



Horsemeat production in South America

1. Introduction

According to the most recent FAO data, there were around 12,518,235 horses living in South America in 2013 with the largest concentrations of horses being found in Brazil (5,456,260), Argentina (3,615,000) and Colombia (1,179,089).

While horses can be found in significant numbers throughout the whole region, FAO data indicates that horsemeat is only produced industrially in six South American nations: Argentina, Brazil, Chile, Colombia, Paraguay and Uruguay. The following table provides an overview of the extent of horsemeat production in each of these countries during the past decade.

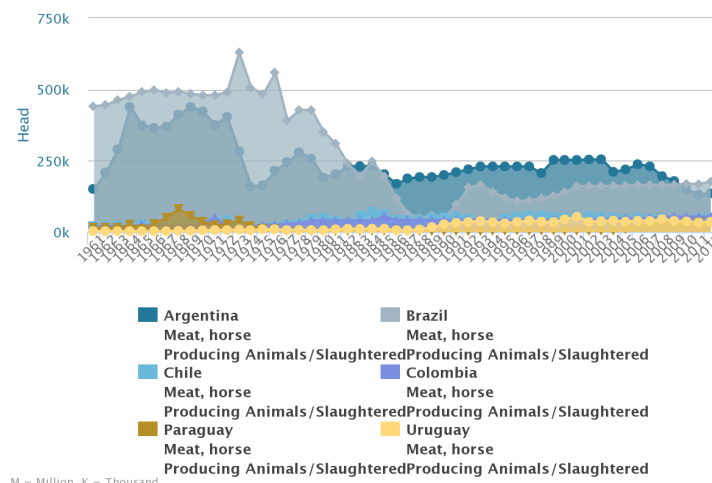
Table 1: Number of horses slaughtered in South America 2002-2012

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Argentina	254,000	255,000	211,079	219,387	237,750	230,215	195,892	178,804	150,286	130,804	136,000
Brazil	161,000	161,500	162,000	162,000	164,600	165,000	165,200	166,200	169,200	168,000	177,000
Chile	56,214	51,824	50,103	45,602	50,232	46,082	48,476	40,076	41,520	46,454	51,300
Columbia	44,500	45,400	46,000	48,000	47,500	50,000	52,600	54,000	53,600	54,000	54,000
Paraguay	3,300	3,500	3,500	9,200	28,000	30,000	30,000	31,000	32,000	33,000	33,000
Uruguay	35,674	38,030	40,006	36,273	39,471	38,879	45,133	39,088	37,136	33,370	36,000
TOTAL	554,688	555,254	512,688	520,462	567,553	560,176	537,301	509,168	483,742	465,628	487,300

Source: FAOSTAT database – Production, accessed 15th September 2014

Historically, Argentina and Brazil have always been the biggest producers, but during the past 50 years horsemeat production in both countries has dropped significantly since the early 1970s when numbers of animals being slaughtered seem to have reached an all time high (Figure 1). The local market for horsemeat is limited in both Argentina and Brazil because it is not widely eaten there. Consequently, the majority of horses are slaughtered for export, primarily to the European Union.

Figure 1: Trends in South American horsemeat production 1961-2012



M = Million, K = Thousand

Source: FAOSTAT database – Production, accessed 15th September 2014



2. Horsemeat industry in decline

According to FAO statistics, horse slaughter reached its peak in Brazil in 1973 with some 630,000 animals being killed for food. By 1984, the number of Brazilian horses slaughtered had fallen to 248,027 and by 1988 the industry had reached its lowest point with just 49,682 horses killed. Although the industry seems to have revived slightly by the early 1990s, a downward trend has continued. The most recent FAO statistics reveal that 177,000 horses were slaughtered in Brazil in 2012 out of a national population recorded at 5,456,260 that year. This is a 72% decrease since the Brazilian horsemeat industry's 1970s heyday.

Horse slaughter in Argentina also shows a similar downward trend. FAO statistics show that the Argentinean horsemeat industry reached its height in 1964 with the slaughter of 438,724 horses. The number of horses being slaughtered in Argentina remained high until the early 1970s, but dropped sharply in 1974 with numbers falling to 159,050. By the end of the decade, the numbers had risen again to over 250,000 per annum and remained relatively stable until 2008 when the number of horses being slaughtered once again began to fall sharply. By 2012, only 136,000 horses were killed for food out of a national population recorded at 3,615,000 that year. This is a 69% decrease from the number slaughtered in 1964.

