Results of the 2022 FSA Slaughter Sector Survey in England and Wales

August 2022

Contents

Slaughter sector survey in England and Wales 2022

This report is based on a survey the Food Standards Agency (FSA) carried out at all slaughterhouses operating in England and Wales during the period 7th March – 13th March 2022, on behalf of Defra and the Welsh Government. The survey was completed by the Official Veterinarians (OVs) based at the slaughterhouses, using the information they were able to acquire from the Food Business Operator (FBO). There was a 99.5% return rate from all plants slaughtering the animals discussed in this report, either in the form of a response ornil return indicating that the plant was not in operation during the week of the survey[1]. The numbers of animals killed that week can be found in Table 1.1 on page 8 of this report.

The survey focused on throughput, slaughter methods (including stun and non-stun slaughter) and some additional areas such as where the livestock is sourced from and where the meat is distributed to, including exports. It included all farmed species and horses but excluded game birdsand deer.

Prior to this survey, the last full FSA survey of slaughterhouses was carried out in 2018 (Results of the 2018 FSA Survey into Slaughter Methods in England and Wales).

The retained slaughter regulation and our national regulations allow for Jews and Muslims to carry out slaughter without stunning, in accordance with religious rites, providing certain conditions are met.

Background notes

In this report "standard" slaughter refers to all non-religious stun slaughter. Halal slaughter includes both stun and non-stun slaughter while Shechita slaughter is exclusively non-stun. A list of slaughter methods classified as stun and non-stun for the purposes of this report can be found in Annex A.

Stun slaughter, which includes both standard slaughter and Halal stun slaughter, is referred to as "stunning prior to slaughter" in this report.

There are some issues with the survey which may affect the reliability of the analysis provided in this report, in particular issues with the questions relating to exports. All such issues are outlined in Annex B.

This survey is based on a single week which was selected with the intention of it being representative of the entire year, avoiding any religious festivals.

NOTE: All findings in this report refer to England and Wales combined.

---

[1] One small mixed species red meat plant, killing 927 animals that week sent a nil return.

Key findings

Where animals were sourced from (Chapter 2)

- Most animals were sourced from farms, 66% of red meat species and almost all of poultry except for a negligible number of "other poultry".

- Most cattle (76%) and pigs (85%) were sourced from farms.

- For other red meat species, calves (less than 8 months old - 46%), sheep (47%) and goats (53%) were sourced from farms.

- 54% of calves and all of horses were sourced from dealers respectively, although these numbers are very small compared with the total throughput reported.

- Other red meat species were also sourced from dealers, including cattle (7%), sheep (6%), goats (5%) and pigs (4%).

- Sources of goats were more varied in this survey compared with the previous survey. There were two main sources in 2018 (88% - farms and 11% - market) compared with four different sources now. The sources for goats were 53% - farms, 30% - markets, 11% - other and 6% - dealers.

How the animals were slaughtered (Chapter 3 and Annex D)

- For all species, most animals were stunned prior to slaughter. The relevant percentages are 95% for poultry and 89% for red meat compared with 91% and 87% respectively for poultry and red meat in 2018.

- 99% of cattle were stunned prior to slaughter (same as 2018), with 85% by captive bolt and 13% by Jarvis box.

- 99% of calves were stunned prior to slaughter (2% more than 2018). 91% by captive bolt, 5% electronarcosis and 3% by free bullet.

- 77% of sheep were stunned prior to slaughter compared with 75% in 2018. 50% of total sheep slaughtered were by Halal stun methods.

- Sheep had the second largest proportion of animals slaughtered by a non-stun method (23%, 2% less than in 2018).

- 75% of goats were stunned prior to slaughter compared with 93% in 2018.

- Goats had the largest proportion of non-stun slaughter with a quarter (25%) of all animals slaughtered by Halal non-stun methods.

- 88% of pigs were stunned with high concentration CO_2 with almost all the remaining 12% being stunned through electronarcosis to the head. In 2018 the proportions were 86% and 14% respectively.

- Meat chicken was by far the most slaughtered species. Out of the 18.4 million slaughtered, approximately 80% were gas stunned (compared with 70% in 2018) and 14% by Halal waterbath methods (non-Annex 1 compliant[2] - 3%). 2% were slaughtered by non-stun methods.

- The number of spent hens, or hens no longer laying, (394,500) slaughtered in this survey was about half of the number slaughtered in 2018 (803,006). 96% of spent hens were slaughtered by stun methods (88% - gas stunned, 9% - electrical waterbath Annex 1 compliant), and the remaining 4% by non-stun methods.

Where the meat was distributed to (Chapter 4)

- 63% of beef was distributed within the UK either via wholesale traders, supermarkets or other UK destinations (was 56% in 2018). 16% of beef was exported via a wholesale trader (13%) or directly (3%) (was 10% in 2018). Most of the exported beef went to EU countries, but also mentioned were some non-EU countries including USA, Japan, South Africa, Ghana and Philippines.

- Over half of calf meat (54%, similar in 2018 - 53%) was distributed within the UK either via wholesale traders or other UK destinations. 39% of calf meat was exported via wholesale traders (36%) or directly (3%) mainly to EU countries, namely Italy and Poland.

- 48% of pork was distributed within the UK either via wholesale traders, supermarkets or other UK destinations (was 66% in 2018). 15% of pork was exported via wholesale trader (12%) or directly (3%), 3% lower than the 2018 rate. 3% going to EU countries, 4% going to non-EU countries and 9% to countries not mentioned (see fig 4.1c). In general, pigs had the largest proportion of distribution to other or unknown destinations compared with all other species (36%, was 16% in 2018).

- 76% of sheep meat was distributed within the UK, either via wholesale traders, supermarkets or other UK destinations (this proportion was 56% in 2018). 18% of all sheep meat was exported via a wholesale trader for export (10%) or directly (8%) and the remaining 6% to unknown destinations. The total exports in 2018 was 25% i.e., both wholesale trader for exports and direct exports indicating a decrease of 7% in exports.

- Almost 50% of all sheep meat exports went to the EU compared with 100% of all exports in 2018. The other 50% of exports went to unknown destinations and a negligible amount to non-EU destinations. The main EU countries were France, Belgium and Germany. The non-EU countries mentioned were Hong Kong, Japan and Kuwait.

- 72% of meat chicken meat was distributed within the UK (85% in 2018), either via wholesale traders, supermarkets or other UK destinations. 6% (7% in 2018) of meat chicken was exported mostly to EU countries, but a negligible amount to non-EU countries namely, Ghana, Hong Kong and Trinidad and Tobago. The destination of the remaining 22% was unknown.

- 67% of spent hens were distributed within the UK via wholesale traders (19%) and supermarkets (48%). The remaining third (32%) were allocated as other or not known. The comparative distribution of spent hens in this survey with 2018 shows the biggest differences

---

[2] 'Non-Annex I compliant' relates to animals slaughtered under Article 4(4) of Retained Regulation (EC) No. 1009/2009, where stunning methods are not required to meet the parameters prescribed in Annex I of the legislation (in England)

for any of the animal species. In 2018, 42% of UK distribution went to wholesale traders, 56% were directly exported and 2% was allocated as unknown.

Third party assurance schemes (Chapter 5)

- Around half of all slaughterhouses were members of at least one third-party assurance scheme, 52% of poultry slaughterhouses and 49% of red meat slaughterhouses.

- The most prominent third-party assurance schemes were Red Tractor and the British Retail Consortium (BRC), with 31% and 14% of all slaughterhouses known to be members of these schemes, respectively.

Certification bodies for Halal and Shechita slaughterhouses

- Of the 24 slaughterhouses involved in non-stun Halal slaughter, 13 slaughterhouses indicated that they were certified by a Halal certification body. 4 stated that they were self-certified and 7 did not provide any response.

- Of the 38 slaughterhouses involved in Halal stun slaughter, 16 slaughterhouses indicated that they were certified by a Halal certifying body. 6 stated they were self-certified ,8 were not certified and the remaining 8 did not provide a response.

- For Shechita slaughter, of the 8 slaughterhouses, 5 named a certification body and 3 did not provide a response.

1. The number of animals slaughtered during the survey period

The number of slaughterhouses operating, and animals slaughtered can be found in Figure 1.1 below. The table compares the current throughput with the previous numbers in 2018.

- A total of 19,571,203 animals were slaughtered across 211 operating plants (190 in England and 21 in Wales). There were 161 red meat slaughterhouses and 50 for poultry.

- Most of the animals that were slaughtered (94%) were meat chickens, 3% more than in 2018 (91%).

Figure 1.1: Animals slaughtered and slaughterhouses operating in England and Wales, by species of animal: 7 March to 13 March 2022

Animal	Current survey - 2022		Previous survey - 2018	
	Number Slaughtered	Operating Plants	Number Slaughtered	Operating Plants
Cattle	33,377	120	35,343	145
Calves (less than 8 months old)	2,225	18	1,245	27
Sheep	219,016	120	244,305	153
Goats	372	39	402	48
Horses	16	1	67	1
Pigs	194,612	91	176,887	111
Meat chickens	18,353,961	42	18,012,455	50
Spent Hens	394,500	6	803,006	9
Turkeys	176,473	8	147,750	11
Other Poultry*	196,651	4	297,220	10
All species	**19,571,203**	**211**	**19,718,680**	**248**

*Other Poultry includes ducks, guinea fowl, geese, and quail. Quail is not classed as game as it is farmed for food and is processed in dedicated slaughterhouses.

2. Where the animals were sourced from

- Figure 2.1 shows the source of the animals slaughtered during the week of 7th March – 13th March 2022. When the sum of the sources of throughput does not match the total throughput, the remainder was allocated to an "Unknown" category.

- Farms continue to be the main source in the case of most animal species.

- 54% of calves and all horses were sourced from dealers respectively, like the trend in the 2018 survey when 58% of calves and 98% of horses came from dealers.

- Goats had two main sources in 2018 (11% - markets, 88% - farms and a negligible proportion from dealers). In this survey, 30% were sourced from markets, 53% from farms, 5% from dealers and 12% were classified as other or unknown.

- Pigs also had more varied sources compared with 2018. Most pigs (85%) came directly from farms, 4% from dealers, 1% from markets and 10% were classified as other or not known. There were only two sources in 2018, 98% from farms and 2% from markets.

- As in 2018, almost all poultry were sourced directly from farms, except a negligible number of 'other poultry' sourced from other or unknown sources. In 2018 the exception was 2% of meat chickens from unknown sources.

Figure 2.1: Percentage breakdown of the source, by species of animals
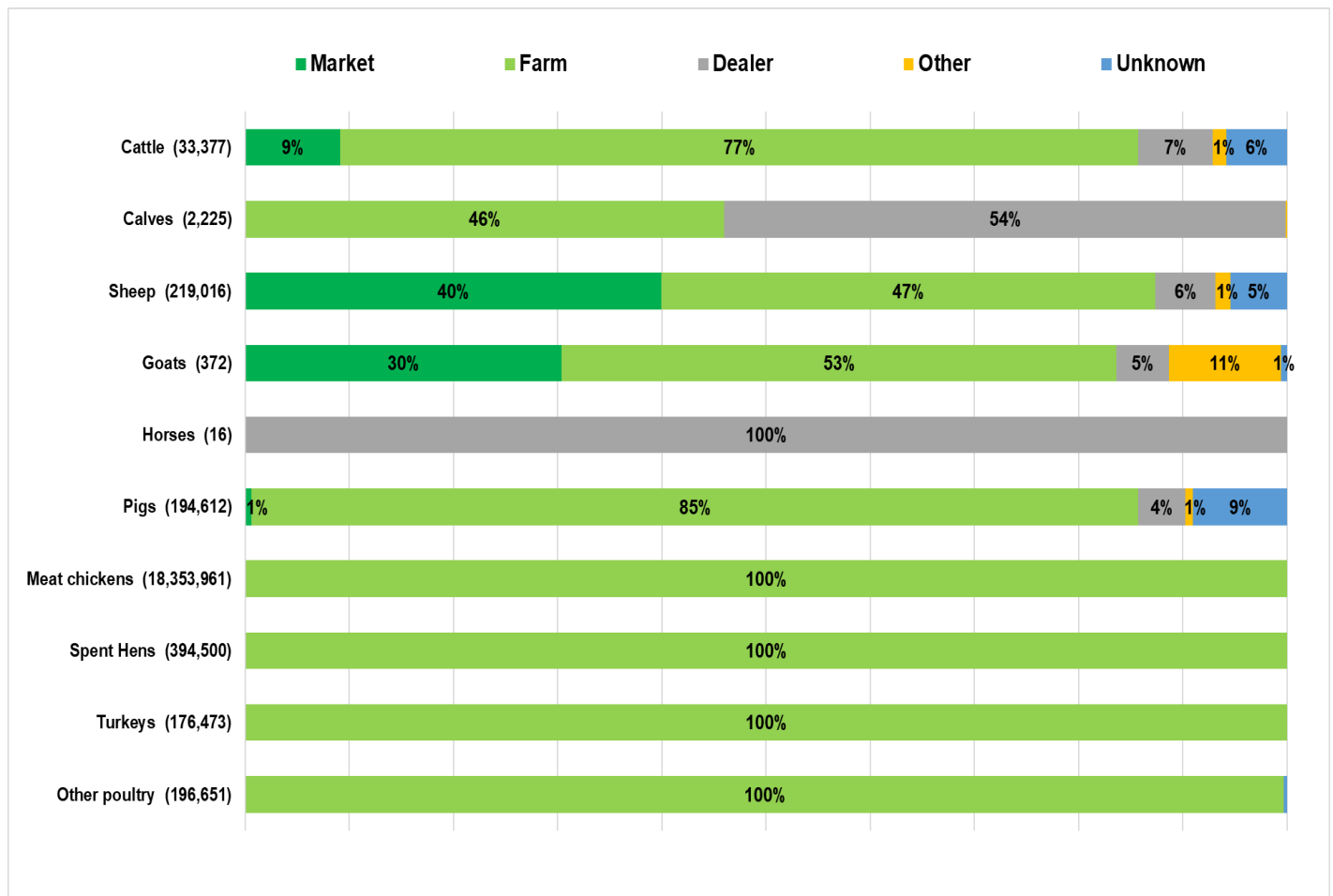
3. How animals were slaughtered

Figure 3.1 below summarises how each species was slaughtered. For a more detailed breakdownby specific methods of stunning and slaughter see Annex D.

