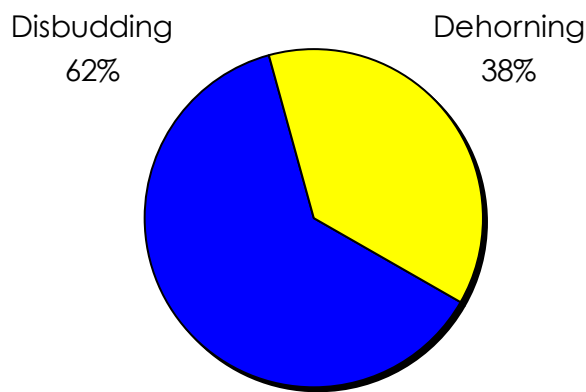


Figure 5.20. Percentage of cattle disbudded and dehorned in different European macro regions

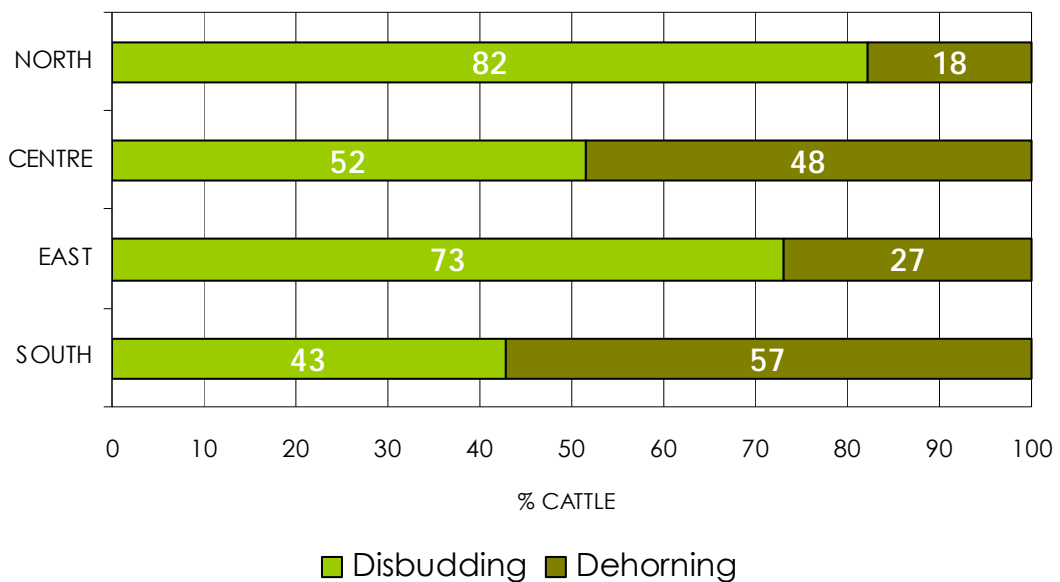


Table 5.11. Methods used for disbudding and dehorning in EU Member States (% of cattle)

EU REGIONS	COUNTRY	DISBUDDING % of cattle	METHODS (%)			DEHORNING % of cattle	METHODS (%)	
			Hot iron	Caustic paste	Scoop/tube		Wire/saw	Other
NORTH	Denmark	90	100	0	0	10	10	90
	Estonia	99	100	0	0	1	-	-
	Finland	100	100	0	0	0	100	0
	Ireland	94	98	2	0	6	100	0
	Sweden	70	100	0	0	30	90	10
	United Kingdom	74	77	21	2	26	46	54
	MEAN	82.1	86.9	12.2	0.9	17.9	67.5	32.5
CENTRE	Austria	97	96	2	2	3	100	0
	France	40	60	40	0	60	20	80
	Germany	95	97	0	0	5	3.4	0
	Netherlands	100	100	0	0	<1	<1	0
	MEAN	51.5	68.1	31.8	0.1	48.5	36.5	63.5
EAST	Bulgaria	90	0	0	100	10	0	100
	Hungary	83	0	92	8	17	100	0
	Poland	20	0	100	0	80	100	0
	Romania	100	54.5	45.5	0	0	-	-
	Slovenia	100	100	0	0	0	-	-
	MEAN	73.1	34.5	57.2	8.3	26.9	93.7	6.3
SOUTH	Greece	0	-	-	-	0	-	-
	Italy	82	41	42	17	18	100	0
	Portugal	15	5	90	5	85	-	-
	Spain	40	-	-	-	60	52	-
	MEAN	42.9	24.5	72.1	3.4	57.1	89.4	10.6
MEAN EU		62.4	53.5	43.3	3.2	37.6	71.8	28.2

5.5 USE OF DRUGS AND PERSON IN CHARGE OF THE PROCEDURE

USE OF DRUGS DURING DISBUDDING

The percentage of farms using some kind of anaesthetic and/or analgesic treatment prior to and/or after disbudding is around 29% (Figure 5.21). However, treatment protocols are inconsistent. According to the experts, local anaesthesia is by far the most frequent pre-treatment (52% of the farms) followed by sedation + local anaesthesia (25%) and by sedation alone (17%).

Considering the different EU macro-regions (Figure 5.22), the use of drugs for the disbudding seem more frequent in the East and particularly in Slovenia where it has been reported that 100% of the cows are dehorned by the vet with the use of sedation + anaesthesia. In all the other macro-regions, less than 30% of the suckler herds use drugs for disbudding. However differences have been reported according to Country legislation (see Chapter 1).

Figure 5.21. Percentage of farms using drugs during disbudding procedure in European Surveyed farms

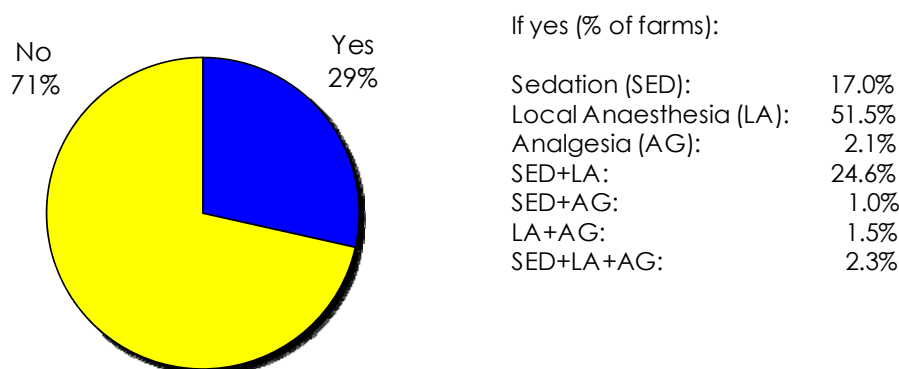
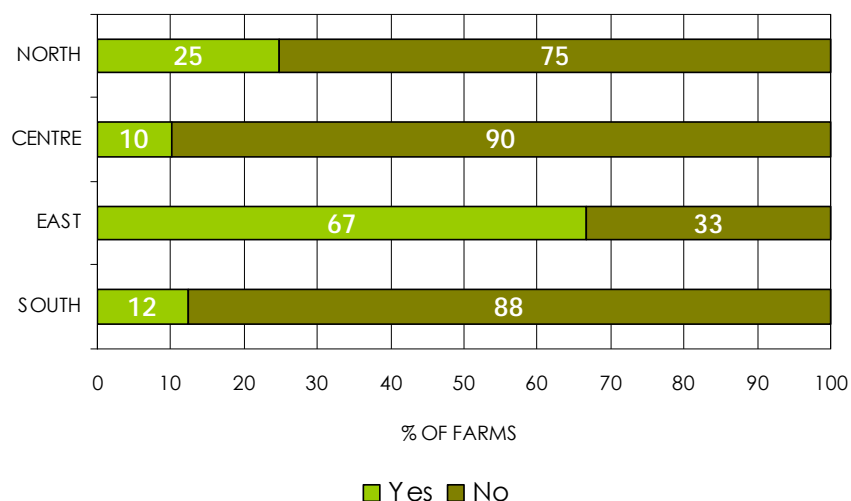


Figure 5.22. Percentage of farms using drugs during disbudding procedure in European macro regions



## USE OF DRUGS DURING DEHORNING

Dehorning is a more invasive procedure which is carried out on more aged animals. Therefore, it is reasonable to observe a higher percentage of herds (41%) that use some kind of medication during the procedure (Figure 5.23). Local anaesthesia (62%) is the most used medical treatment followed by sedation + local anaesthesia (14%) (Figure 5.23). However, as for disbudding, the use of some drug treatment appears to be inconsistent among geographical area of Europe (Figure 5.24). Medical treatments are more frequent in the North and the East macro-regions. In the Centre macro-region the contribution of Germany, where by law dehorning should be carried out under anaesthesia by a vet, is counterbalanced by the France where the use of drugs is minimum. Similar to France, Spain which has the largest suckler cows population in the South, reports a minimum use of drugs for the dehorning of these animals (Figure 5.24).