3. Export markets for South American horsemeat

Although six South American nations are engaged in horsemeat production, only four of these countries are presently exporters of horse flesh. FAO data indicates that neither Chile nor Columbia have been active in external trade in horsemeat for well over a decade. Moreover, the trade that is recorded for the 1970s, 1980s and early 1990s was fairly limited in size. As illustrated in Figure 1, Paraguay also had relatively low levels of both horsemeat production and external trade until 2004 when it started to export its horsemeat exclusively to the Russian Federation.

Table 2: Horsemeat exports from South America in quantity and value 2006-2011

	2006	2007	2008	2009	2010	2011
Argentina						
Tonnes	35,095	33,235	28,928	26,862	23,474	21,225
1000 US\$	80,052	83,996	96,457	78,851	78,282	87,567
Brazil						
Tonnes	16,186	13,102	9,870	9,247	3,348	2,082
1000 US\$	33,923	31,910	27,742	23,426	8,864	6,882
Paraguay						
Tonnes	740	616	481	172	170	180
1000 US\$	929	742	727	280	280	300
Uruguay						
Tonnes	5,267	5,737	6,187	6,376	5,503	6,673
1000 US\$	12,986	14,737	21,096	19,693	19,624	23,569

Source: FAOSTAT database – Trade, accessed 15th September 2014



3.1. Destination Europe

The EU is the most important market for horsemeat from Argentina, Brazil and Uruguay. Although Paraguay did export horsemeat to various EU Member States during the 1990s, the country does not currently have any slaughterhouses that are approved for the slaughter of horses and export of horsemeat to the EU. At present, there are 4 such EU approved establishments in Argentina, 3 in Brazil and 3 in Uruguay.

The table below presents an overview of the value and volume of recent equine meat exports from South America to the EU. Belgium is the primary importing country, although a significant proportion of this meat will be subsequently re-exported to other Member States.

Table 3: Imports of meat of horses, asses, mules or hinnies, chilled or frozen (020500) from Argentina, Brazil and Uruguay by EU Member States 2010-2013

	2010		2011		2012		2013	
	€	100kg	€	100kg	€	100kg	€	100kg
Argentina								
Belgium	14,304,336	41,755	15,347,912	39,409	12,722,481	29,138	14,307,706	35,673
Bulgaria	:	:	:	:	:	:	:	:
Germany	:	:	:	:	:	:	:	:
France	6,219,782	13,667	5,255,347	11,322	4,060,201	7,585	5,595,014	10,635
Italy	7,433,033	20,538	5,753,157	14,647	7,326,751	16,484	6,748,821	15,467
Netherlands	4,132,108	11,706	2,613,246	7,622	2,518,682	6,716	2,174,346	5,108
EU 27-28 Total	32,089,259	87,666	28,969,662	73,000	26,628,115	59,923	28,825,887	66,883
Brazil								
Belgium	3,424,214	18,553	3,258,933	13,240	3,812,822	15,444	2,284,418	9,350
Finland	85,440	480	:	:	162,250	750	:	:
France	297,715	705	:	:	:	:	:	:
Italy	1,587,687	4,515	744,412	1,862	723,757	3,235	522,087	2,564
Netherlands	535,509	3,190	130,469	744	:	:	555,784	1,486
Spain	64,170	296	39,048	175	32,400	120	32,400	120
EU 27-28 Total	5,994,735	27,739	4,172,862	16,021	4,731,229	19,549	3,394,689	13,520
Uruguay								
Belgium	1,867,842	5,182	2,875,589	7,251	3,479,429	8,393	2,081,042	5,701
Czech Republic	:	:	47,287	250	:	:	:	:
France	990,990	2,223	618,600	1,472	587,260	1,228	234,680	486
Italy	801,716	2,269	1,705,176	4,467	801,547	1,889	278,531	676
Netherlands	5,711,764	14,542	6,017,046	15,400	5,830,998	13,046	4,675,042	10,137
Denmark	:	:	:	:	:	:	2,785	3
EU 27-28 Total	9,372,312	24,216	11,263,698	28,840	10,699,234	24,556	7,272,080	17,003

Extracted from Eurostat database; EU27-28 Trade Since 1988 by HS2, 4, 6 and CN8. Accessed 19th May 2014.

