

ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD
INFORMATION PAPER

Botulism Outbreaks and Toxin Types in Cattle, Sheep and Goats, 2010

1. The ACMSF reports on Botulism in Cattle (2006) and Botulism in Sheep and Goats (2009) recommended that in the absence of clinical signs, there should be no requirement to restrict meat or milk from healthy cattle, sheep or goats from farms where there have been suspected cases of botulism. The reports also recommended that the incidence of toxin types other than C and D among cattle, sheep and goats should be monitored and the situation should be reviewed if there is evidence that the toxin types are associated with human disease. This paper is provided to update the Committee on outbreaks of suspected botulism in cattle, sheep and goats in 2010 and the toxin types that were detected.
2. During 2010, there were a total of 11 reported outbreaks of suspected botulism in cattle, sheep and goats, of which the majority occurred in cattle with only 2 in sheep and none in goats (Table 1). The suspected source for the majority of the outbreaks in 2010 was direct/indirect exposure to poultry (broiler) litter. As the Veterinary Laboratories Agency (VLA) is no longer carrying out botulinum testing on samples in cases where the incident has a potential association with poultry litter, the majority of cases in 2010 were not tested (Table 2). Where toxin testing was undertaken, *C. botulinum* and its toxins were not identified in the intestinal contents of the cattle and sheep. Therefore there is no indication of toxin types A, B and E (more commonly associated with humans) involvement in any of the outbreaks during 2010.
3. A comparison of the number of incidents reported in 2010 to previous years shows a decrease (Figure 1). There are no obvious reasons to explain this downward trend. It is possible that this decrease may be attributed to increased awareness of botulism amongst private practitioners and of farmers to the dangers of spreading poultry litter. On a more general note, it is expected that incidents reported to the FSA may decline slightly in the future, due to a projected reduction in post-mortem submissions and a move away from non-essential testing.
4. Overall, no evidence has emerged where testing was undertaken during 2010 that toxin types such as A, B and E (more commonly associated with humans) are causing outbreaks in UK food animal populations.

Table 1: Number of reported outbreaks of suspected botulism in cattle, sheep and goats in 2010 compared to 2009, 2008 and 2007 (England and Wales)

Species	2010	2009	2008	2007
Cattle	9	22	22	31
Sheep	2	7	1	3
Goats	0	0	0	0

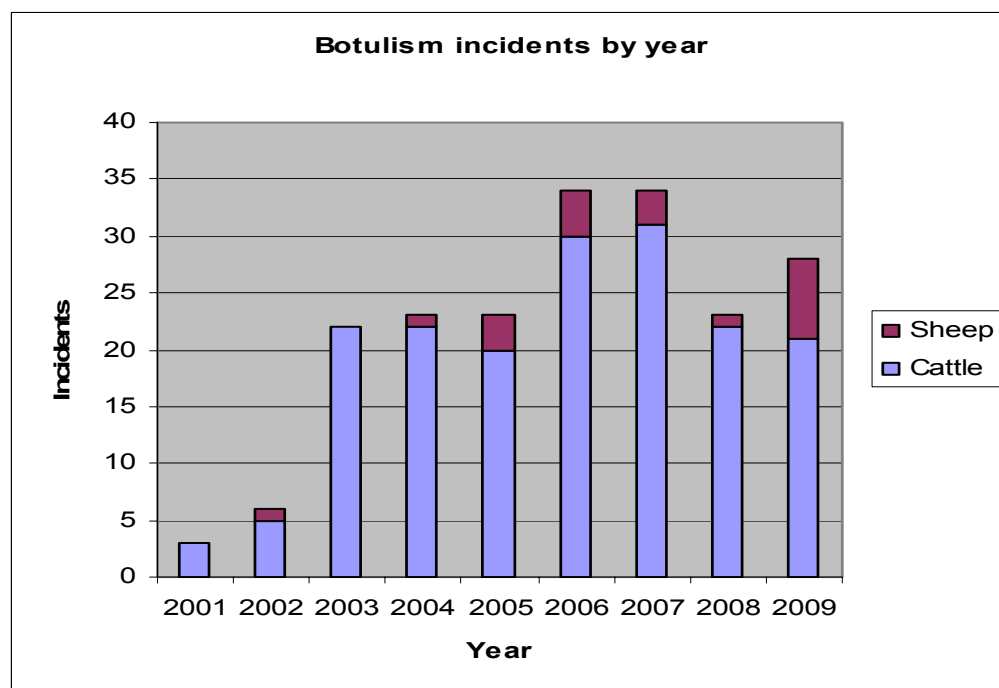
Data provided by VLA

Table 2: Summary of botulism outbreaks and toxin types in cattle, sheep and goats in England and Wales (2010)

Date	Species	Suspected Source	Exposure	Results
05/02/10	Sheep	Poultry litter	Direct	No toxin or organism identified
10/06/10	Cattle	Poultry litter	Direct	No toxin or organism identified
22/06/10	Sheep	Poultry litter	Direct	No toxin or organism identified
09/09/10	Cattle	Not known	Not known	No toxin or organism identified
14/09/10	Cattle	Poultry litter	Indirect	Not tested
04/10/10	Cattle	Poultry litter	Indirect	Not tested
12/10/10	Cattle	Poultry litter	Indirect	Not tested
22/10/10	Cattle	Poultry litter	Indirect	Not tested
28/10/10	Cattle	Poultry litter	Indirect	Not tested
17/12/10	Cattle	Poultry litter	Indirect	Not tested
20/12/10	Cattle	Poultry litter	Indirect	Not tested

Data provided by VLA

Figure 1: Number of Suspected Botulism Incidents recorded by VLA 2001-2009 in England and Wales



Date provided by VLA