Figure 5.23. Percentage of farms using drugs during dehorning procedure in surveyed European farms

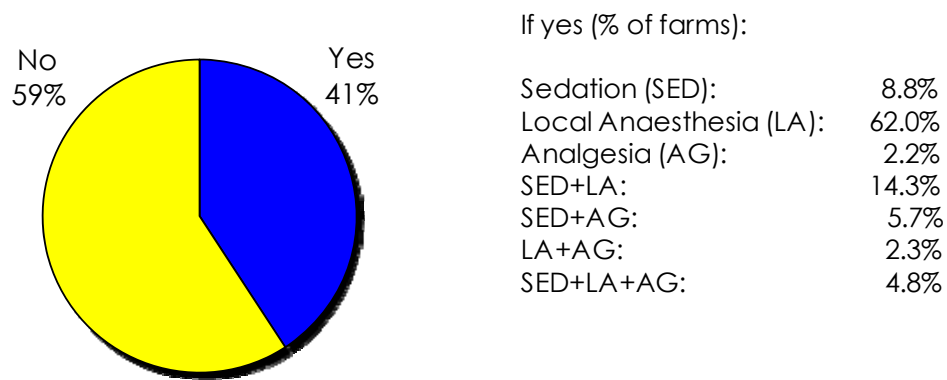
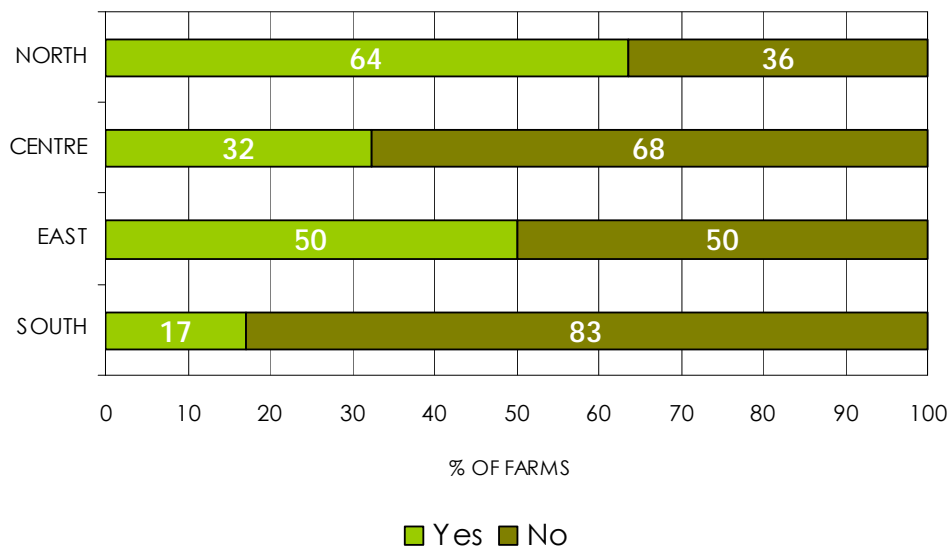


Figure 5.24. Percentage of farms using drugs during dehorning procedure in European macro-regions



PERSON CARRYING OUT DISBUDDING

In the large majority of European suckler herd farms, the stockman is the person carrying out the disbudding of the calves, followed by the veterinarian (Figure 5.25). However, difference have been reported among macro-regions as shown in Figure 5.26. Consistent with the data about the use of drugs, the presence of a veterinarian appears more frequent in the East. In the North, trained technicians have been reported as 'Others' to carry out disbudding in 40% of Swedish suckler herd farms.

Figure 5.25. Person carrying out the disbudding procedure in Europe (% of farms)

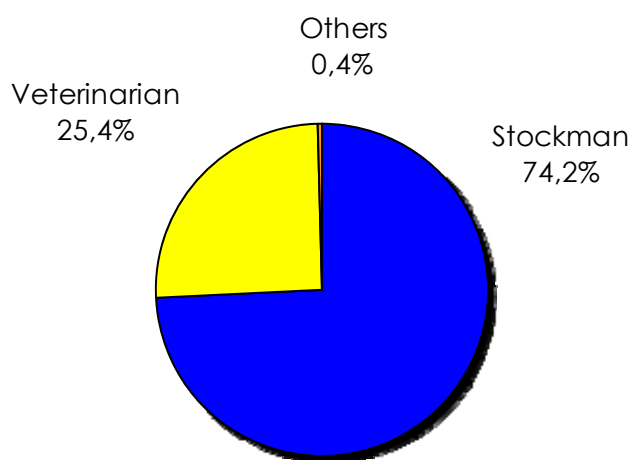
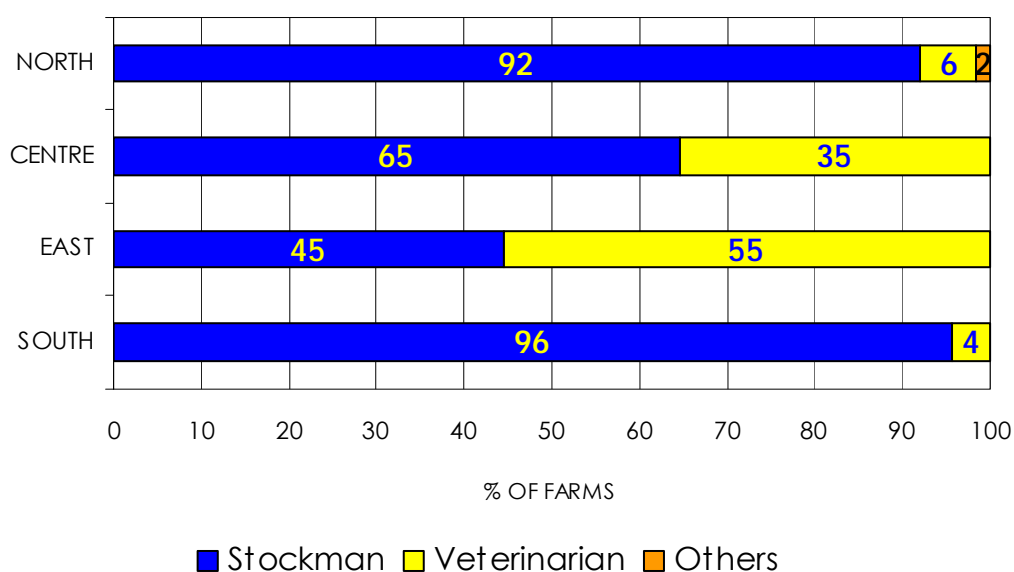


Figure 5.26. Person carrying out the disbudding procedure in different European macro-regions (% of farms)



## PERSON CARRYING OUT DEHORNING

Dehorning is a more invasive procedure that it is more consistently carried out by veterinary practitioners, often with the assistance of the stockman (Figure 5.27). This has been reported particularly for East and the North regions (Figures 5.28). In the Centre, there are Countries like Germany and Austria where the vet is in charge of the dehorning procedure while in France it is carried out mainly by stockman. In the South, there is some involvement of the vet only in Portugal and in Italy to a lower extent.

Figure 5.27. Person carrying out the dehorning procedure in Europe (% of farms)

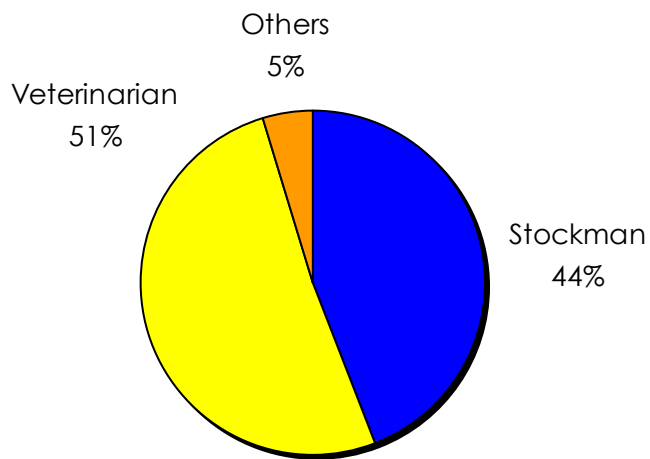
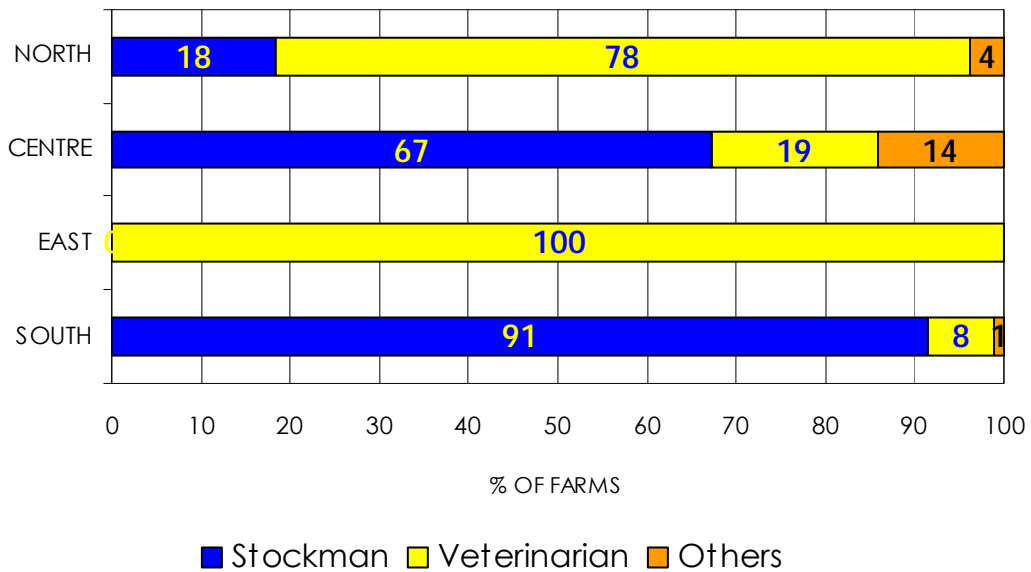