- Majority of animals were slaughtered by standard methods. 83% of the total in this survey compared with 78% in 2018.

- For all species, most animals were stunned prior to slaughter. The relevant percentages are 95% for poultry and 89% for red meat compared with 91% and 87% respectively for poultry and red meat in 2018.

- 99% of cattle were stunned prior to slaughter (same as 2018), with 85% by captive bolt and 13% by Jarvis box. 99% of calves were stunned prior to slaughter (2% more than 2018), 91% by captive bolt, 5% by electronarcosis and 3% by free bullet.

- 89% of all red meat species were stunned compared with 95% of poultry. Goats (25%) and sheep (23%) had the largest proportion of non-stun slaughter.

- 88% of pigs were stunned with high concentration CO_2 with almost all the remaining 12% being stunned through electronarcosis to the head. In 2018 the proportions were 86% and 14% respectively.

- For all poultry, the prominent methods of stun were CO_2 in phases (64%), other gas mixture (15%) and electrical waterbath (Annex 1 Compliant) - 11%.

- Meat chickens were by far the most slaughtered species. Out of the 18.4 million slaughtered, approximately 80% were gas stunned (compared with 65% in 2018), 14% by Halal stun methods (non-Annex 1 compliant - 3%) and 3% by non-stun methods.

- The number of spent hens, or hens no longer laying, (394,500) slaughtered in this survey was about half of the number slaughtered in 2018 (803,006). 96% of spent hens were slaughtered by stun methods (88% - gas stunned, 9% - electrical waterbath Annex 1 compliant), and the remaining 4% by non-stun methods.

Figure 3.1: Percentage of animals slaughtered, by slaughter method

Legend: ■ Standard ■ Halal Stun ■ Halal Non Stun ■ Non-Annex 1 compliant ■ Shechita

Animal	Percentages
Cattle (33,377)	Standard 95%, Halal Stun 4%, 1%
Calves (2,225)	Standard 95%, Halal Stun 4%, 1%
Sheep (219,016)	Standard 28%, Halal Stun 50%, Halal Non Stun 22%
Goats (372)	Standard 44%, Halal Stun 31%, Halal Non Stun 25%
Horses (16)	Standard 100%
Pigs (194,612)	Standard 100%
Meat chicken (18,353,961)	Standard 83%, Halal Stun 11%, 2%, Non-Annex 1 compliant 3%
Spent Hens (394,500)	Standard 96%, 4%
Turkeys (176,473)	Standard 99%, 1%
Other Poultry (196,651)	Standard 99%, 1%

Percentage of total animals slaughtered for the given species

Species	Total animals slaughtered	Standard (1)	Halal Stun (2)	Halal Non-Stun (3)	Shechita (4)	Stun slaughter (1) + (2)	Non-stun slaughter (3) + (4)	Religious slaughter (2)+(3)+(4)
Cattle	33,377	95.4%	3.7%	0.1%	0.8%	99.1%	0.9%	4.6%
Calves	2,225	95.2%	4.1%	0.7%	-	99.3%	0.7%	4.8%
Sheep	219,016	27.5%	49.9%	22.4%	0.2%	77.4%	22.6%	72.5%
Goats	372	44.4%	30.9%	24.7%	-	75.3%	24.7%	55.6%
Horses	16	100.0%	-	-	-	100.0%	-	-
Pigs	194,612	100.0%	-	-	-	100.0%	-	-
Meat chicken	18,353,961	83.3%	11.3%	2.0%	0.3%	94.6%	2.3%	16.7%*
Spent Hens	394,500	96.3%	-	3.7%	-	96.3%	3.7%	3.7%
Turkeys	176,473	99.5%	-	-	0.5%	99.5%	0.5%	0.5%
Other Poultry	196,651	99.4%	-	-	0.6%	99.4%	0.6%	0.6%

* The meat chickens religious slaughter total of 16.7% includes 3.1% by non-Annex 1 compliant methods not shown in the table.

What proportion of animals were slaughtered using anon-stun method?

The Shechita method of slaughter is exclusively non-stun while Halal slaughter is comprised of both stun and non-stun methods of slaughter. Horses and pigs are only slaughtered using stun methods.

- For all species, most animals were stunned prior to slaughter.

- Goats had the largest proportion of animals slaughtered by a non-stun method (25%), with all of this being Halal (was 7% in 2018).

- Sheep had the second largest proportion of animals slaughtered by a non-stun method (23%) a reduction of 2% from 2018, and 0.2% was slaughtered by the Shechita method.

- It is worth noting that the number of plants using stunned Halal methods for meat chickens, has decreased from 13 to 10 since the previous survey, and the number of plants using non-stun Halal methods has decreased from 12 to 10.

- 4% of spent hens were slaughtered by non-stun methods and all were Halal non-stun. In 2018 only 1% of spent hens were slaughtered by non-stun methods. The plant which carried out stunned Halal slaughter on a significant number of spent hens in 2018, now only processes by standard slaughter.

Figure 3.2: Percentage of animals slaughtered by a non-stun method
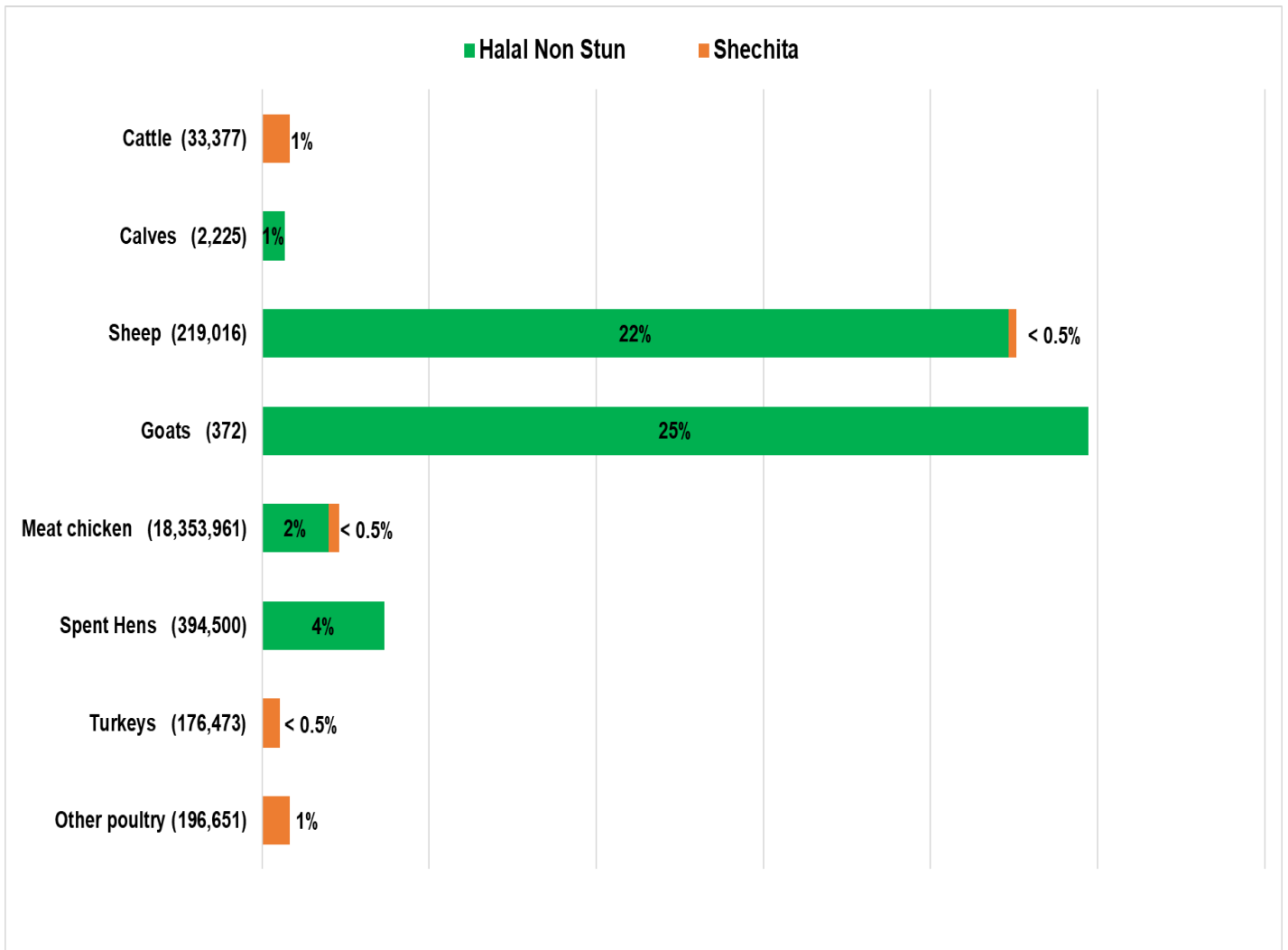
4. Where the meat was distributed to

The destination of the meat resulting from the slaughter of each species is presented in Figure 4.1a.

- 72% of all poultry meat was distributed in the UK and 6% was exported via wholesale traders (3%) and direct exports (3%). The destination of 22% was declared as unknown.

- For red meat, 63% was distributed in the UK and 17% was exported through wholesale traders (11%) and direct exports (6%) with 20% of total slaughter declared as unknown.

- Except for horses, calf meat had the largest proportion of exports (39%) followed by sheep (18%), cattle (16%) and pigs (15%).

- For poultry, the proportion of meat exported for both non-stun and stun slaughter was 5%, compared with 31% and 15% respectively for non-stun and stun red meat exports.

- Compared with 2018 the general level of exports has declined by 4%. Exports of poultry to the EU has declined by 3% and exports to non-EU countries by 1%. For red meat, exports have declined by 11% and 2% to EU and non-EU countries, respectively.

Figure 4.1a: Where meat was distributed to
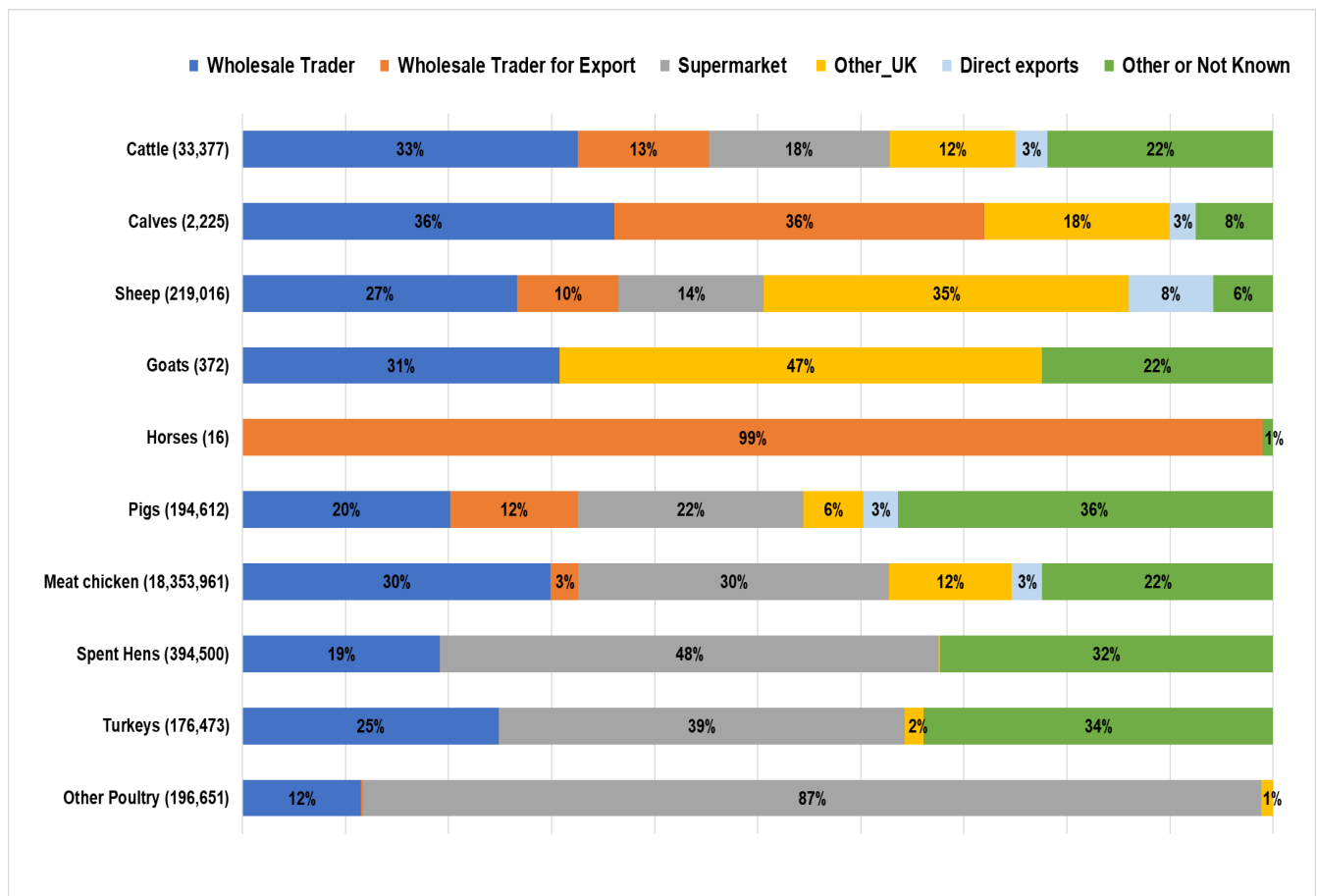
*Other UK includes those sent to Smithfield, other butchers, individual customers, restaurants, and other UK destinations.