3.2. Other export destinations

There are also several other markets for South American horsemeat elsewhere in the world; the most of important of which being the Russian Federation, Japan, Switzerland and Kazakhstan.

FAO data indicates that since 2000, Brazil has exported varying quantities of horsemeat to the following countries: Japan, Vietnam, China, South Africa, Djibouti, Côte de Ivoire, New Zealand, Russian Federation, Uzbekistan, Croatia, Switzerland, Cuba and Haiti.



During the past decade, FAO statistics show that Argentina has exported its horsemeat to Japan, Russian Federation, Kazakhstan, Brazil and Uruguay. Since 2000, Uruguay is recorded as having exported horsemeat to Russian Federation, Switzerland, Japan, Canada, Bangladesh, Peru and the United States.

4. Animal welfare

Serious animal welfare abuses have been well-documented in both the Argentinean and Brazilian horse slaughter industries, but less is known about the conditions of horses being transported and slaughtered for meat elsewhere in South America.

4.1. Brazil

In 2011, the Belgian animal protection organisation GAIA produced an exposé of the suffering endured by horses in Brazil. Despite federal legislation prohibiting the live transport of animals for longer than 12 hours without food or water, horses were found to be being transported over distances of 2500 kilometres and spending up to three days in overloaded open-roofed trucks with no protection from the elements, no proper loading ramps or partitions to prevent injuries from falls. Undercover footage also showed animals being brutally treated during loading.

Horses reportedly lose between 7% and 12% of their body weight during such transports and arrive severely dehydrated at their destinations. Some end up dying in holding pens if they are not slaughtered immediately on arrival.¹

4.2. Argentina

A second report from GAIA released in 2011 also exposed similar animal welfare abuses during horse slaughter in Argentina.² Like in Brazil, Argentinean horses are also forced to endure long-distance transports before slaughter. Horses are first picked up one-by-one from across a wide area – often more than 100 kilometres - and transported to collection centres by an *aguantador*; it is also alleged that stolen horses are common problem within this trade given that there are profits to be made from selling horses for slaughter.

From the collection centres, the animals are collected by horse traders known as *acopiadores* and put on long-distance transports to one of the few abattoirs in the country that are approved for slaughter. Slaughterhouses may only purchase horses from government registered *acopiador* (i.e. a pre-slaughter collection centre). Horses may travel more than 1500 kilometres before reaching their final destination.

The GAIA investigation provides a sad catalogue of the routine maltreatment and serious neglect of horses being transported by *acopiadores* with animals suffering brutal handling, horrific injuries and sometimes even dying en route to slaughter. Horses are also branded. Akin to the

¹ GAIA (2011) Van paard tot steak: Brazilië en Mexico.

<http://www.gaia.be/nl/gaia-bibliotheek/rapport/van-paard-tot-steak-brazili-en-mexico>

² GAIA (2011) Van paard tot steak: Argentinië

<http://www.gaia.be/nl/gaia-bibliotheek/rapport/van-paard-tot-steak-argentini->



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Brazilian situation, horses are roughly loaded into trucks with no partitions and subjected to long transport times without food or water.

The investigation's findings are also reflected in a 2008 audit carried out by the EU's Food and Veterinary Office, which also noted serious and chronic injuries in horses in waiting pens at two horse slaughter plants. Such injuries were not mentioned in ante-mortem inspection reports despite the fact that these could taint the meat.³

More recently, Animals' Angels released the results of an investigation into horse transport and horse slaughter plants in Argentina.⁴ The key objective was to ascertain whether transport conditions had improved since 2010, particularly to be able to substantiate claims that steps had been taken following the GAIA exposé to ensure that horses were being transported in compliance with Argentinean legislation. Furthermore, it sought to establish whether the Argentinean abattoirs approved for the slaughter of horses for export to the EU were also compliant with EU legislation on the protection of animals at the time of killing.

Animals' Angel's report strongly echoes the GAIA investigation's findings in Argentina. It documents the routine maltreatment of horses during loading, with horses being beaten with wooden sticks and crammed into overcrowded open trailers without any protection from the elements or bedding. Investigators recorded horses being transported that already were emaciated and/or had open wounds, eye infections and other injuries. Interviews with drivers reveal that horses also die during transportation after falling and being trampled by other animals. New injuries sustained by horses during transport were also documented when horses were unloaded at their final destination.