Figure 5.28. Person carrying out the dehorning procedure in different European regions (% of farms)



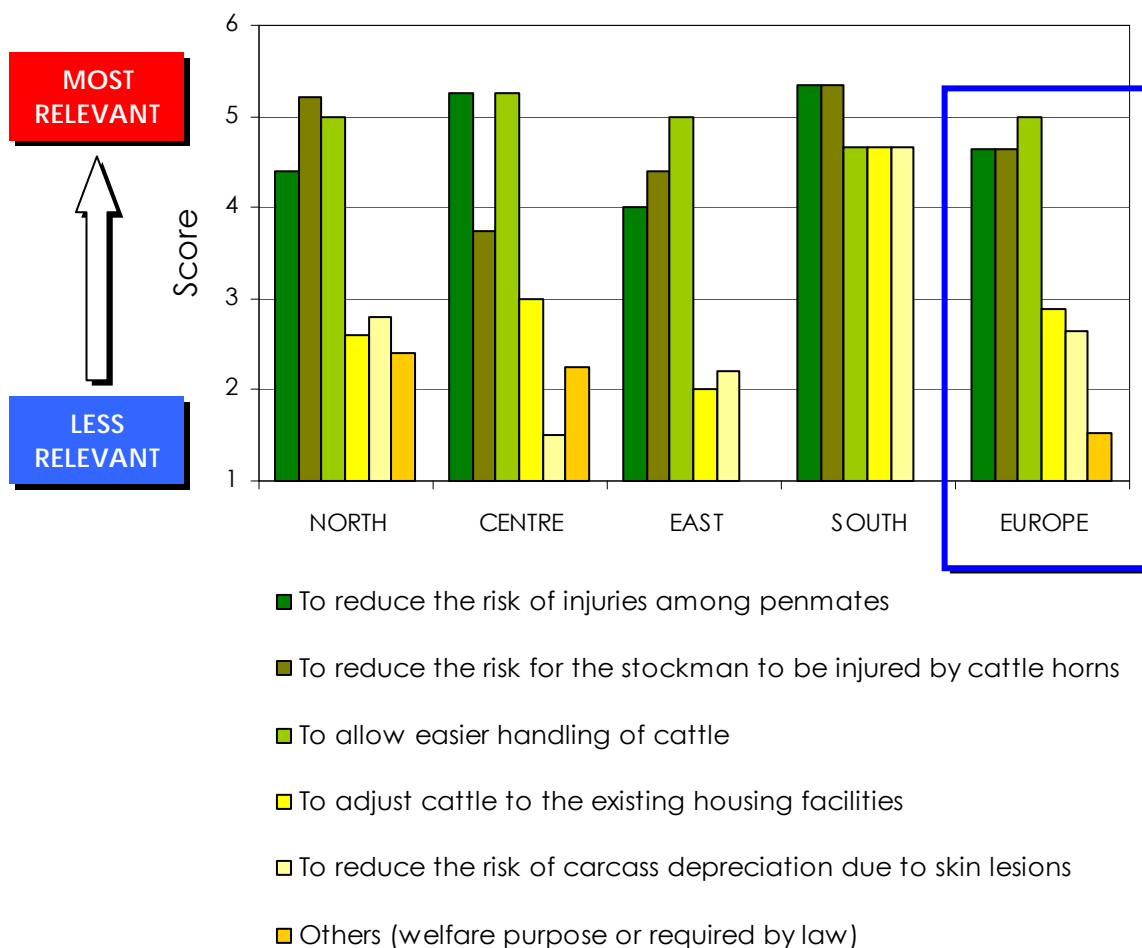


5.6 GENERAL QUESTIONS ON DISBUDDING/DEHORNING IN SUCKLER HERDS

Why do farmers practice disbudding/dehorning in suckler herds?

According to the experts opinion, in Europe horns removal is consider an effective solution to lower the risk of injures for both cattle and stockman and to allow an easier handling of cattle in suckler herds (Figure 5.29). In addition to this general trend, in the South, dehorning is considered an effective tool also to adjust cattle to existing housing facilities and to lower the carcass depreciation due to skin lesions.

Figure 5.29. Reasons why farmers practice disbud/dehorn suckler cows in Europe and in the four macro-regions (average score)

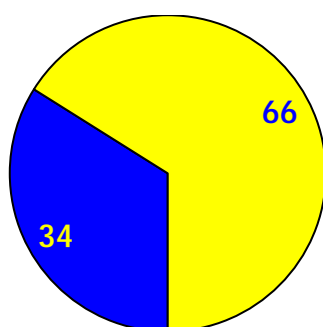


## Does cattle breed affect the farmers' decision to practice disbudding/dehorning?

The decision to dehorn suckler herds has shown to be influenced by cattle breed (Figure 5.30). In each macro-region it has been reported that suckler cows belonging to specific breeds are not routinely dehorned: Alpine Grey, Simmental, Valdostana (Italy), Simmental (Germany and Austria) and Tyrolean Grey (Austria), Scottish Highland (UK), Salers, Gasconnes or Aubrac in France. Dutch experts reported that suckler herds kept in extensive systems with limited handling are generally not dehorned. In Spain, experts report a selective dehorning of more aggressive animals (i.e. Limousine) or of cows with long horns.

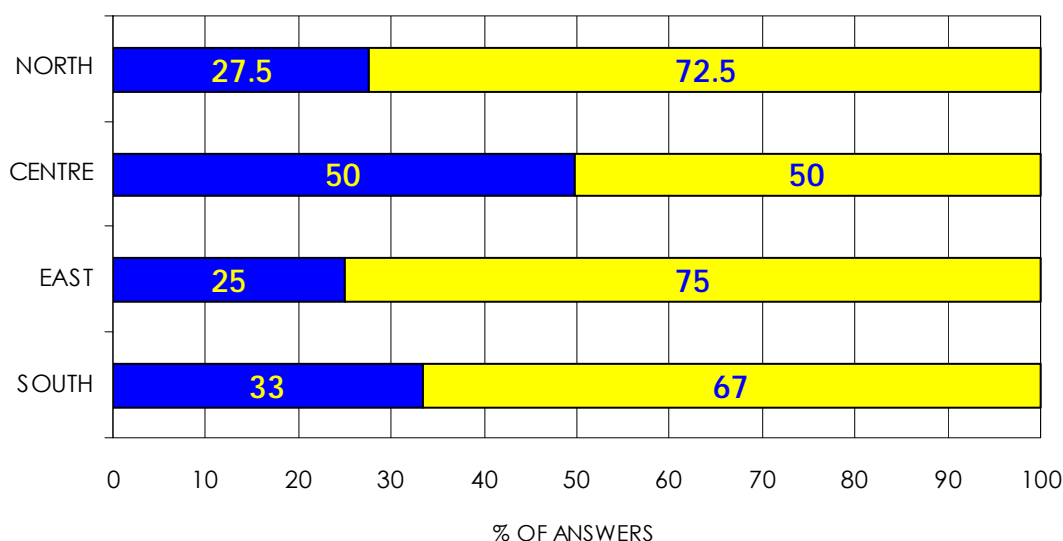
Figure 5.30. Does cattle breed affect the farmers' decision to practice disbudding/dehorning? (% of answers)

EUROPE



■ No ■ Yes

MACRO REGIONS



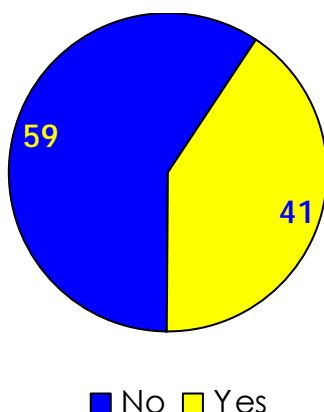
■ No ■ Yes

Does cattle gender affect the farmer decisions to practice disbudding/dehorning?