Figure 4.1b: Where the meat was distributed to

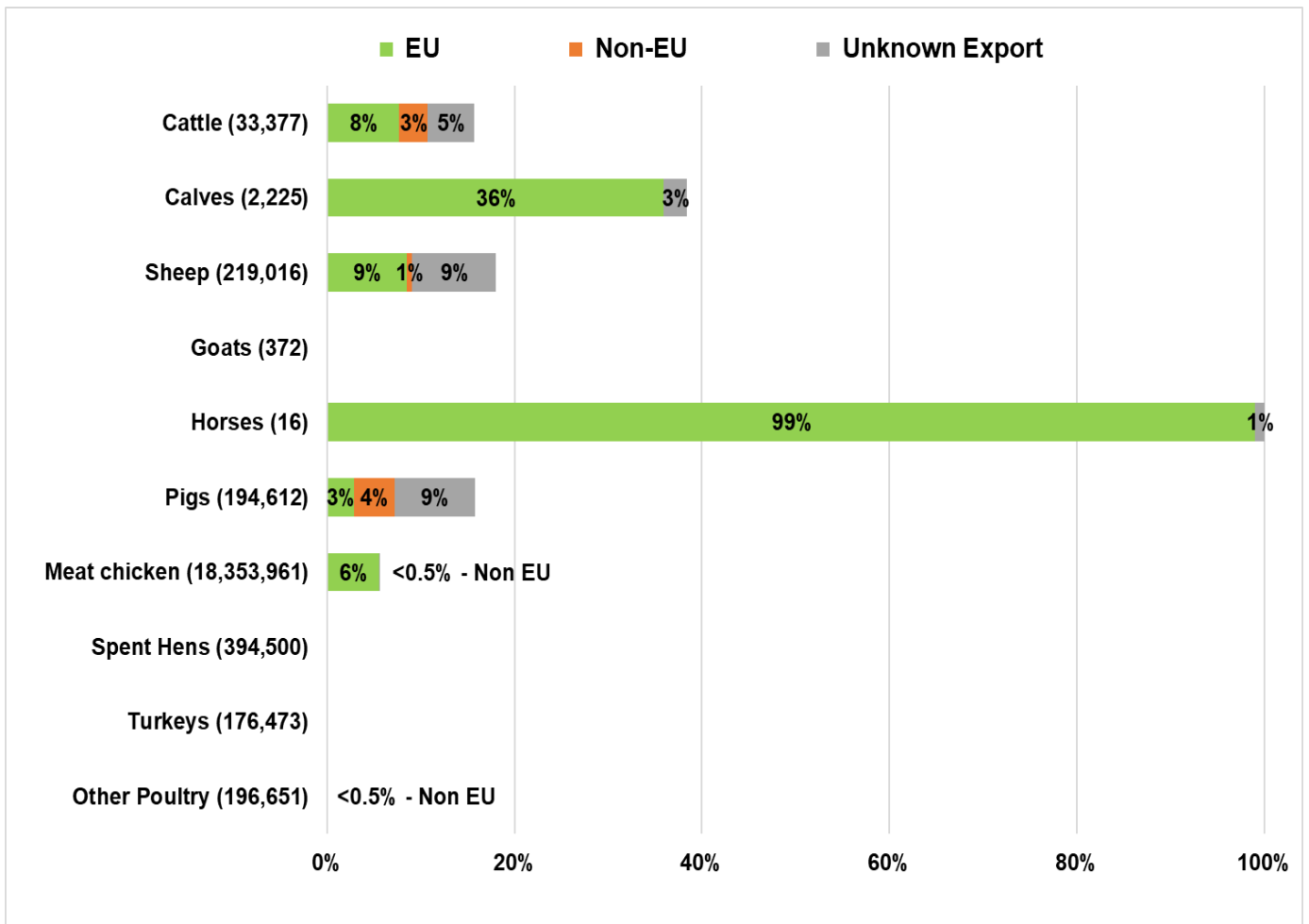| Animal	Wholesale Trader	Wholesale Trader for Export	Super-market	Other UK* destination	Direct exports	Other or not known*
Cattle (33,377)	33%	13%	18%	12%	3%	22%
Calves (2,225)	36%	36%		18%	3%	8%
Sheep (219,016)	27%	10%	14%	35%	8%	6%
Goats (372)	31%	-	-	47%	-	22%
Horses (16)	-	99%	-	-	-	1%
Pigs (194,612)	20%	12%	22%	6%	3%	36%
Meat chicken (18,353,961)	30%	3%	30%	12%	3%	22%
Spent Hens (394,500)	19%	-	48%	<0.5%	-	32%
Turkeys (176,473)	25%	-	39%	2%	-	34%
Other poultry (196,651)	12%	<0.5%	87%	1%	-	-

*Other UK includes those sent to Smithfield, other butchers, individual customers, restaurants, and other UK destinations.

Looking at the proportion of meat exported and where it was exported to (see Figures 4.1c and Annex C):

- 16% of beef was exported via wholesale traders (13%) and direct exports (3%), half of these (8%) went to the EU, 3% to non-EU countries and 5% to unknown destinations. The non-EU countries included USA, Japan, South Africa, Ghana and Philippines.

- 39% of calf meat was exported, 36% went to the EU and 3% to unknown destinations. The EU countries mentioned were Poland (1 slaughterhouse) and Italy (1).

- 18% of total sheep slaughtered was exported. 9% was exported to the EU. The most frequently mentioned countries were France (11 slaughterhouses), Germany (8), the Netherlands (7) and Belgium (6). Another 1% went to non-EU countries namely Japan (1 slaughterhouse), Kuwait (1) and Hong Kong (1) and the remaining 9% to unknown destinations.

- 100% of horse meat was exported. The one plant which slaughtered horses exported 99% of its meat to Belgium and France and 1% to an unknown destination. This is very similar to 2018 where 94% of meat was exported to the same countries, but the total number of animals slaughtered decreased from 67 in 2018 to 16.

- 15% of all pork slaughtered was exported. 12% via wholesale traders and 3% by direct exports. 3% was exported to the EU and 4% to non-EU, with 9% going to unknown destinations. In 2018, 18% of pork was exported via wholesale traders for export and direct exports to EU (7%) non-EU (11%) respectively.

- 6% of all meat chicken was exported, almost all to the EU with a negligible proportion (less than 0.05%) to non-EU countries. In 2018, 7% of all meat chickens exported went to the EU and a negligible proportion was classified as unknown exports.

- 6% of all meat was exported (via wholesale trader for export or directly), compared with 10% in 2018 (wholesale trader for export and direct exports). 94% of the total exports went to the EU (92% were stun slaughter), 2% to non-EU countries (all stun) and 5% was unknown. In 2018 80% of exports went to EU countries, 15% to non-EU and 4% to unknown destinations.

Figure 4.1c: The percentage of the meat which was either exported directly or sent to a UK wholesale trader for export, broken down by EU and non-EU

Legend: ■ EU ■ Non-EU ■ Unknown Export

Category	EU	Non-EU	Unknown Export
Cattle (33,377)	8%	3%	5%
Calves (2,225)	36%		3%
Sheep (219,016)	9%	1%	9%
Goats (372)			
Horses (16)	99%		1%
Pigs (194,612)	3%	4%	9%
Meat chicken (18,353,961)	6%	<0.5% - Non EU	
Spent Hens (394,500)			
Turkeys (176,473)			
Other Poultry (196,651)	<0.5% - Non EU		

Unknown = Information not provided or incomplete

Were there differences in where the meat was distributed between stun and non-stun methods of slaughter?

The charts and tables in this section highlight the distribution of meat by stun and non-stun. Figure 4.2a illustrates the distribution by the proportions of stun/non-stun slaughter within the UK and those exported for each species.

- For non-stun distribution in the UK, again all other poultry was distributed within the UK, 98% of non-stun cattle was also distributed within the UK followed by meat chicken (93%), goats (71%) and sheep (68%).

- 62% of stunned cattle was distributed in the UK, 16% was exported and the destination of 22% of stunned cattle was unknown. 98% of non-stunned cattle was distributed in the UK and only 2% was exported. For more information on the distribution of species by stun and non-stun see figure 4.2a.

- Most meat exported was from animals that were stunned. For stunned slaughter, the proportion of meat that was exported ranged from 99% of horse meat to 6% of meat chickens.16% of stunned cattle and pigs respectively were also exported. Six animal species had stun slaughter exports compared with just two for non-stunned exports.

- Sheep had the highest proportion of non-stun exports (32% of non-stun slaughter) compared with 14% of stunned sheep exports. The other species with any non-stun exports was meat chicken with 5% compared with its stun exports of 6%.

Figures 4.2a and 4.2b below illustrate the distribution of animal species within the UK and exports by stun and non-stun, respectively.

Fig 4.2a: Distribution of stun and non-stun meat by destination (UK or exported) – table

Animal species	UK		Exports		Unknown	
	Stun	Non-Stun	Stun	Non-Stun	Stun	Non-Stun
Cattle (33,377)	62%	98%	16%		22%	2%
Calves (2,225)	54%		39%		7%	100%
Sheep (219,016)	79%	68%	14%	32%	8%	
Goats (372)	80%	71%			20%	29%
Horses (16)			99%		1%	
Pigs (194,612)	48%		16%		36%	
Meat chicken (18,353,961)	71%	93%	6%	5%	23%	2%
Spent Hens (394,500)	70%	3%			30%	97%
Turkeys (176,473)	66%	10%			34%	90%
Other Poultry (196,651)	100%	100%				

Figure 4.2b: Distribution of stun and non-stun meat by animal species and destination (UK and exported) – chart

Legend:
- ■ % of stun distribution - UK
- ■ % of non-stun distribution - UK
- ■ % of stun distribution exported
- ■ % of non-stun distribution exported

Species	% of stun distribution - UK	% of non-stun distribution - UK	% of stun distribution exported	% of non-stun distribution exported
Cattle (33,377)	62%	98%	16%	
Calves (2,225)	54%		39%	
Sheep (219,016)	79%	68%	14%	32%
Goats (372)	80%	71%		
Horses (16)			99%	
Pigs (194,612)	48%		16%	
Meat chicken (18,353,961)	71%	93%	6%	5%
Spent Hens (394,500)	70%	3%		
Turkeys (176,473)	66%	10%		
Other Poultry (196,651)	100%	100%		