At the slaughterhouses, the Animals' Angels' report found that some of the holding pens were found to be overcrowded and muddy with no food and water or shelter from the elements apparently available. Horses may be reportedly lairaged for up to eight days before slaughter, although when demand for horsemeat is high they may be slaughtered soon after arrival.

In sum, the Animals' Angels reports found that horse transport conditions had not improved since the GAIA investigation. The report concludes that transporters are in breach of national animal transport regulations, which stipulate that animals must be conducted without causing suffering to the animals, no obviously injured, sick or exhausted animals may be transported, vehicles must have protective roof coverings, animals must not be transported during very bad weather conditions and vehicles must not be overloaded.

In 2014, Animals' Angels released another report that revealed unacceptable conditions at one of the four EU certified Argentinean horse slaughter plants.⁵

The investigation exposed inhumane handling by the operators and unsuitable facilities. Horses were being beaten with sticks to enter the kill chute while downer horses were deprived of

³ European Commission, DG SANCO (2008) Final report of a mission carried out in Argentina from 01 February to 14 February 2008 in order to evaluate animal health controls in place in particular over foot and mouth disease and public health control systems and certification procedures.

⁴ Animals' Angels Inc. (2013) Investigation of horse transport and slaughter plants in Argentina. <http://www.animalsangels.org/images/stories/pdf/Investigation%20of%20the%20Horse%20Slaughter%20Industry%20in%20Argentina.pdf>

⁵ Animals' Angels Inc. (2014) Investigation of the horse slaughter trade in Argentina. <http://www.animalsangels.org/files/images/stories/pdf/Investigation%20of%20the%20Horse%20Slaughter%20Trade%20in%20Argentina%20-%202014%20Report.pdf>



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veterinary care. Operators also used electric prods to force them into the kill box. Animals' Angels reported that horses in line could see the horse being stunned in the kill box. The stunning by captive bolt was poorly conducted and horses had to be shot several times leading to serious concerns regarding the effectiveness of the stun.

5. Traceability, consumer safety and drug residues

The Animals' Angels investigations into horse transport and slaughter plants also highlighted the issue of the traceability of horses entering into the food chain. As noted above, there is an apparently flourishing trade in stolen horses in Argentina. According to the Animals' Angels' reports, it is easy to launder these animals into the horsemeat trade because there is no legal obligation (yet) for horses to be micro-chipped and it is claimed that they only had to be vaccinated for a veterinarian to issue documentation for them. It is alleged that corruption among veterinarians and police is rife, which means this illegal trade continues unhindered.

The traceability of horses is essential because during their lifetimes, horses may be administered a whole host of substances, some of which are banned for use in food animals. Since 31st July 2010, the EU has required that only horses with a known lifetime medical treatment history, and whose medicinal treatment records show they satisfy the veterinary medicine withdrawal periods, will be allowed to be slaughtered for export to the EU. Consequently, any non-EU country wishing to continue exporting horsemeat to the Union has been required to introduce appropriate residue control plans and to adopt new rules with respect to the identification of horses for slaughter.

Since the introduction of these import requirements, the EU's Food and Veterinary Office (FVO) has conducted audits in Argentina and Brazil to assess whether they are complying with these requirements. A third audit was conducted in Uruguay a few months prior to the entry into force of these requirements. Below are the most important findings of all three of these audits outlined.

5.1. Argentina

In 2008, prior to the introduction of the EU's new import requirements, the Argentinean competent authorities, Servicio Nacional de Sanidad y Calidad Agroalimentaria (SENASA), established a national horse identification system and the official registration of animal holdings. In 2010, SENASA introduced new procedures whereby before October 2010 every horse destined for slaughter for the EU was supposed to be ear-tagged at least six months before slaughter. Animals now only qualify for export to the EU if they come from registered holdings or from a registered *acopiador*. It appears, however, that most of these horses come from such collection centres.⁶

Under these rules, each horse must also be accompanied by an individual equine medicinal treatment register (*Documento Individual para el Registro de Tratamiento de Equideos - DIRTE*),

⁶ European Commission (2011), Final report of an audit carried out in Argentina from 13 to 23 September 2011 in order to evaluate the monitoring of residues and contaminants in live animals and animal products, including controls on veterinary medicinal products. DG(SANCO)2011-8903.