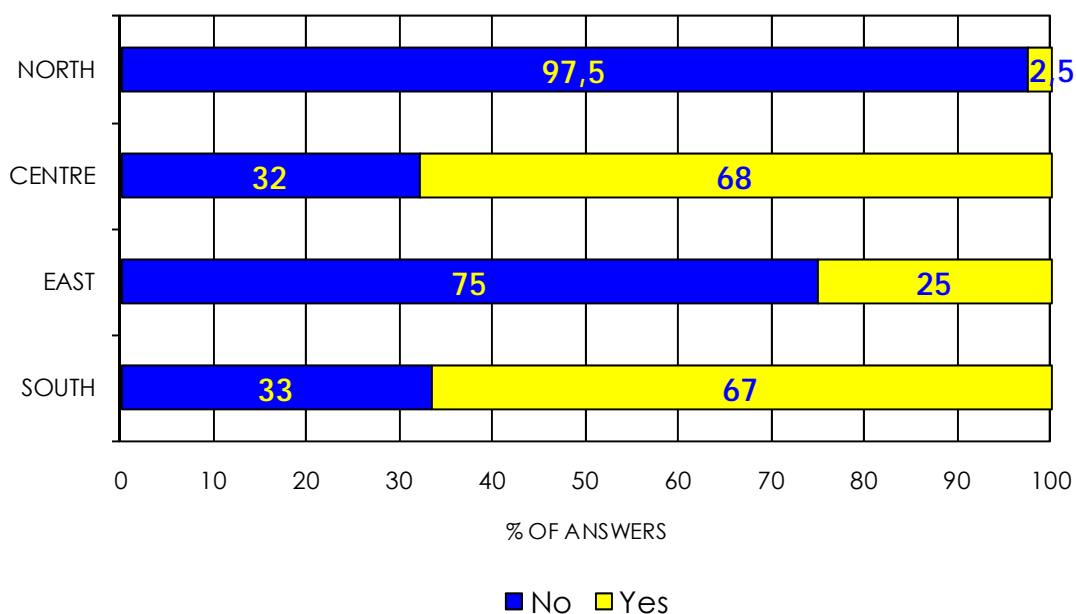
At the European level, about 40% of the experts judged that cattle gender has an effect on the decision to disbud/dehorn calves in suckler herds (Figure 5.32). Based on experts opinions, the North and the East macro-regions seem more addressed to dehorn (or not) both male and females. Female calves are more likely to be dehorned In the South and in the Centre even though it has been reported by Dutch and German experts that males are more often disbudded to prevent fighting.

Figure 5.32. Does cattle gender affect the farmer decisions to practice disbudding/dehorning? (% of answers)

EUROPE



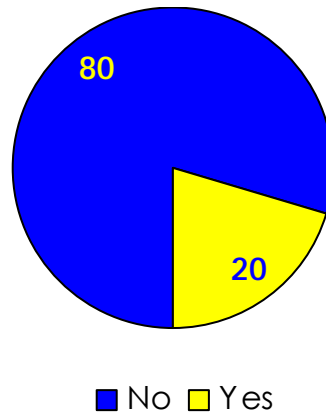
MACRO-REGIONS



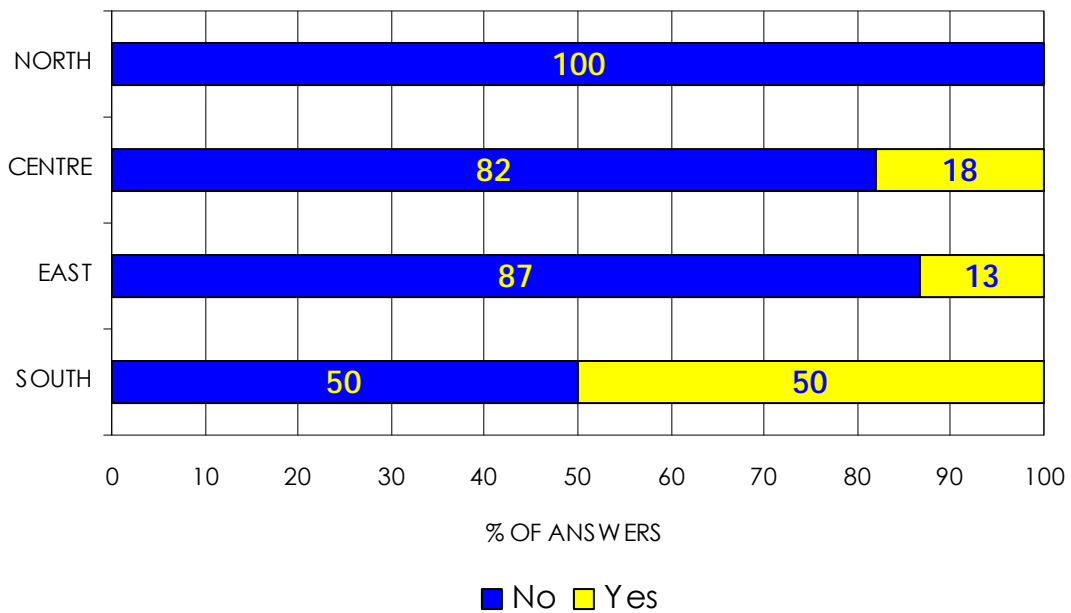
### Does farm size affect the farmers' decision to practice disbudding/dehorning?

At the European level, farm size appears less important in determining disbudding and dehorning practices in suckler herds (Figure 5.33). However, experts of many Countries particularly in the South, Centre and East macro-regions reported that dehorning is less consistently carried out in smaller suckler herds which are usually housed in tie stalls.

Figure 5.33. Does farm size affect the farmers' decision to practice disbudding/dehorning (% of answers)?  
EUROPE



#### MACRO-REGIONS

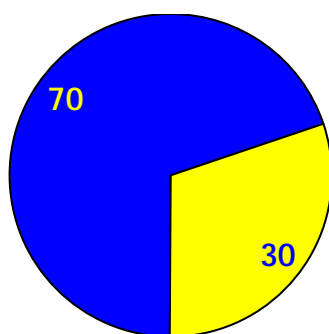


### Does the farmers' age affect the decision to practice disbudding/dehorning ?

Thirty percent of experts assume that the farmer's age affects disbudding/dehorning practices in Europe (Figure 5.34). Experts of several Countries (Sweden, Germany, Austria and Italy) stated the young farmers are more prone to dehorn their animals.

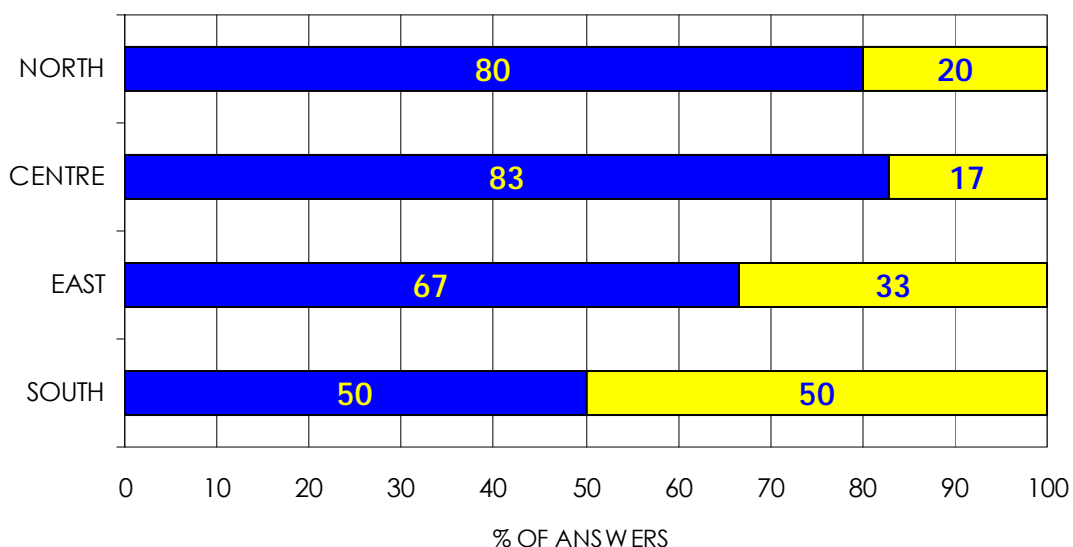
Figure 5.34. Does the farmers' age affect the decision to practice disbudding/dehorning (% of answers)?