Figure 4.3a: The percentage of the meat from stun slaughter which was either exported directly or sent to a UK wholesale trader for export, broken down by EU and non-EU
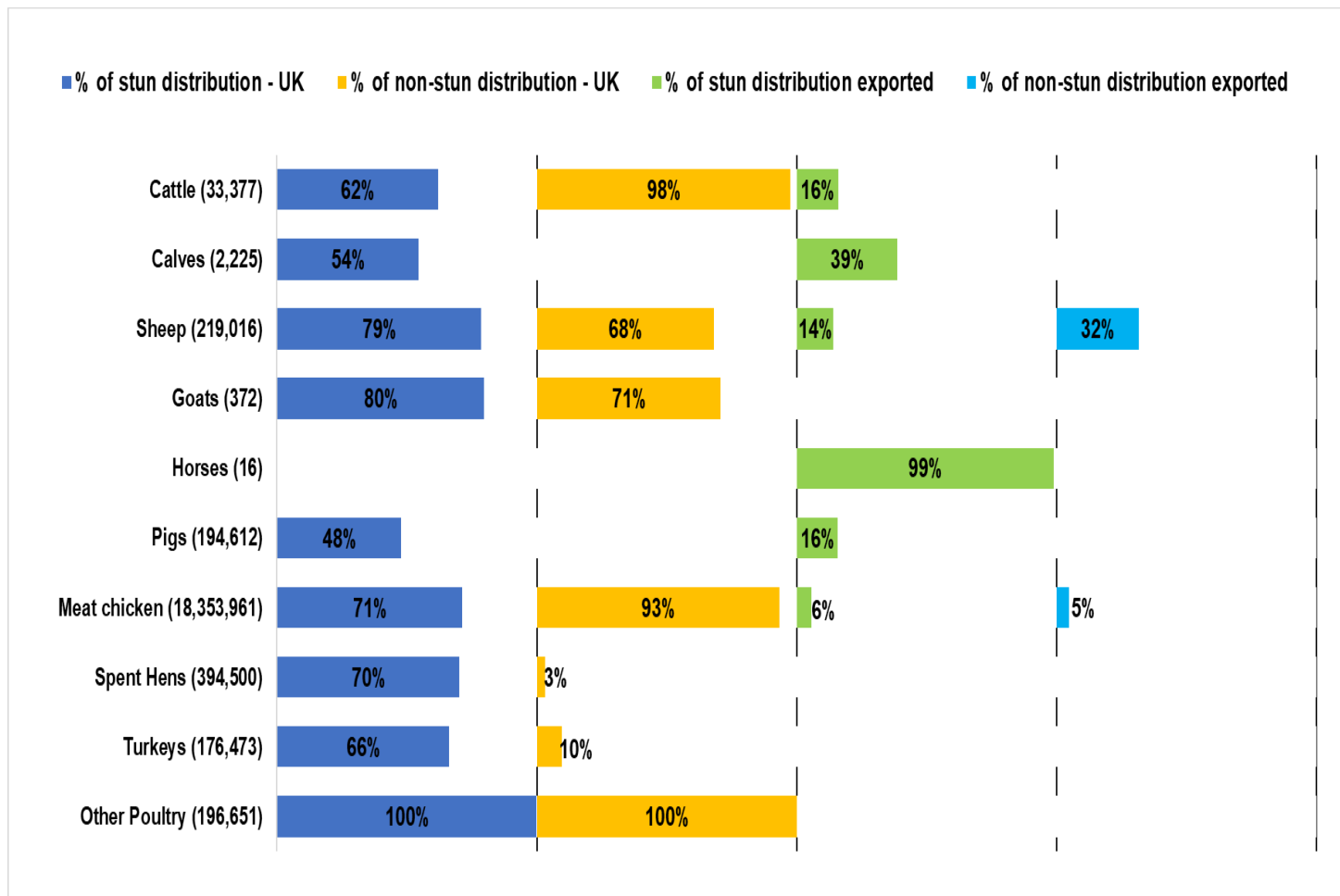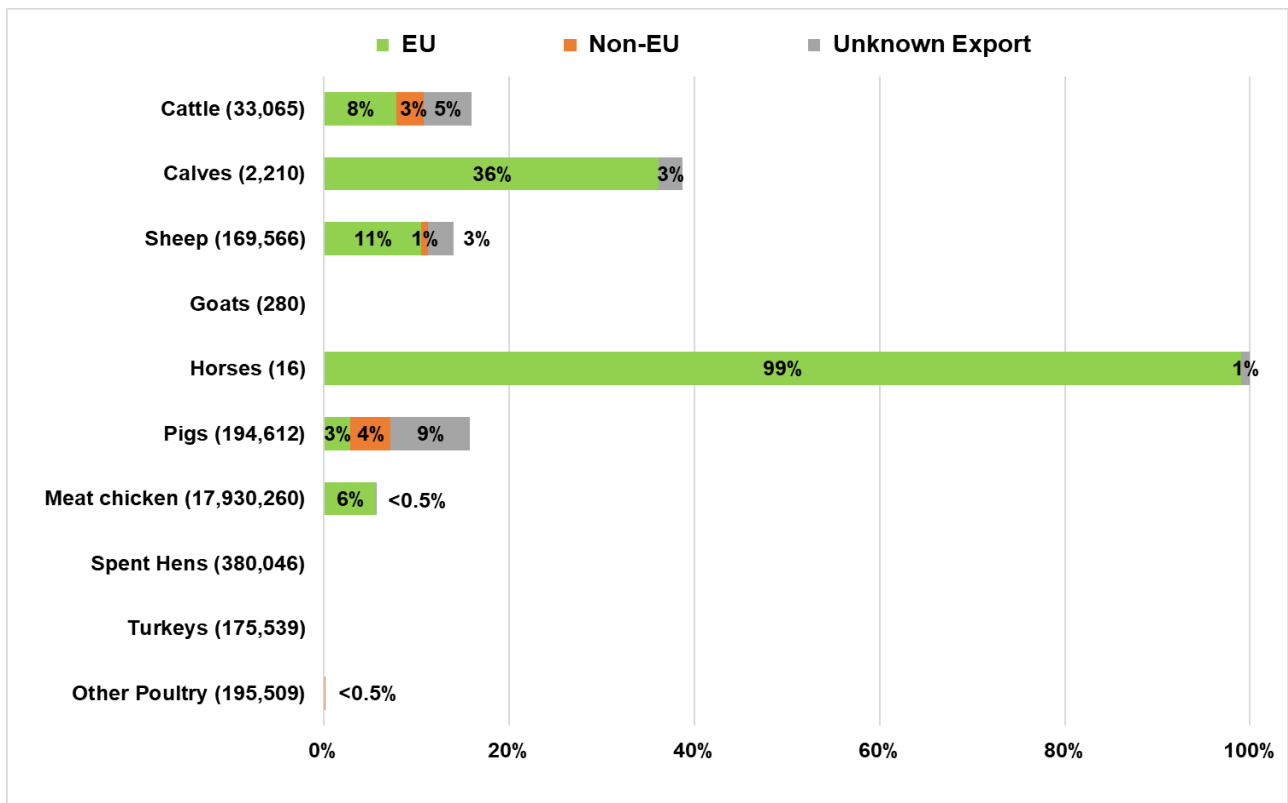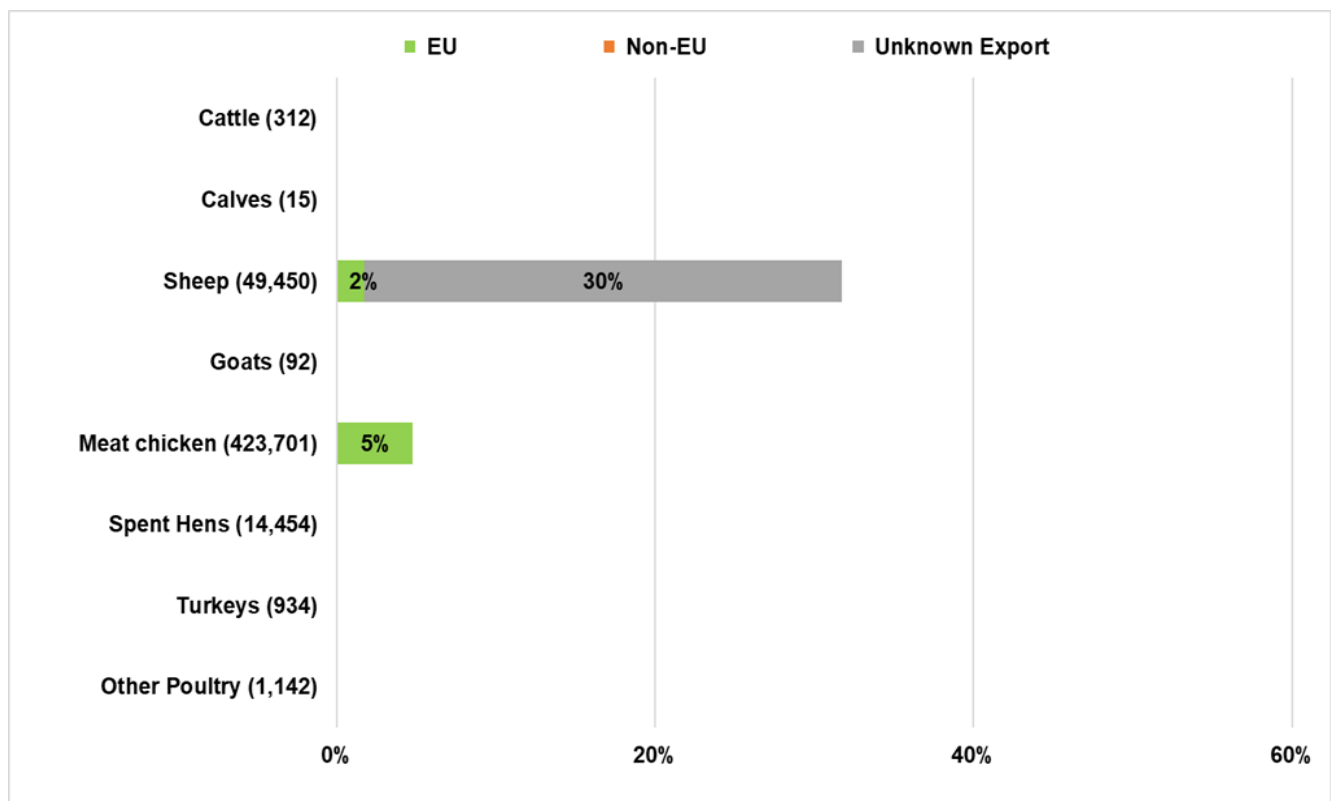

Figure 4.3b: The percentage of the meat from non-stun slaughter which was either exported directly or sent to a UK wholesale trader for export, broken down by EU and non-EU

For Halal slaughter, does the destination of the meat differ between stun and non-stun slaughter methods?

- All Halal slaughtered spent hens were non-stunned with 3% going to other UK destinations and the remaining 97% classified as other or unknown.

- None of Halal non-stun sheep went to supermarkets, but 16% of stunned Halal were sent to supermarkets. Most Halal non-stun sheep (68%) went to wholesale traders and other UK destinations, with 4% exported through wholesale traders and 28% was classified as other or unknown.

- Meat chickens were the only non-stun Halal species that had a proportion (12%) sent to supermarkets. 16% of Halal stun sheep and 11% of Halal stun meat chickens were sent to supermarkets.

- 71% of non-stun Halal goats were sent to wholesale traders (12%) and other UK destinations (59%) in comparison with Halal stun goat, of which 42% and 15% were sent to wholesale traders and other UK destinations, respectively.

Figure 4.4a: Where the meat was distributed to, Halal stun

*Other UK includes those sent to Smithfield, other butchers, individual customers, restaurants and other UK destinations. Meat chickens total exclude slaughter by non-Annex 1 compliant methods.

Figure 4.4b: Where the meat was distributed to, Halal non-stun
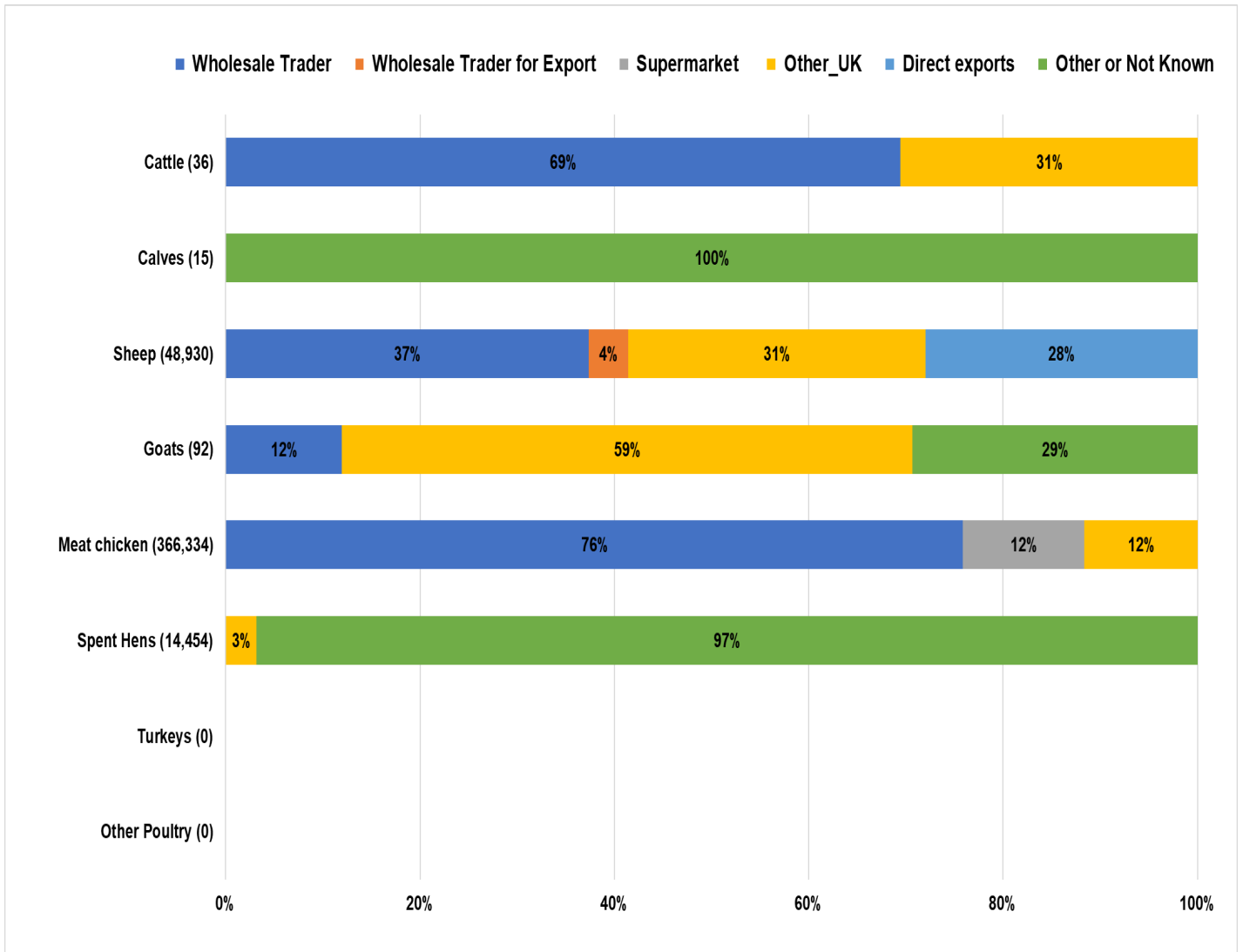
*Other UK includes those sent to Smithfield, other butchers, individual customers, restaurants and other UK destinations.