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which is linked to an ear tag. The DIRTE states that the horse has not been treated with anabolic substances or thyrostats and that the appropriate withdrawal periods have been observed for any authorised veterinary pharmaceuticals.⁷ This sworn statement does not, however, include non-steroidal inflammatory drugs, such as phenylbutazone, which are commonly used in horses, but are banned for use in food animals in the EU.⁸

According to an FVO audit conducted in September 2011, the deadline for the implementation of these rules was extended for a year and the rules for identifying horses were relaxed. Horses from registered holdings could be identified by either an ear tag, a microchip, a tattoo or a sworn affidavit from the horse's owner about the animal's medical treatment history during the six months prior to slaughter. Horses sourced from an *acopiador* had to be ear-tagged and branded with the letter F (i.e. *Frigorifico*, which translates as slaughterhouse). These animals must also be accompanied by the sworn affidavit from the registered holding that originally supplied them, plus an DIRTE and an animal transportation document.⁹

In 2011, the Argentine government also adopted new legislation requiring that owners keep lifetime medicinal records for all food-producing animals. This is particularly necessary for horses given that there are a variety of substances, such as phenylbutazone, that are licensed for and routinely administered to horses in Argentina under the condition that these horses do not enter the food chain. The FVO audit report concludes that such mandatory recordkeeping is much needed because the systems that the Argentine authorities had thus far put in place were heavily reliant on the owner affidavits, which covered only a limited range of substances.¹⁰ Moreover, the report states that there are also no means to ensure that horses treated with drugs, such as phenylbutazone, are excluded from the food chain.¹¹

The new rules concerning mandatory lifetime medicinal treatment records were due to be fully implemented in 2012. However, the Animals' Angels' investigation suggests that while they look good on paper, the measures put in place may still be vulnerable to fraud. A new audit of Argentinean horsemeat production has been scheduled by the FVO for 2014.¹²

5.2. Brazil

In late 2011, the FVO carried out an audit in Brazil to assess whether the authorities had taken sufficient measures to guarantee food safety and public health in relation to the export of horsemeat.¹³ Following the introduction of the EU's stricter import requirements, the Brazilian authorities submitted a horse action plan to the European Commission to demonstrate how they would implement measures regarding the identification and traceability of horses and medical treatment records.

⁷ Ibid. p. 21.

⁸ Ibid p. 22

⁹ Ibid p. 21.

¹⁰ Ibid p. 22.

¹¹ Ibid. p 17.

¹² European Commission (2014) Food and Veterinary Office Programme of Audits 2014.

http://ec.europa.eu/food/fvo/inspectprog/prog_audit_2014_en.pdf

¹³ European Commission (2011) Final report of an audit carried out in Brazil from 29 November to 09 December 2011 in order to evaluate food safety and public health controls systems in place as well as certification procedures in relation to exports of equine and pig meat. DG(SANCO) 2011-6139 – MR FINAL.



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Amongst other things, this horse action plan stipulated that all horse holdings must be uniquely registered at the local veterinary unit level. Before leaving these holdings to go to either a collection centre or slaughterhouse, horses must be given an individually numbered ear tag. In turn, the collection centres and abattoirs are only permitted to receive animals that have been kept at the holdings for at least six months. According to the Brazilian's plan, if horses cannot be individually identified, then the medical records at the holding are deemed to apply to all horses there. New horses cannot be introduced, unless they have a complete six month treatment record.

Prior to transport, the animals must be issued an animal movement permit and must also be accompanied by "a) a vendor declaration stating that the animals were under the responsibility of the vendor/owner for at least the last six months, have never been treated with hormonal growth promotants and, in the case of treatment with veterinary medicines in the last six months, only approved products were used, respecting the withdrawal periods and b) a list of medicines administered in the last six months."¹⁴ It should also be noted that the slaughter of sport horses has been prohibited in Brazil since 2006.