EUROPE



■ No ■ Yes

MACRO-REGIONS



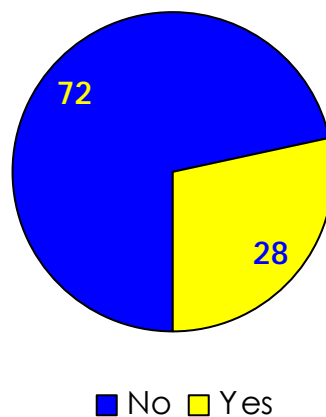
■ No ■ Yes

## Does the farmers' level of education affect the decision to practice disbudding/dehorning?

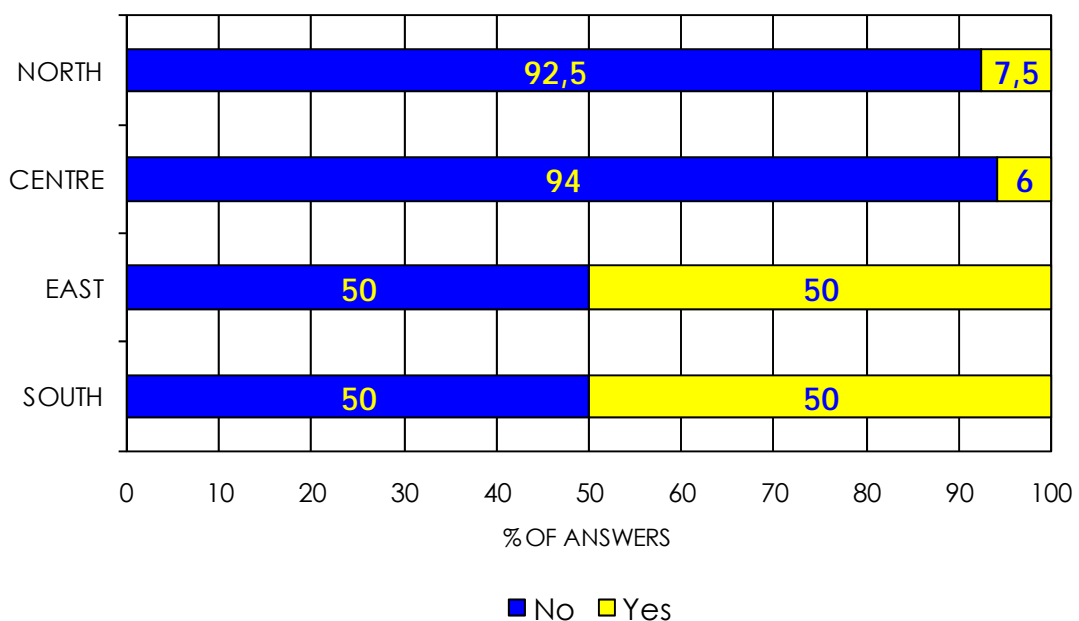
At the European level, the farmers' level of education has some influence on dehorning practices in suckler herds (Figure 5.35). The level of education plays an important role mainly in the East and the South macro-regions. Younger, more educated generations are keener on dehorning for work safety reasons.

Figure 5.35. Does the farmers' level of education affect the decision to practice disbudding/dehorning (% of answers)?

EUROPE



MACRO-REGIONS

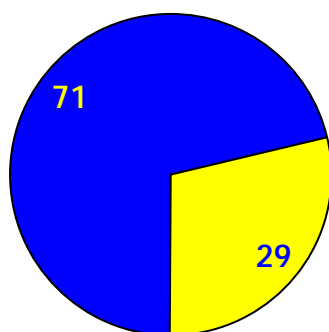


### Do the local traditions affect the farmer decision to practice disbudding/dehorning?

In general local traditions have some effect on the practice of dehorning in suckler herds (Figure 5.36). Local traditions tend to preserve the natural look of the animals and particularly where rustic cattle breeds are raised in tie stall or permanent grazing systems. However, there are possible exceptions like in case of Denmark where the local expert reported dehorning as traditional practice for cattle breeders.

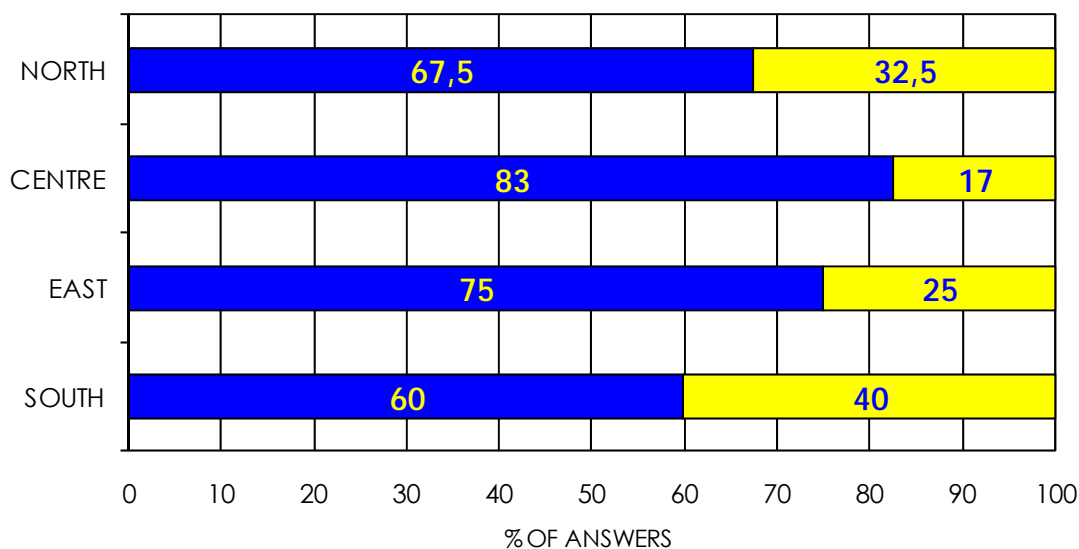
Figure 5.36. Do the local traditions affect the farmer decision to practice disbudding/dehorning (% of answers)?

#### EUROPE



■ No ■ Yes

#### MACRO-REGIONS

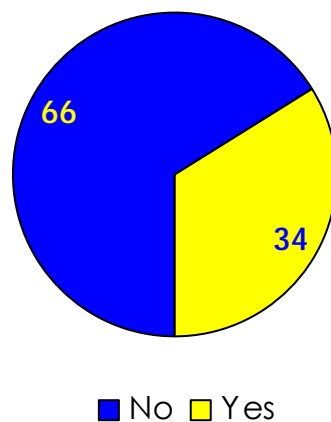


■ No ■ Yes

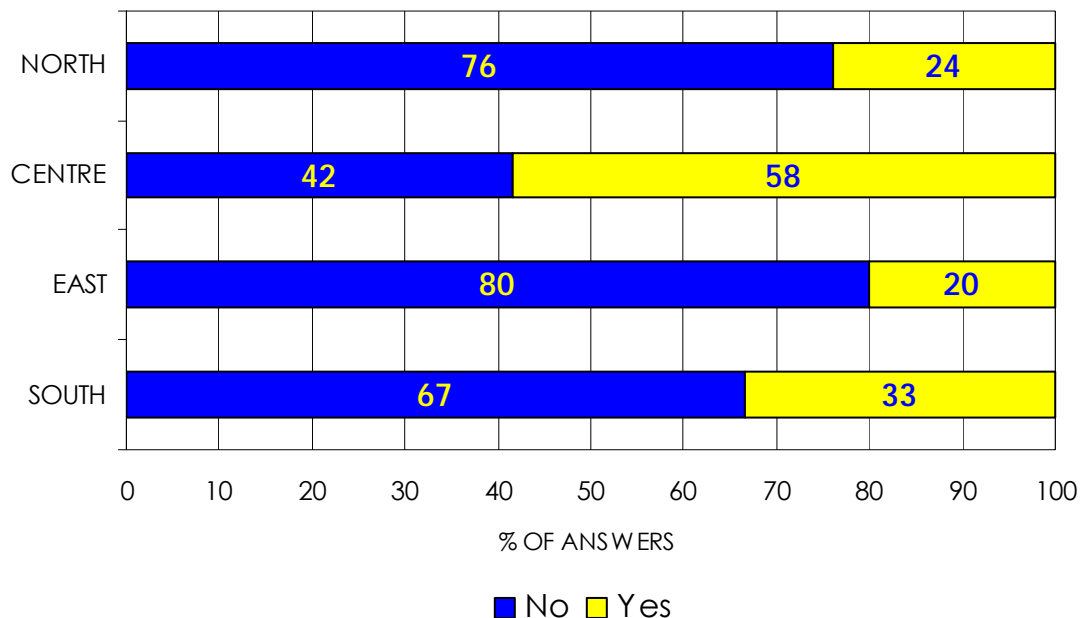
## Are there guidelines beyond legislation in force on the disbudding/dehorning practice?

Dehorning is regulated by law in some Member States (see Chapter 1), but national guidelines exist in order to set standards for best practices in disbudding and dehorning of cattle (Figure 5.37). Disbudding is usually recommended over dehorning as a more humane alternative. In Ireland a specific program has been launched in order to promote disbudding in suckler herds. Specific information are sometimes made available online or they are published by producers associations like the 'French Charter of Good Practices in Cattle Production'.