Figure 4.5 The percentage of the meat from Halal stun slaughter which was either exported directly or sent to a UK wholesale trader for export, broken down by EU and non-EU
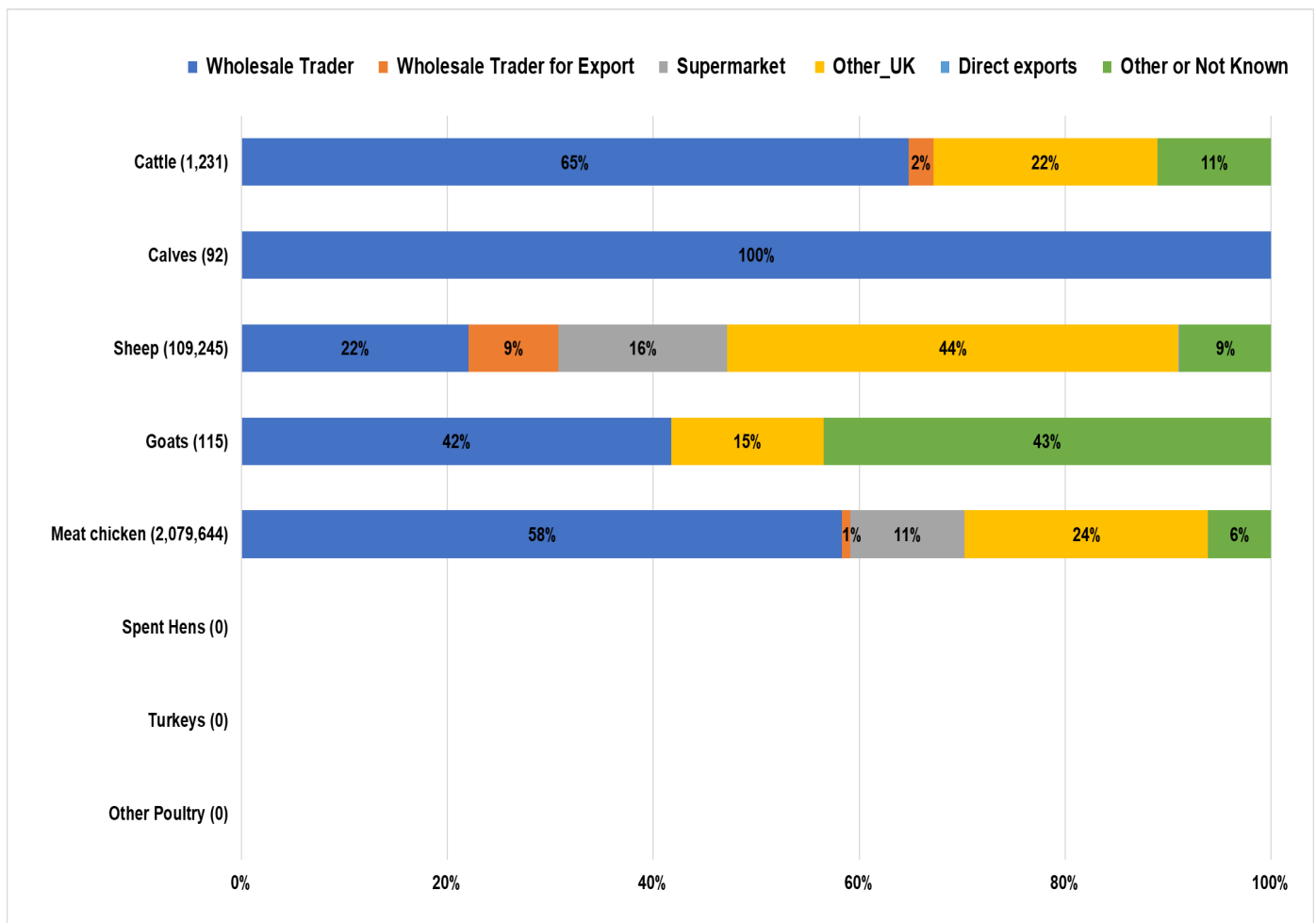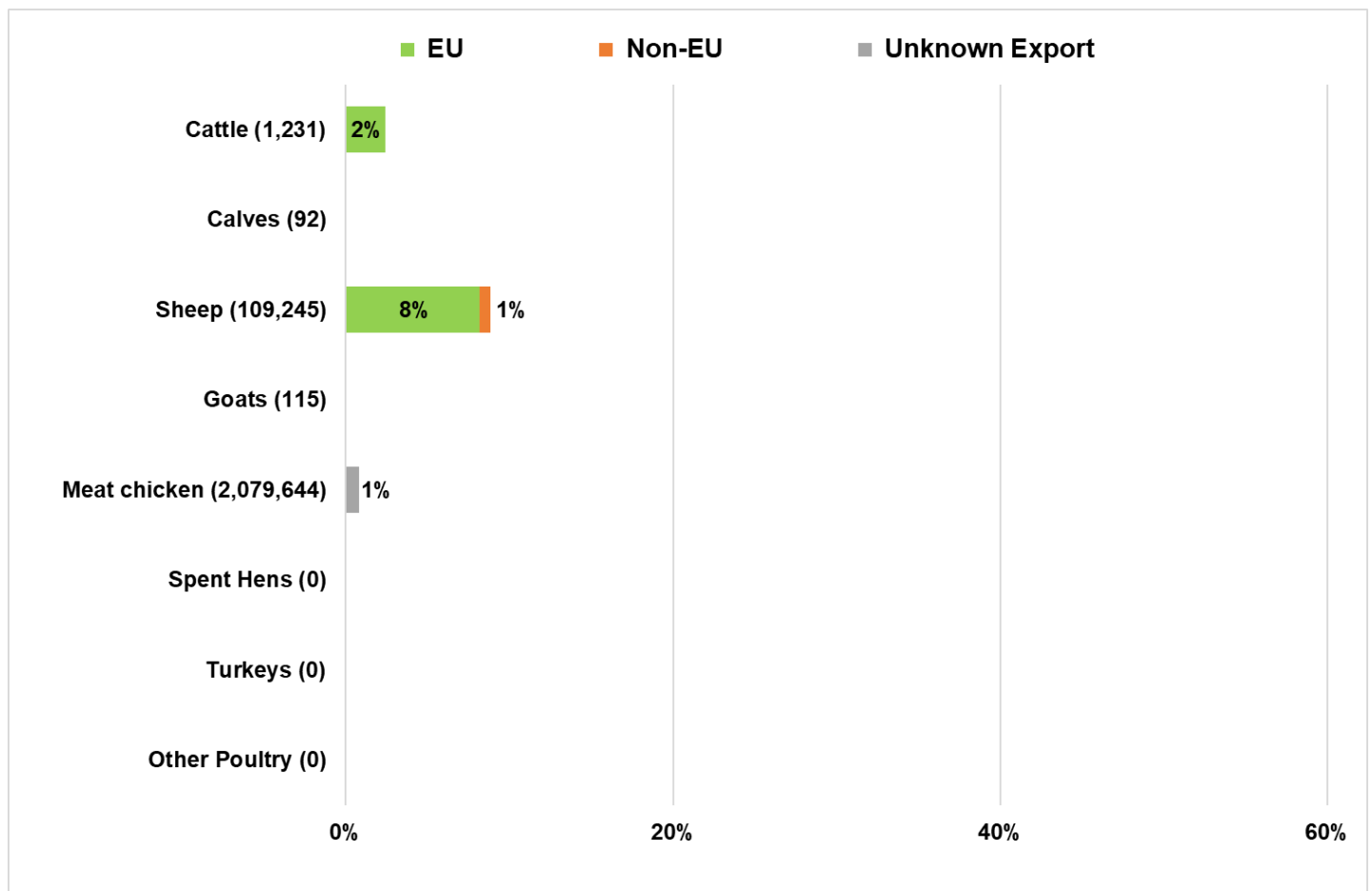

*Meat chickens total exclude slaughter by non-Annex 1 compliant methods.

- 9% of sheep slaughtered by Halal stun methods was exported, almost all of which was sent to the EU. For both stun and non-stun Halal, the most mentioned destinations were Germany, France, and Belgium. 1% was sent to non-EU countries namely Japan, Hong Kong and Kuwait.

- 2% of Halal stun cattle was exported to EU countries of Germany and Belgium and 1% of meat chickens to unknown destinations.

What proportion of animals slaughtered using a non-stun religious slaughter method subsequently did not meet religious requirements, but were fit for wider consumption

- For all species, all non-stun Halal slaughtered carcases were deemed fit for consumption by the religious community.

- For species where there were more than 100 Shechita slaughtered animals, the proportion of Shechita slaughtered carcases rejected as not meeting religious requirements but fit for wider consumption were as follows: 51% of cattle (142 out of 276), 43% of sheep (223 out of 520) and 1% of meat chickens (332 out of 57,367)[3].

- The corresponding figures for 2018 were: 15% of cattle (24 out of 164), 27% of sheep (60 out of 222) and 3% of meat chickens (1263 out of 50,373).

Goats and sheep by method of slaughter and distribution

This section looks at goats and sheep in more detail for being the animal species with the largest proportion of non-stun slaughter, 25% for goats and 22% for sheep.

Goats

- 78% of goat meat was distributed to UK Wholesale traders (31%) and other known UK destinations (47%), with 22% going to other or unknown locations.

- The 47% of goat meat sent to other UK destinations was broken down by: 15% - non-stun Halal, 5% - Halal stun and 28% -standard.

- The 31% of goat meat distributed to UK wholesale traders was broken down by: 3% - non-stun Halal, 13% - Halal stun and 15% -standard.

- The 22% of goat meat sent to other or unknown locations was broken down by: 7% - non-stun Halal, 13% - Halal stun and 2% - standard.

- Non-stun Halal goat meat (25%) went to: Other UK destinations (15%), UK wholesale traders (3%) and 7% classified as unknown.

- There were no exports of goat meat.

---

[3] The survey asked for the sum of the ante mortem and post-mortem carcases which did not meet religious requirements but fit for wider consumption. Here it has been assumed that for Shechita methods animals are not rejected ante mortem for religious reasons, and therefore all the rejections reported were post-mortem.

Figure 4.6: Goat meat, by slaughter method and destination

Legend: Halal Non Stun, Halal Stun, Shechita, Standard

- Wholesale Trader: 3% Halal Non Stun, 13% Halal Stun, 15% Standard
- Wholesale Trader for Export: (none)
- Supermarket: (none)
- Other_UK: 15% Halal Non Stun, 5% Halal Stun, 28% Standard
- Direct exports: (none)
- Other or Not Known: 7% Halal Non Stun, 13% Halal Stun, 2% Standard
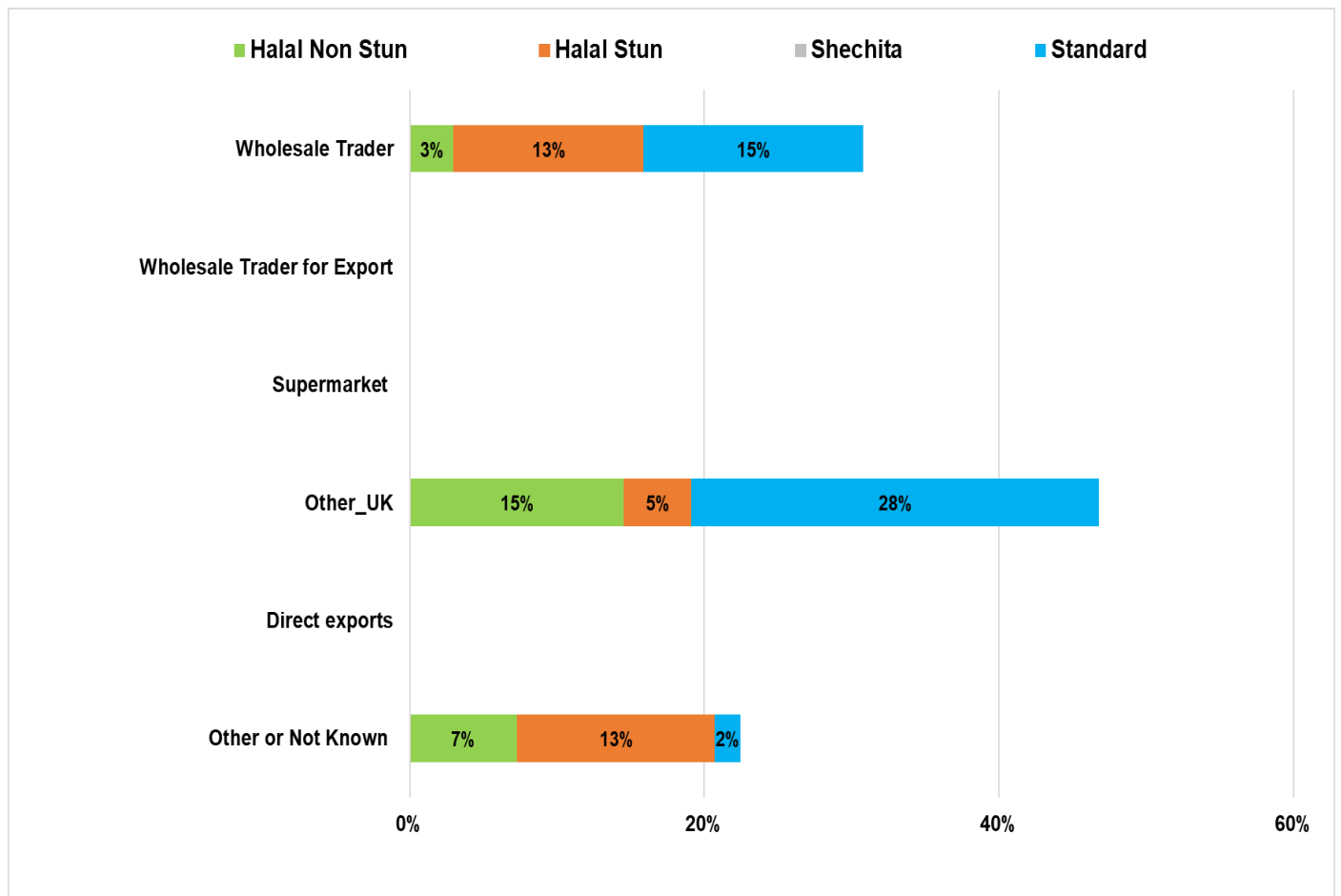
Sheep

- 22% of sheep were slaughtered by non-stun. 15% of the meat was distributed in the UK and 7% was exported. No portion of non-stun sheep was distributed to supermarkets.

- 30% of Halal stun sheep meat was distributed between other known UK destinations (22%) and UK supermarkets (8%). 4% to wholesale traders for export and 11% to UK wholesale traders. 4% was classified as unknown.

- 28% of all sheep meat was from animals slaughtered through standard methods and distributed evenly (average of 6%) across the identified known destinations. The destination of 1% of meat from standard slaughtered sheep was classified as unknown.

- 35% of sheep meat went to other known UK destinations, 27% to UK wholesale traders, 14% to supermarkets, and 10% to wholesale traders for export. 5% was classified as unknown.