One of the most remarkable findings of the FVO's 2011 Brazilian audit was that the central competent authorities in the country did not appear to be aware that horses are generally traded through dealers. The auditors also found that the dealers they visited could not provide adequate documentation, if any at all, on the origins of the animals. The auditors noted that small groups of horses arrive continuously at dealer's holdings, remaining there for up to a few weeks. The horses they saw being collected for slaughter were not identified, yet still the dealers signed the required vendor statements with respect to their veterinary medical history records for the past six months. Nor was any documentation on their treatment records from the holdings where the horses originated available.¹⁵

In addition, the Brazilian horse action plan also requires that risk-based annual checks to be made by the official veterinary service and horse collection centres and holdings of origin, the plan did not make any provisions for dealers' holdings.¹⁶ These annual controls are intended to check medical records, animal identification, information on sales and vendor statements. However, at the time of the FVO's mission, no control programme had been established in some Brazilian States. Nor did the central competent authorities even have a list of horse holdings that routinely supplied animals for slaughter for export.¹⁷

It also found that permits for animal movement were being issued at for horses of unknown origin with no veterinary treatment history. Private veterinarians are authorised to issue these permits for horses that are sent from collection centres to abattoirs approved for slaughter for export to the EU. Nonetheless, there was also no system in place to supervise both the controls made by authorised veterinarians at horse holdings and the issuing of animal movement permits.¹⁸

In sum, the 2011 FVO audit concluded that the Brazilian authorities could not provide any guarantees with respect to the residue status of horsemeat exported to the EU. The horse action

¹⁴ Ibid pp. 8-9

¹⁵ Ibid. p 9.

¹⁶ Ibid. p. 4.

¹⁷ Ibid. p. 6.

¹⁸ Ibid p. 7.



plan had not been implemented as intended by the Brazilian authorities, which means that neither the traceability of the horses nor the adherence to withdrawal periods for veterinary drugs could be guaranteed.

It remains to be seen whether in the meantime the Brazilian authorities have responded to the recommendations of this audit and implemented the necessary measures to ensure traceability and the safety of horsemeat exports to the EU. According to the FVO's audit programme, an audit concerning fresh equine meat, meat products, minced meat and meat preparations is scheduled to take place in Brazil in 2014.¹⁹

5.3. Uruguay

The most recent FVO audit conducted in Uruguay with regard to veterinary drug residues predates the entry into force of the EU import requirements.²⁰ However, it does provide some insight into the measures put in place by the Uruguayan authorities with respect to the identification of horses and the exclusion of drug residues from the food chain.

According to the audit report, horses in Uruguay are identified by branding. All horse owners must be registered and their brands must also be officially registered; these are entered into an official database. When horse ownership change hands, the animal is branded again. The keeping of veterinary treatment records is compulsory on Uruguayan farms. Since 2007, all sport horses have also been banned for slaughter for human consumption. Veterinarians responsible for certifying horses for slaughter must ensure that the animals are eligible for slaughter and verify the treatment records.²¹

The FVO report states that new Uruguayan legislation requiring the authorisation and registration of all horse dealers was imminent at the time of writing. Only authorised dealers would be permitted to supply horses to the slaughterhouses authorised for export. In addition, an owner affidavit would also be required in the future with respect to the treatment record of the animal six months before slaughter.²²

Finally, the main weakness identified by the FVO audit was the fact that the National Residue Control Plan, which Uruguay had implemented, did not involve the testing of a variety of substances commonly administered to horses. This included drugs for which a maximum residue limit has been established in the EU, but also for substances that have not, including the NSAID diclofenac.²³

While the next FVO audit concerning equine meat from Uruguay was scheduled for 2013, it appears it did not take place and has not been scheduled for 2014.²⁴

¹⁹ European Commission (2014) Food and Veterinary Office Programme of Audits 2014.
http://ec.europa.eu/food/fvo/inspectprog/prog_audit_2014_en.pdf

²⁰ European Commission (2010) Final report of a mission carried out in Uruguay from 27 April to 06 May in order to evaluate the control of residues and contaminants in live animals and animal products, including controls on veterinary medicines. DG(SANCO) 2010-8445 – MR Final.

²¹ Ibid. p. 19.

²² Ibid. pp. 19-20.

²³ Ibid. p. 19.

²⁴ European Commission (2013) Food and Veterinary Office Programme of Audits 2013.
http://ec.europa.eu/food/fvo/inspectprog/prog_audit_2013_en.pdf