Figure 5.37. Are there guidelines beyond legislation on disbudding/dehorning practice (% of answers)? EUROPE



### MACRO-REGIONS



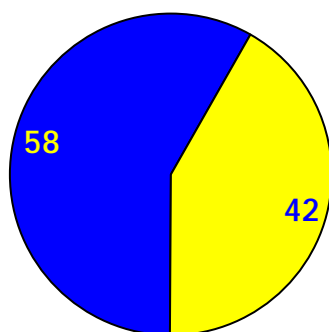


Is there any specific training regarding the practice of disbudding/dehorning ?

Training on how to dehorn cattle in suckler herds is not very frequent (Figure 5.38) and it is usually provided by agricultural schools (i.e. Netherlands, Italy and Spain) or by veterinary practitioners (i.e. Sweden). Other resources are: specialised press (breeders' associations bulletins, assurance schemes' guidelines); institutional websites; hands-on seminars by manufacturers of disbudding tools (e.g. Buddex® in Austria). Training opportunities appear to be less common in the East macro-region.

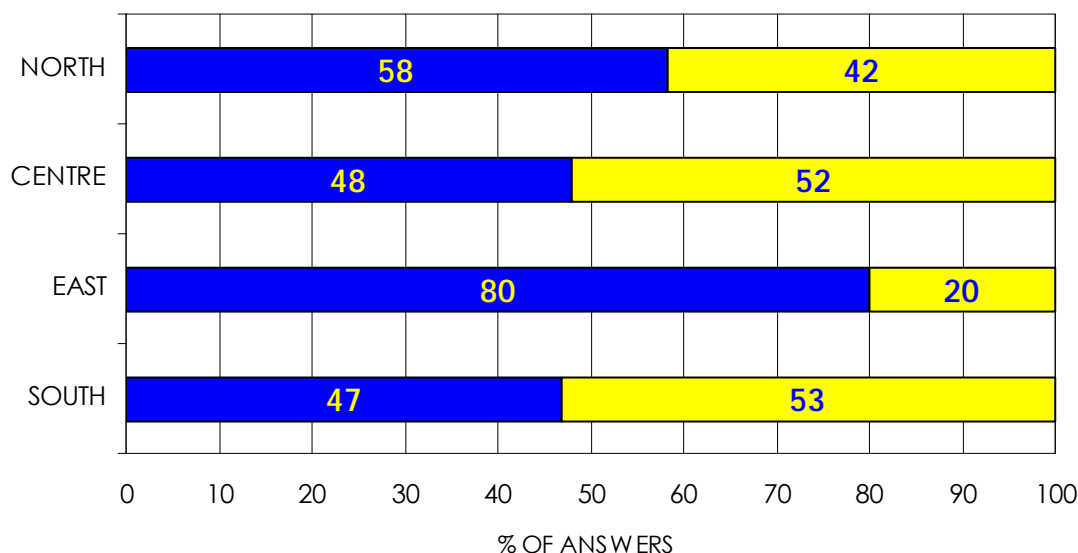
Figure 5.38. Is there any specific training regarding the practice of disbudding/dehorning (% of answers)?

EUROPE



■ No ■ Yes

MACRO-REGIONS



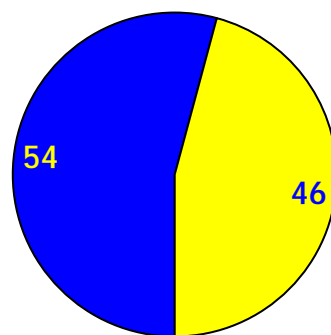
■ No ■ Yes

## Is there any discussion or attempt to improve the current practices of disbudding/dehorning ?

As for dairy and beef, some level of discussion going on in Europe about disbudding and dehorning practices, particularly concerning the use of sedation, anaesthesia and analgesia and the preference for disbudding over dehorning as a more humane option (Figure 5.39). There is also some discussion on promoting polled genetics. Countries of the Centre macro-region appear more active in these discussions when addressed to suckler cattle, while the East seems soundless.

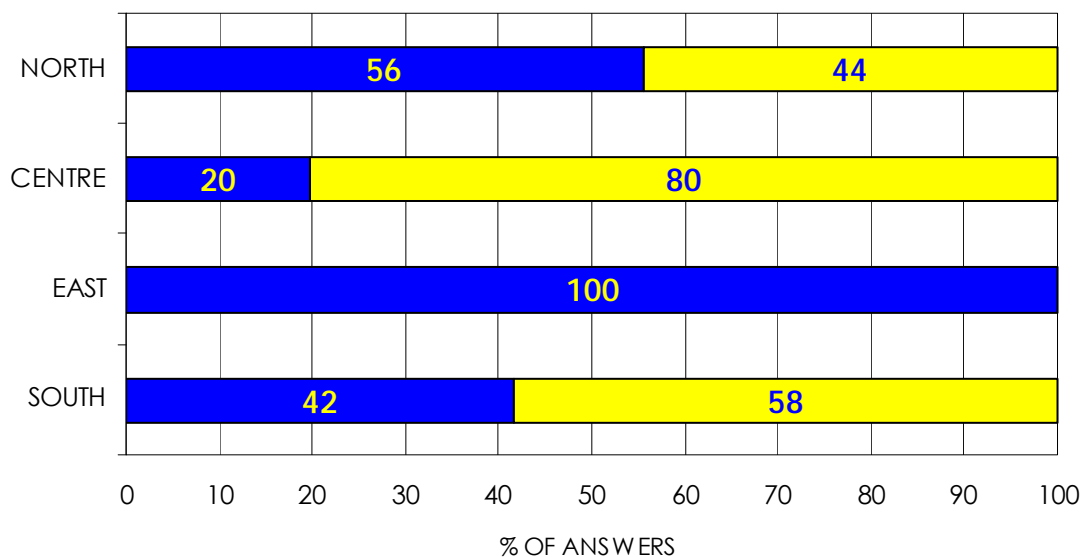
Figure 5.39. Is there any discussion or attempt to improve the current practices of disbudding/dehorning (% of answers)?

EUROPE



■ No ■ Yes

MACRO-REGIONS

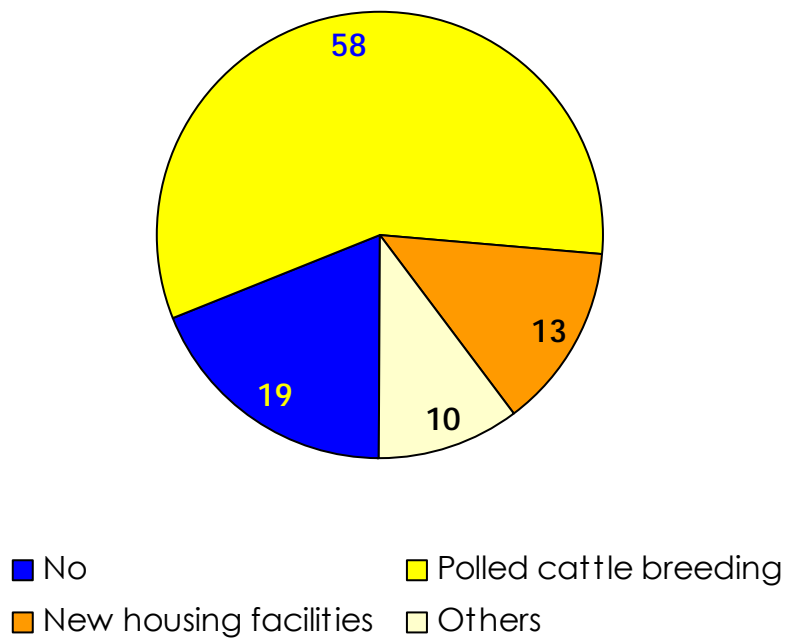


■ No ■ Yes

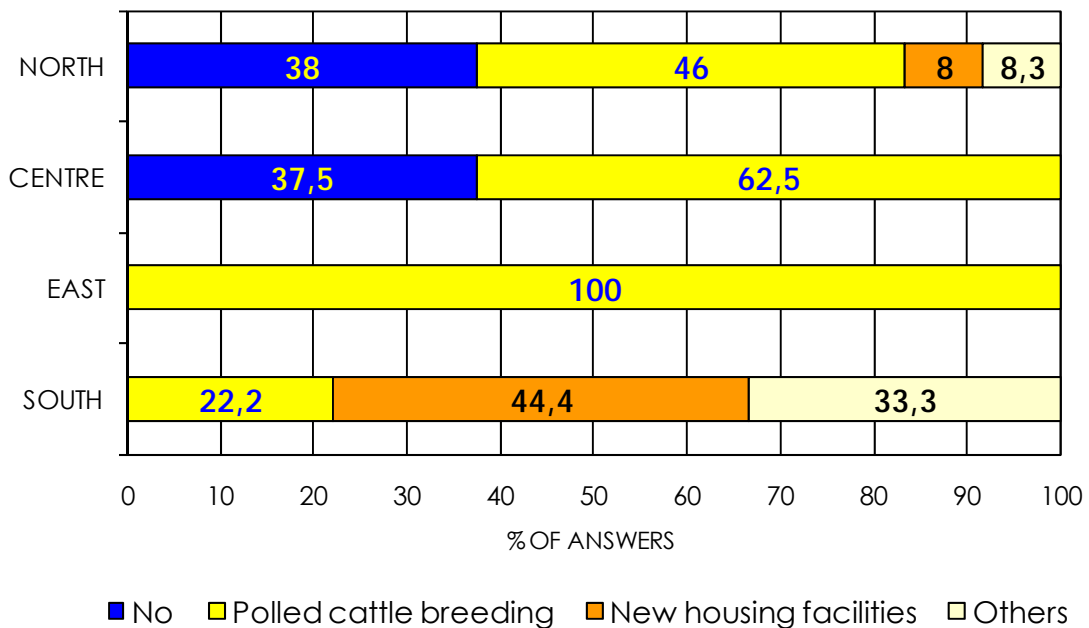
Is there any attempt to develop alternative practices to disbudding/dehorning?