Figure 4.7: Sheep meat, by slaughter method and destination

Legend: Halal Non Stun, Halal Stun, Shechita, Standard

- Wholesale Trader: Halal Non Stun 8%, Halal Stun 11%, Standard 7%
- Wholesale Trader for Export: Halal Non Stun 1%, Halal Stun 4%, Standard 5%
- Supermarket: Halal Stun 8%, Standard 6%
- Other_UK: Halal Non Stun 7%, Halal Stun 22%, Standard 7%
- Direct exports: Halal Non Stun 6%, Standard 2%
- Other or Not Known: Halal Stun 4%, Standard 1%
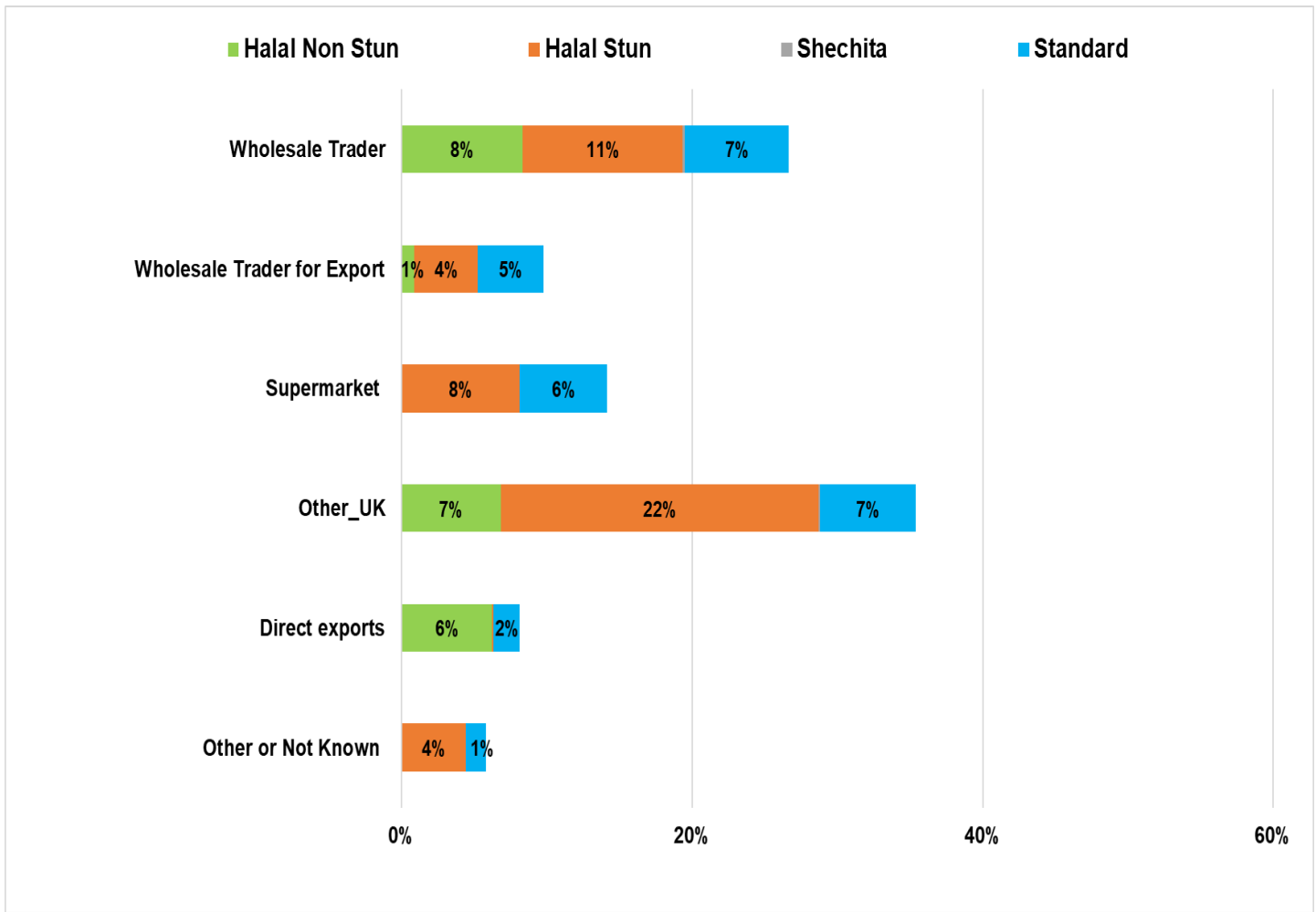
5. Third party assurance schemes and certification bodies

How many slaughterhouses are members of third-party assurance schemes?

- Half (50%) of slaughterhouses declared that they were members of at least one third-party assurance scheme. The most common schemes are shown in Figure 5.1. Slaughterhouses can typically be members of several schemes which is why the percentages do not add up to 100%.

- Just over half of poultry slaughterhouses (52%) were members of at least one third party assurance scheme and 49% of red meat slaughterhouses.

- The Red Tractor and the British Retail Consortium (BRC) are the most prominent third-party assurance schemes, having 31% and 14% of slaughterhouses as members, respectively.

Figure 5.1: Numbers of slaughterhouses which are members of third-party assurance schemes
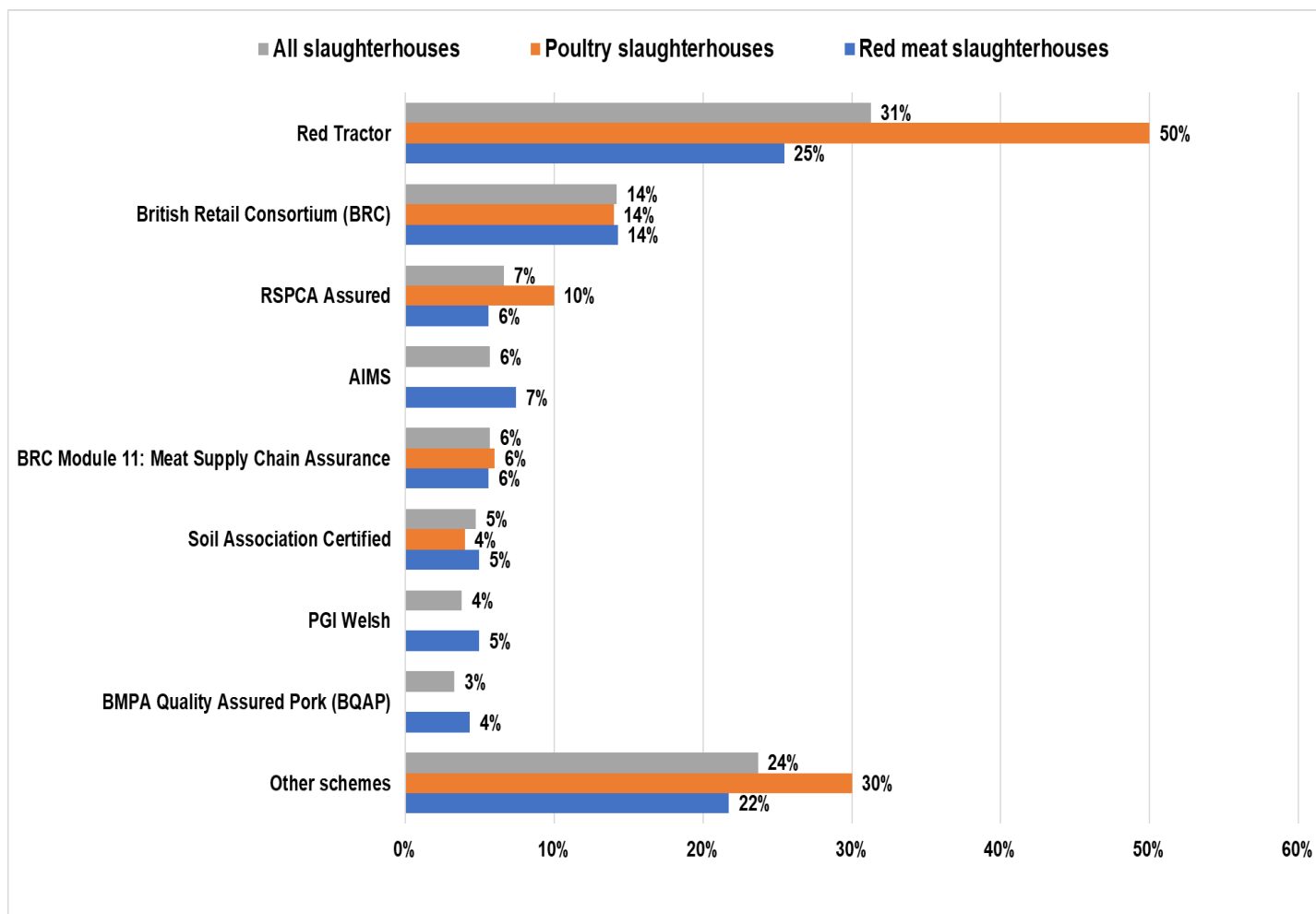
Third party assurance scheme	Red meat slaughterhouse	Poultry slaughterhouse	Total
Red Tractor	41	25	66
British Retail Consortium (BRC)	23	7	30
RSPCA Assured	9	5	14
AIMS (Association of Independent Meat Suppliers)	12		12
BRC Module 11: Meat Supply Chain Assurance	9	3	12
Soil Association Certified	8	2	10
PGI Welsh	8		8
BMPA (British Meat Processing Association) Quality Assured Pork (BQAP)	7		7
*Other schemes	35	15	50
All slaughterhouse which are members of at least one scheme.	**79**	**26**	**105**
All slaughterhouse which are not members of any schemes	**82**	**24**	**106**

*The breakdown of the 'Other schemes' can be seen in Figure 5.1a below.

Figure 5.1a: Breakdown of *other schemes

List of *other assurance schemes	
Red meat slaughterhouse	**Poultry slaughterhouse**
Aberdeen Angus	Halal Food Authority
AHDB (Agricultural and Horticultural Development Board) Beef and Lamb (was EBLEX)	IIJ
BEC	KFC animal welfare
BMPA	M&S Approved
BQAP	Organic Farmers and Growers (OF&G)
BRCGS	SLASA (Safe and Local Supplier Approval)
Campden BRI Membership	Tesco Welfare
Charter Bacon, Quality Standard mark	
Demeter biodynamic standards	
Farm Assured Welsh Livestock Beef and Lamb Scheme (FAWL)	
HAB	
HSA (Humane Slaughter Association)	
M&S Approved	
McDonalds Supplier Quality Management System (SQMS)	
Organic Farmers and Growers (OF&G)	
PGI West Country	
PGI West Country, Halal	
QMS (Quality Meat Scotland)	
Quality Standard Mark (QSM)	
Retailer Standards (Tesco Welfare Approved, M&S Outdoor Bred)	
SAI Global	
SLASA (Safe and Local Supplier Approval)	
Tesco Welfare	
TWA	
West Country PGI Certificate	

Which certification bodies are Halal and Shechita slaughterhouses certified with?

The certification bodies used by Halal and Shechita slaughterhouses are shown in Figures 5.2 – 5.4 below.

Figure 5.2: Number of slaughterhouses by certification body, stun Halal slaughter

Certification body	Number of slaughterhouses
Halal Food Authority	9
Halal Consultations	3
*Other	4
Self-certified	6
Not Certified	8
Unknown	8
Total	**38**

*Other breakdown: Middlesbrough Mosque, Cardiff Halal, Halal Advisory Board, and Halal Certification Organisation.

Figure 5.3: Number of slaughterhouses by certification body, non-stun Halal slaughter

Certification body	Number of slaughterhouses
Halal Monitoring Committee	5
Halal Monitoring Service	2
Halal Monitoring board	2
Halal Consultations	1
Halal Certification Organisation	1
Halal Food Authority (HFA)	2
Self-certified	4
Unknown	7
Total	**24**

Figure 5.4: Number of slaughterhouses by certification body, Shechita slaughter

Certification body	Number of slaughterhouses
Machzikei Hadass Communities	1
Hebrew Congregations London	1
Manchester Shechita Board	1
The London Board for Shechita	2
Unknown	3
Total	**8**

Annex A: Definitions

For the purposes of this report slaughter methods are classified as being stun or non-stun as specified in the table below:

Figure A1: Stun and non-stun slaughter methods by species

Species	Stun	Non-stun
Cattle	Free bullet, captive bolt, Jarvis box and Halalstun.	Halal post cut stun, Halal non-stun and Shechita method.
Calves	Free bullet, captive bolt, electronarcosis andHalal stun	Halal post cut stun, Halal non-stun and Shechita method.
Sheep andGoats	Free bullet, captive bolt, electronarcosis (headonly), electronarcosis (head to body) and Halal stun.	Halal post cut stun, Halal non-stun and Shechita method.
Pigs	Free bullet, gas – high concentration CO_2,other gas mixtures, electronarcosis (headonly), electronarcosis (head to body) and captive bolt.	
Horses	Free bullet and captive bolt.	
Meat chickens, Spent Hens, Turkeys and "Other Poultry"	High concentration CO_2, CO_2 in two phases,other gas mixtures, electrical stunning (headonly), water bath (annex 1 compliant) and Halal water bath (annex 1 compliant).	Halal non-stun, Halal water bath (non-annex 1 compliant),other non-annex 1 compliant methods and Shechita method.

Annex B: Data issues

Checks have been applied across the various responses and any inconsistencies found were queried with the OVs to correct them. However, the accuracy of the results is reliant on the data provided by the FBO through the OVs. Some specific issues with the survey or wider issues which may have implications for the reliability of the analysis in this report are outlined below:

1. Many of the questions in the survey were not mandatory e.g., the destination of the meat afterslaughter. Therefore, in some cases the information requested was not provided or incomplete. In cases where information about the destination of the meat was not provided, this meat was put into an "Unknown" category.

2. The survey asked for the percentages of meat sent to the various UK destinations (including "wholesale trader for export"), including a direct export question, but no percentage split; therefore, this data is inferred where we have an Other or Unknown percentage, and there is an indication that the plant exports directly.

3. For the questions where percentages were asked for it appears as though some figureswere rounded while others were not. As a result, the figures may for example sum to more than 100%. To resolve this issue percentages for individual slaughterhouses were rounded to the nearest whole percentage point.