It appears that rearing polled suckler cattle is considered the most viable alternative to their dehorning in Europe (Figure 5.40). Polled cattle breeding is the only alternative strategy for the experts of the East and it seems the main alternative for those of the Centre and the North macro-regions. In the South, there is a particular interest to design housing systems more suitable to host horned suckler herds.

Figure 5.40. Is there any attempt to develop alternative practices to disbudding/dehorning (% of answers)?  
EUROPE



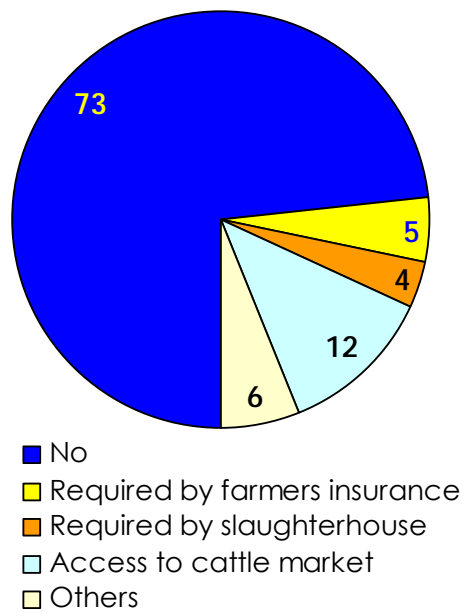
MACRO-REGIONS



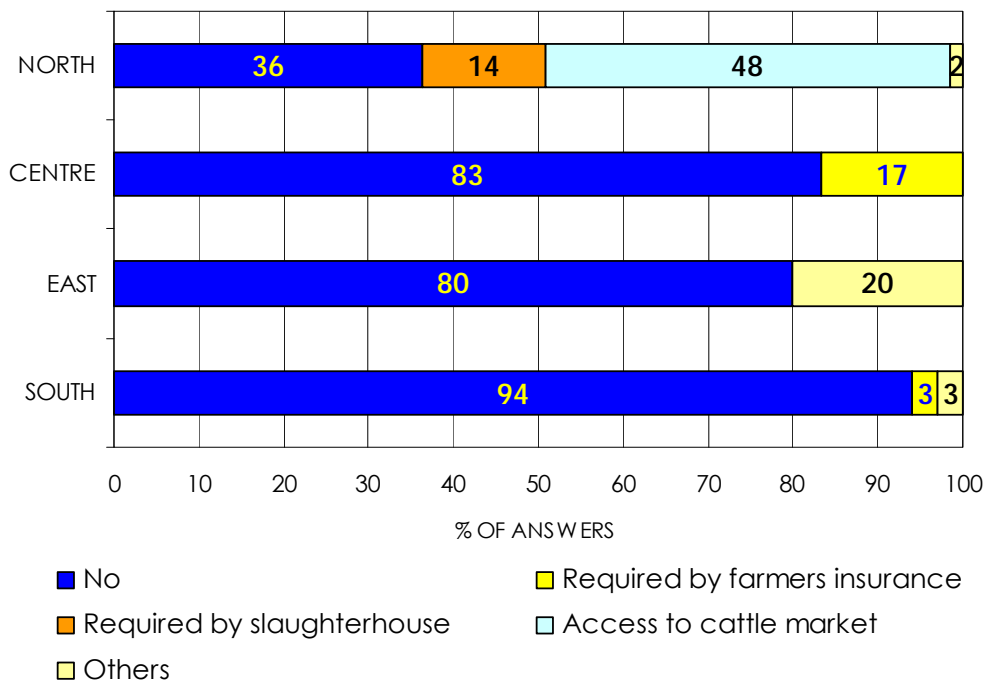
### Is there any obligation to dehorn?

In general there is no obligation to dehorn cattle of suckler herds in Europe (Figure 5.41). However, in some Member States of the North (including, for instance, the UK and Ireland) experts report that animals that are brought for sale at auctions or markets must be dehorned. In Finland and the UK dehorning is also required by some slaughterhouses while farmer insurance ask for dehorning in Germany and Italy.

Figure 5.41. Is there any obligation to dehorn (% of answers)?  
EUROPE



### MACRO-REGIONS

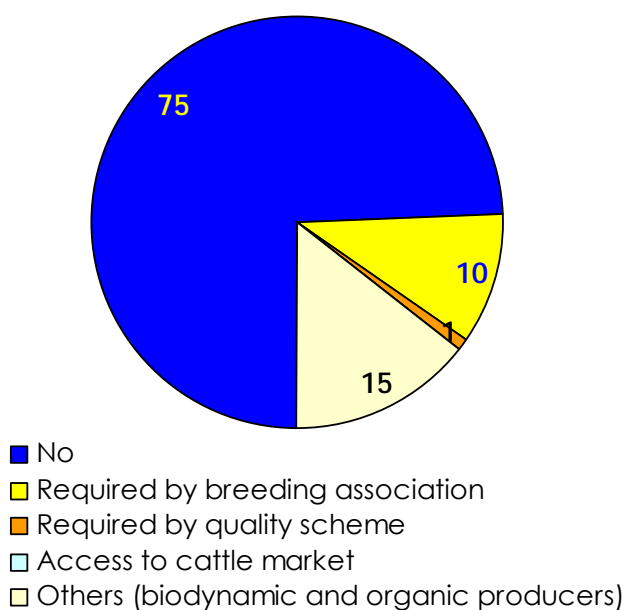


### Is there any obligation not to dehorn?

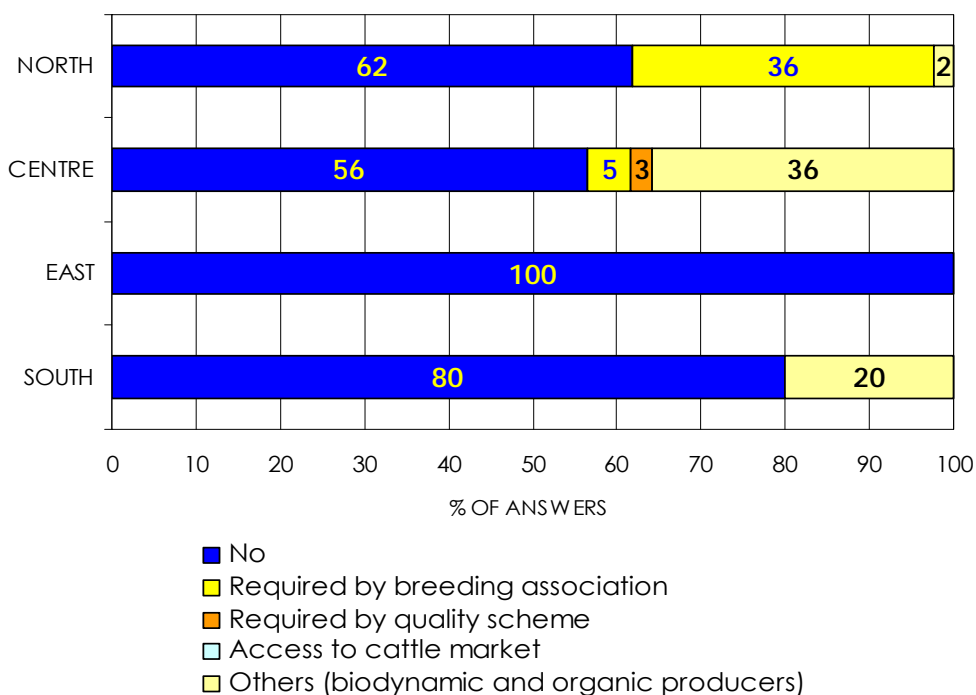
In general dehorning is not banned but exceptions exist (Figure 5.42). shall not be done in biodynamic systems (Demeter scheme) and in certain organic farming certification schemes. Obligations not to dehorn suckler cattle can be mainly found in the North and the Centre. Specific obligations come from some breeder associations (e.g. Scottish Highland Cattle) or from quality schemes like for some meat brands in Denmark.