4. While the breakdown by slaughter method was given according to the numbers of animals slaughtered, the breakdown by the destination of the resulting meat was given as proportions of the total tonnage. As a result, we are assuming that if, for example the same number of animals were slaughtered by two different methods then these two methods would be producing a similar amount of meat for consumption. Some reasons why this assumption may not hold are:

    -   For the Shechita slaughter of cattle, calves, sheep and goats, the hindquarters are not used for Kosher consumption. For the question asking for the destination of the hind quarters no meaningful information was provided. Therefore, it is unclear whether hind quarters are sent on for wider consumption.

    -   Some methods of slaughter may tend to use smaller animals than others. Therefore, just because the same number of animals were slaughtered by two different methods, this does not necessarily mean that both methods are producing a similar amount of meat.

    In addition to this if the same amount of meat from the same slaughter method was sent to twodifferent destinations, then this would equate to the same number of animals going to each destination. This may not be the case as one destination may tend to get smaller animals than the other.

5. There are differences in the numbers of animals slaughtered between the survey and the FSA's throughput charging database. The largest being for goats, where the survey figure provided is roughly 7% lower than the FSA database, a difference of 26 animals. The other major difference is in pigs where the survey figure reported is 4% higher than the charging database figure. Table B1 below gives the number of animals slaughtered by species over the survey period by both sources of data.

Figure B1: A comparison of the reported number of animals slaughtered, between the FSA throughput charging database and the responses to the slaughter methods survey 2022

Species	FSA throughput charging database	Slaughter methods survey 2022	% Difference
Cattle	33,056	33,377	1 %
Calves	2,239	2,225	-1 %
Sheep	218,691	219,016	-
Goats	398	372	-7 %
Horses	16	16	-
Pigs	186,962	194,612	4 %
Poultry	18,583,500	18,945,112	2 %
Turkeys	176,510	176,473	-

Annex C: The countries exported to mentioned in the survey

Figure C1: Number of slaughterhouses mentioning each country as a destination for standard slaughtered red meat

Standard: red meat standard									
Standard Cattle	**Number of slaughterhouses**	**Standard Calves**	**Number of slaughterhouses**	**Standard Sheep**	**Number of slaughterhouses**	**Standard Horses**	**Number of slaughterhouses**	**Standard Pigs**	**Number of slaughterhouses**
Canada	7	Italy	1	France	5	Belgium	1	South Korea	5
France	7	Poland	1	Belgium	4	France	1	Philippines	4
Japan	7			Germany	4			South Africa	3
Netherlands	7			Austria	2			Japan	3
Other country	7			Holland	1			Australia	2
Belgium	4			Hong Kong	1			Canada	2
Hong Kong	4			Italy	1			China	2
Republic of Ireland	4			Japan	1			France	2
Germany	3			Kuwait	1			Hong Kong	2
Poland	3			Republic of Ireland	1			USA	2
South Africa	3			United Kingdom	1			Taiwan	2
USA	3							Belgium	1
Ghana	2							Denmark	1
Northern Ireland	2							Mexico	1
Italy	2							Poland	1
Ireland	1							Singapore	1
Gibraltar	1							Dominican Republic	1
Malta	1							Ivory Coast	1

Philippines	1							Trinidad	1
Spain	1							Liberia	1
United Kingdom	1								

Figure C2: Number of slaughterhouses mentioning each country as a destination for religiously slaughtered red meat

Religious: Red meat									
Halal Cattle stunned	Number of slaughterhouses	Halal Sheep Post cut	Number of slaughterhouses	Halal Sheep non-stunned	Number of slaughterhouses	Halal Sheep stunned	Number of slaughterhouses	Shechita Cattle	Number of slaughterhouses
Belgium	1			Germany	2	Germany	5	France	1
Germany	1			Netherlands	1	Belgium	4		
				France	1	France	4		
						Australia	1		
						Kuwait	1		
						Netherlands	1		

Figure C3: Number of slaughterhouses mentioning each country as a destination for standard slaughtered poultry

Standard: Poultry							
Meat chickens	**Number of slaughterhouses**	**Spent Hens**	**Number of slaughterhouses**	**Turkeys**	**Number of slaughterhouses**	**Other Poultry**	**Number of slaughterhouses**
Belgium	3	Benin	1	Gibraltar	1	Hong Kong	1
Germany	3	Hong Kong	1	Republic of Ireland	1		
France	2						
Netherlands	2						
Hong Kong	2						
Denmark	1						
Ghana	1						
Czech Republic	1						
Northern Ireland	1						
Portugal	1						
Republic of Ireland	1						
Romania	1						
Trinidad and Tobago	1						
North Macedonia	1						

Figure C4: Number of slaughterhouses mentioning each country as a destination for religiously slaughtered poultry

Religious: Poultry			
Meat chicken Halal stunned	**Number of slaughterhouses**	**Meat chicken Shechita**	**Number of slaughterhouses**
Hong Kong	1	France	1

Annex D: Flowcharts detailing each method of slaughter, by species

Figure D1: Slaughter methods for cattle

Figure D2: Slaughter methods for calves

Total number of calves slaughtered 2,225 At 19 premises

Standard method total 2,118 (95%). At 16 premises

Halal method total 107 (5%). At 3 premises

Free bullet 68 (3%). At 1 premise

Captive bolt 1,949 (88%). At 12 premises

Electronarcosis 101 (5%). At 3 premises

Halal method STUNNED 92 (4%) At 2 premises

Halal method NON STUNNED 15 (1%). At 1 premise

Total STUNNED 2,210 (99%). At 18 premises
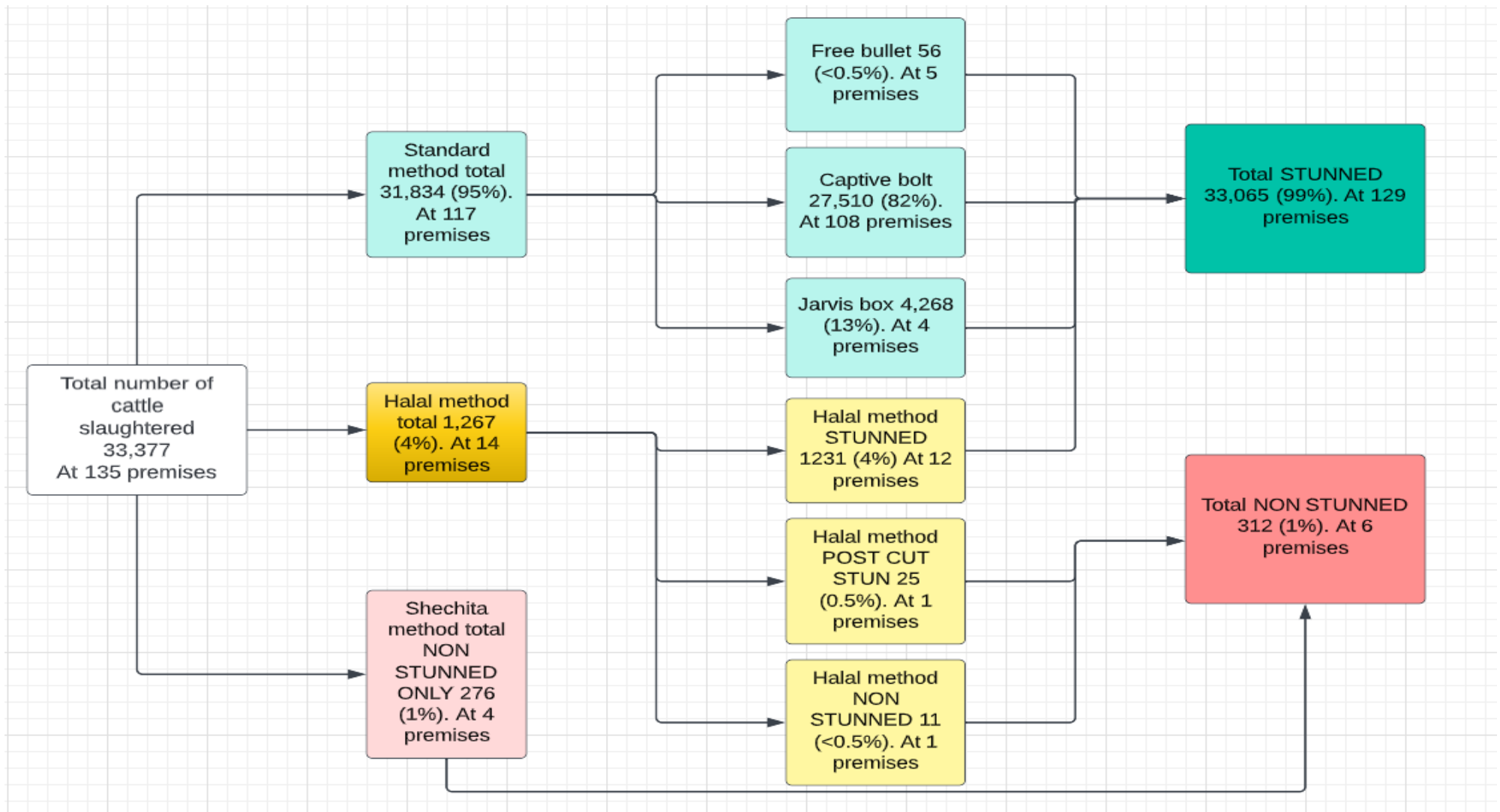
Total NON STUNNED 15 (1%). At 1 premises

Figure D3: Slaughter methods for sheep

Total number of sheep slaughtered 219,016 At 137 premises

Standard method total 60,321 (28%). At 95 premises

Halal method total 158,175 (72%). At 39 premises

Shechita method total NON STUNNED ONLY 520 (<0.5%). At 3 premises

Captive bolt 420 (<0.5%). At 13 premises

Electronarcosis (head only) 52,729 (24%). At 81 premises

Electronarcosis (head to body) 7,172 (3%). At 1 premise

Halal method STUNNED 109,245 (50%) At 29 premises

Halal method POST CUT STUN 3 (<0.5%). At 1 premise

Halal method NON STUNNED 48,927 (22%). At 9 premises

Total STUNNED 169,566 (77%). At 124 premises

Total NON STUNNED 49,450 (23%). At 13 premises

Figure D4: Slaughter methods for goats
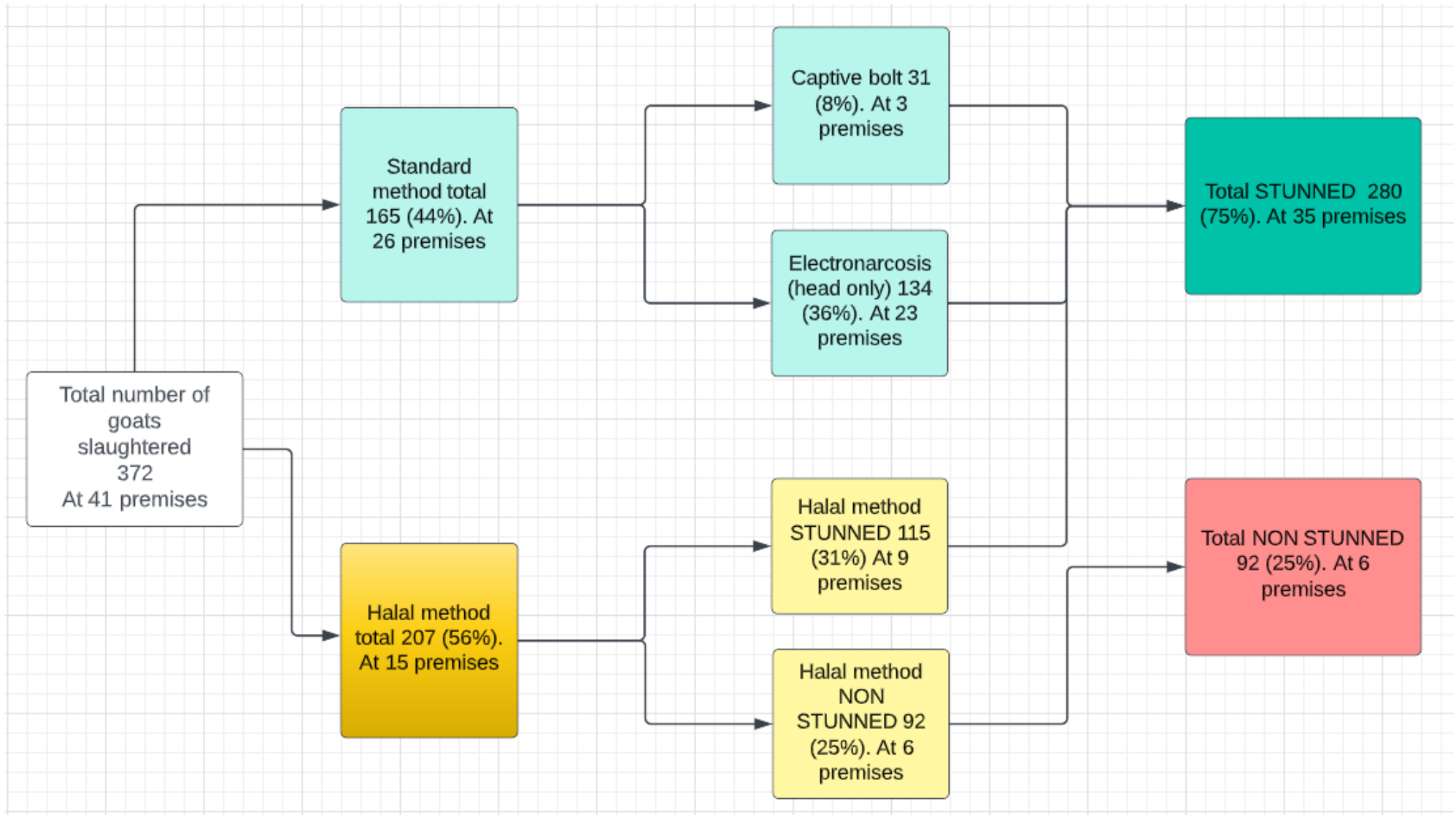
Figure D5: Slaughter methods for pigs