Figure 5.42. Is there any obligation not to dehorn (% of answers)?

#### EUROPE



#### MACRO-REGIONS



## 6. General conclusions

- Data from the survey show that in Europe, about 82% of dairy, 39% of beef and 63% of suckler cattle are currently dehorned. Regardless of cattle category the percentage of dehorned animals is the highest in the North macro-region.
- The overall prevalence of polled cattle is very low, particularly in the dairy cattle population (<1%). The percentages of polled beef and polled suckler cattle are a little higher than in dairy (3.2 and 7.7% respectively), since polled breeds are raised for beef production in the North and the East macro-regions.
- Dehorning is performed primarily in cattle housed in free stall systems in order to reduce the risk of injuries for the stockman and among the pen-mates as well as to allow an easier cattle handling.

% of dehorned cattle	Dairy	Beef	Suckler herds
Loose housing	82	42	67
Tie stall	52	6	35
Permanent grazing	-	-	28

- In Europe, the conventional production scheme clearly prevails over the organic one for both dairy (97 vs. 3% of the surveyed farms) and beef (98 vs. 2% of the surveyed farms). Therefore dehorning results for conventional cattle are similar to those of the total cattle population while organic cattle are less dehorned.

% of dehorned cattle	Dairy	Beef	Suckler herds
Conventional farms	82	44	62
Organic farms	37	3	14

- As a method of horns removal, disbudding is generally preferred over dehorning. The latter method is performed for work safety reasons mainly when there is a change in the farm housing system (from tie to free stall) or on bought in animals. Dehorning is also performed as therapeutic procedure on horn-injured cattle.

Method of horns removal	Dairy	Beef	Suckler herds
Disbudding (% farms)	89	64	62
Dehorning (% farms)	11	36	38

- Hot iron is the most used method of disbudding especially in the North and Centre macro-regions. The use of caustic paste appears more frequent in the South and the East.
- Dehorning of more aged cattle is mainly performed with the wire/saw method while alternative methods and instruments (guillotine, sheers, grinders etc) have been reported only in specific Countries.
- Some kind of anaesthetic and/or analgesic treatment is administered to the animals prior to or after disbudding only in a small percentage of dairy (20), beef (35) and suckler farms (29). The use of drugs has shown to increase when dehorning is carried out on more aged animals (72% of dairy, 52% of beef and 41% of suckler farms), since it is a more invasive practice. Reported treatment protocols have shown to be inconsistent among EU Member States.
- In the large majority of European farms, the stockman is the main person in charge of calves disbudding. Horns removal from more aged cattle is performed with a frequent use of drugs and therefore it is more consistently carried out by veterinary practitioners, often with the assistance of the stockman.
- According to the experts opinion, horns removal is considered an effective solution to reduce the risk of injures for both cattle and stockman as well as to allow an easier handling of cattle. However, for some macro-regions, additional reasons were considered important by the experts. In the East and the South, dehorning is a way to adapt cattle to existing housing facilities. Welfare purpose was not included in the questionnaire among the possible list of reasons for cattle dehorning but sometimes it has been mentioned by the experts.
- Cattle breed can affect the decision to dehorn. Female calves of dairy breeds are routinely dehorned unless when their herd is housed in tie stalls. The decision to not dehorn is more often addressed to animals belonging to dual purpose and beef breeds. In mountain regions, grazing dairy cows of rustic local breeds are traditionally not dehorned. Local traditions tend to preserve the natural look of these animals also for aesthetic reasons.
- Farm size appears to be a factor determining to some degree disbudding and dehorning practices. Particularly in the East and the Centre macro-regions, it has been reported that small-scale farms where tie stall system is predominant do not usually dehorn their cattle.

- Older farmers particularly when managing small scale farms tend to not dehorn their animals, while it has been reported that younger, more educated generations are keener on dehorning for work safety reasons.
- Some training on cattle dehorning is carried out in many European Countries. However, training opportunities appear to be less frequent in the South and the East macro-regions.
- Some level of discussion is going on in Europe about the disbudding/dehorning practices, particularly concerning the use of drugs during the procedure and the preference for disbudding over dehorning as a more humane option. There is also some interest on promoting polled genetics which is considered the most feasible alternative to dehorning in the medium/long run. Countries of the East macro-region appear less involved in these discussions.
- In general there is no obligation to dehorn cattle in Europe. However, in some Member States animals brought for sale at auctions or markets must be dehorned. According to the EC transport regulation (2005), it is illegal to mix horned and dehorned animals during transport and dehorning is often required by slaughter industry to avoid carcass lesions.
- Dehorning is banned in biodynamic production systems and only by some organic farming schemes. Horned animals are also required by some breeding standards or they are promoted by local traditions which tend to preserve the natural appearance of cattle belonging to autochthonous breeds.



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Hörning, B., Simantke, C., Aubel, E., Andersson, R (2004): Ökologische Milch- und Rindfleischproduktion: Struktur, Entwicklung, Probleme, politischer Handlungsbedarf. Abschlussbericht des Forschungsprojektes 020E348, Geschäftsstelle Bundesprogramm Ökologischer Landbau in der Bundesanstalt für Landwirtschaft und Ernährung (BLE). URL:  
<http://orgprints.org/13434/01/13434-02OE348-ble-uni-kassel-2003-rinderproduktion.pdf>

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ZMP (2006): Strukturdaten ökologischer Betriebe. ZMP Materialien zur Marktberichterstattung 68, 85-93

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#### **Council of Europe**

European convention of 1976 for the protection of animals kept for farming purposes.

Recommendation concerning cattle adopted by the standing committee on 21 October 1988 and entered into force on 21 October 1989.

#### **European Union**

Commission regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control (OJ EC No. L 250, 18.09.2008, p. 1).

#### **Austria**

Federal Act on the Protection of Animals as of 28.09.2004 (BGBl. I, No. 118/2004, as last amended by BGBl. I, No. 35/2008 as of 11.01.2008)

1. Decree law on the Keeping of Animals (1. Tierhaltungsverordnung) as of 17.12.2004 (BGBl. II, No. 485/2004 as last amended by BGBl. II, No. 530/2006 as of 29.12.2006)

## **Belgium**

## **Bulgaria**

Law for veterinary service (ЗАКОН ЗА ВЕТЕРИНАРНОМЕДИЦИНСКАТА ДЕЙНОСТ),  
(<http://www.nvms.government.bg/files/ZVD.pdf>)

## **Cyprus**

## **Czech Republic**

Act on the protection of animals against cruelty (No. 246/1992 Coll., as last amended by Act No. 312/2008 Coll.)

## **Denmark**

Act on the Protection of Animals (LOV No. 286/06.06.1991, as last amended by LBK No. 344/13.05.2005)

## **Estonia**

## **Finland**

Animal Welfare Act (No. 247/1996, as last mended by No. 1430/2006)

Decree 14/EEO/1997

## **France**

## **Germany**

Animal welfare act as of 18 May 2006 (BGBl. I No 25, 31.5.2006, p. 1206; amended 7.6.2006 p. 1313).  
Medicinal products act (the drug law) as of 12 December 2005 (BGBl. I p. 3394).

## **Greece**

## **Hungary**

## **Ireland**

## **Italy**

Legislative decree n. 146, 26 March 2001

This decree is in application of the European Directive n. **98/58/CE**

Article 19 of the attachment (*Mutilations and other practices*) says “[...] The cauterisation of the horn bud is admitted under three weeks of age (of the animal, ndt)”.

## **Latvia**

## **Lithuania**

## **Luxembourg**

## **Malta**

## **Netherlands**

Animal Health and Welfare act: Article 40 and Provision on allowed operations (Regeling toegelaten handelingen), Article 4n.

## **Poland**

## **Portugal**

Recomendações de Bem-Estar Animal” that was published in 2005 by the Direcção Geral de Veterinária – Divisão de Bem-estar Animal (Minitry of Agriculture) in cooperation with CAP (Confederação dos Agricultores de Portugal) (p. 34, 35)

**Romania****Slovakia**

Animal Welfare Act as of 09.07.2003 (Zbierka zákonov No. 322/2003)

Veterinary Surgeons Act as of 12.12.2006 (Zbierka zákonov No. 39/2007)

**Slovenia**

Animal Protection Act (Zakon o varstvu živali, Ur. l. RS, No.: 98/99.

**Spain****Sweden****United Kingdom**

Defra Codes of Recommendations for the Welfare of Livestock – Cattle:

<http://www.defra.gov.uk/animalh/welfare/farmed/cattle/booklets/cattcode.pdf>