Total number of pigs slaughtered 194,612 At 91 premises

- Free bullet 3 (< 0.5%) At 1 premise
- Gas CO_2 high concentration 171,030 (88%) At 10 premises
- Electronarcosis (head only) 23,059 (12%) At 70 premises
- Electronarcosis (head to body) 464 (<0.5%) At 6 premises
- Captive bolt 56 (< 0.5%) At 4 premises
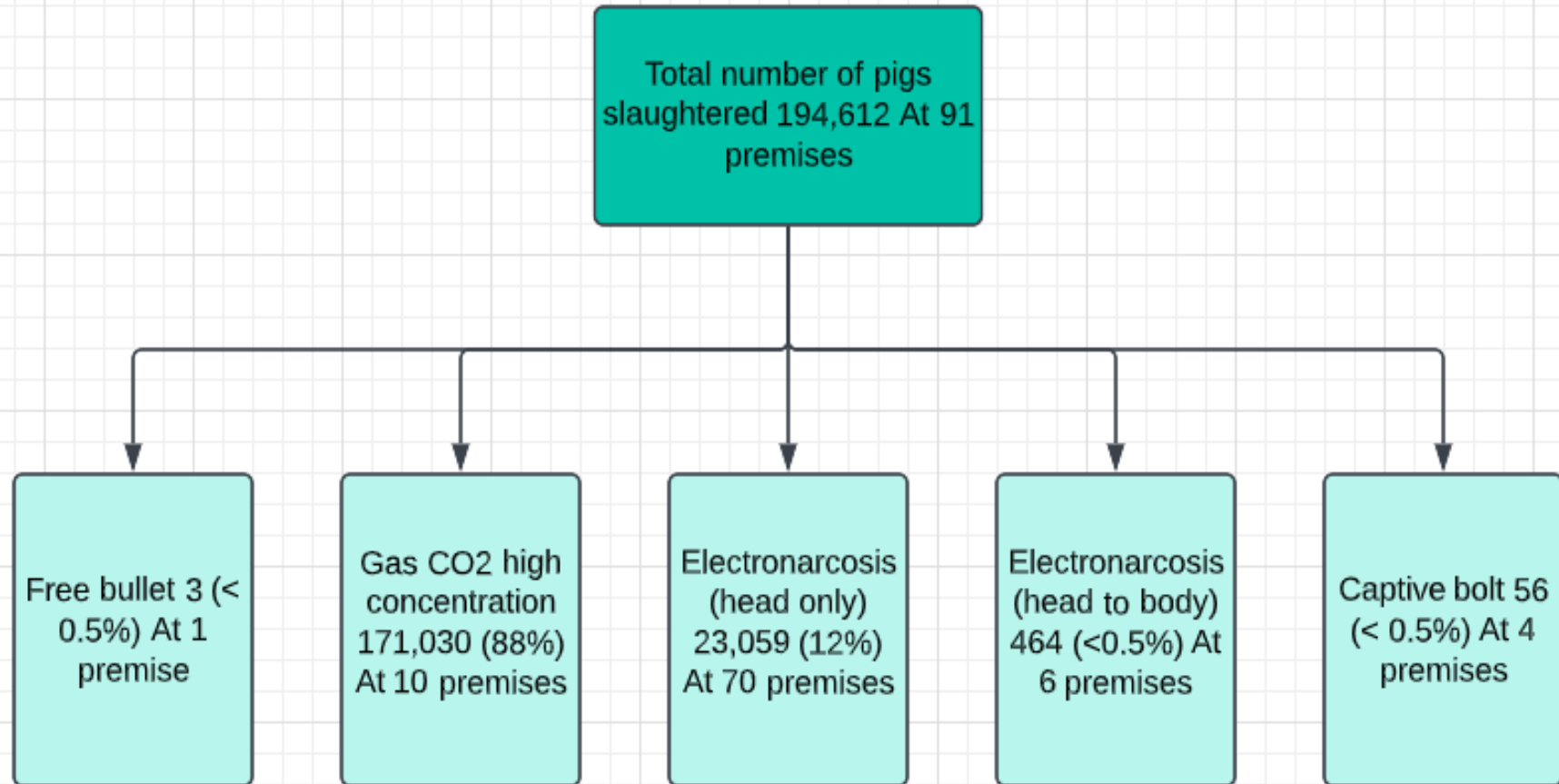
Figure D6: Slaughter methods for horses

Total number of horses slaughtered 16 At 1 premise → Free bullet 16 (100%) At 1 premise
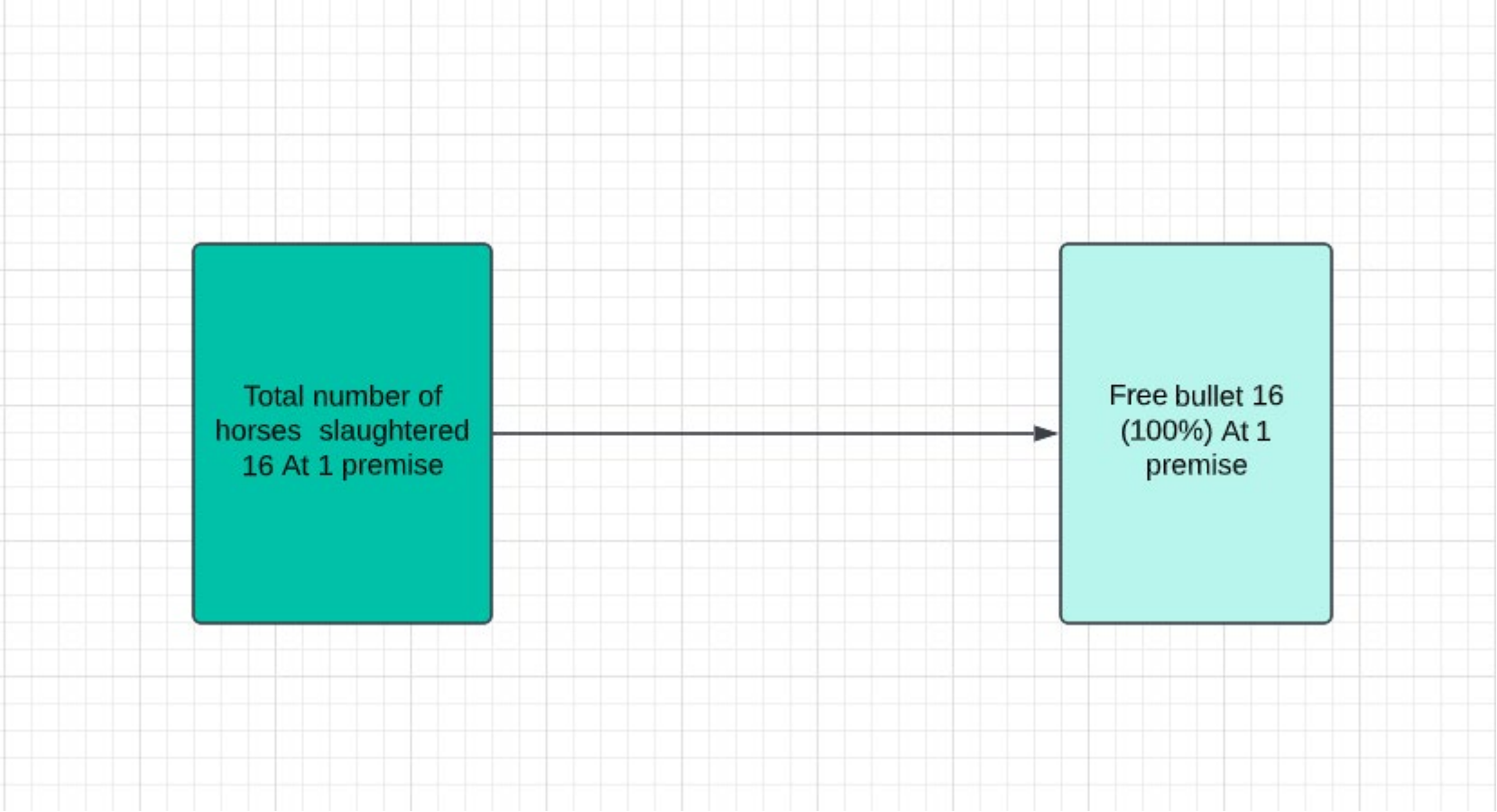
Figure D7: Slaughter methods for meat chickens

Total number of meat chickens slaughtered 18,353,961 At 49 premises

Standard method total 15,281,683 (83%) At 24 premises

High concentrate CO2 299,447 (2%) At 1 premise

CO2 in 2 phases 11,956,533 (65%) At 12 premises

Other gas mixture 2,542,942 (14%) At 2 premises

Electrical stunning (head) 3,899 (<0.5%). At 1 premise

Waterbath Annex 1 Compliant 478,861 (3%). At 8 premises

Halal method water bath (Annex 1 compliant) 2,079,644 (11%) At 9 premises

Total stunned 17,361,326 (95%) At 33 premises

Halal method total 3,014,911 (16%) At 21 premises

Halal Method NON STUNNED 366,334 (2%) At 10 premises

Halal method water bath (non Annex 1 compliant) 568,933 (3%). At 2 premises

Total non stunned 423,701 (2%). At 14 premises

Shechita method total NON STUNNED ONLY 57,367(<0.5%) At 4 premises

Figure D8: Slaughter methods for spent hens

Figure D9: Slaughter methods for turkeys

CO2 in 2 phases 6,555 (4%). At 1 premise

Standard method total 175,539 (99%) At 5 premises

Other gas mixture 165,750 (94%) At 2 premise

Waterbath Annex 1 Compliant 3,234 (2%). At 2 premises

Total stunned 175,539 (99%) At 5 premises

Total number of turkeys slaughtered 176,473. At 8 premises

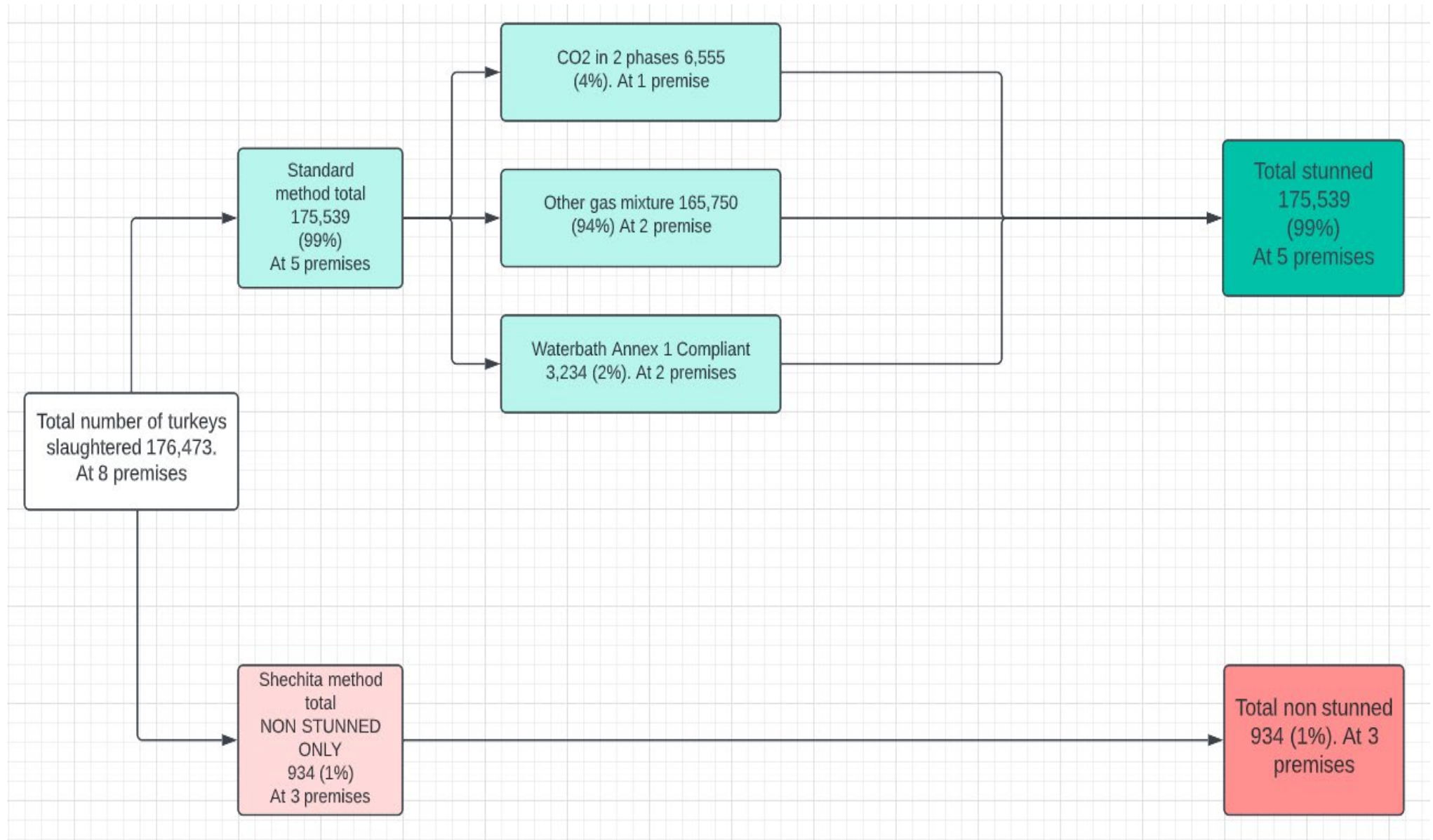Shechita method total NON STUNNED ONLY 934 (1%) At 3 premises

Total non stunned 934 (1%). At 3 premises

Figure D10: Slaughter methods for "other poultry"