ACM/984

ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD

Information Paper

Botulism Outbreaks and Toxin Types in Cattle, Sheep and Goats, 2009

1. The ACMSF reports on Botulism in Cattle (2006) and Botulism in Sheep and Goats (2009) recommended that in the absence of other 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 for the toxin types associated with human disease. This paper is provided to update the Committee on outbreaks of suspected botulism in cattle, sheep and goats in 2009 and the toxin types that were detected.

2. During 2009, there were a total of 29 reported outbreaks of suspected botulism in cattle, sheep and goats, of which the majority occurred in cattle with only a few in sheep and none in goats (Table 1). The suspected source for the majority of the outbreaks in 2009 was direct/indirect exposure to poultry litter. Where toxin testing was undertaken, results indicate that none of the outbreaks during 2009 were likely to have been caused by toxin types A, B and E (more commonly associated with humans). In the majority of cases, *C. botulinum* and its toxins were not identified in the intestinal contents of the cattle and sheep and 10 out of 29 outbreaks identified either toxin type D only, *C. botulinum* type D only or toxin type D and *C. botulinum* types C & D (Table 2).

3. Overall, no evidence has emerged during 2009 that toxin types such as A, B and E (more commonly associated with humans) are causing outbreaks in UK food animal populations. Therefore voluntary restrictions on meat and milk from only clinically affected cattle, sheep and goats and not unaffected animals continues to be appropriate until such evidence emerges.

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

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

Data provided by VLA

Table 2: Summary of botulism outbreaks and toxin types in cattle, sheep and goats (2009)

Date	Species	Suspected Source	Exposure	Results
30/01/09	Cattle	Silage	Direct	No toxin and organism identified
17/02/09	Sheep	Not known	Not known	Not tested
03/03/09	Sheep	Poultry litter	Direct	Toxin type D
04/03/09	Sheep	Poultry litter	Direct	No toxin and organism identified
15/04/09	Cattle	Poultry litter	Indirect	No toxin and organism identified
01/05/09	Cattle	Not known	Not known	Toxin type D
23/04/09	Sheep	Poultry litter	Direct	Toxin type D
05/05/09	Cattle	Poultry litter	Indirect	No toxin and organism identified
11/05/09	Cattle	Poultry litter	Direct	No toxin and organism identified
11/05/09	Cattle	Poultry litter	Indirect	No toxin and organism identified
21/05/09	Cattle	Poultry litter	Indirect	Toxin type D
17/06/09	Cattle	Poultry litter	Direct	Not tested
07/08/09	Cattle	Poultry litter	Indirect	Toxin type D
10/07/09	Cattle	Poultry litter	Indirect	*C. botulinum* type D
10/07/09	Cattle	Poultry litter	Indirect	Not tested
08/07/09	Cattle	Not known	Not known	No toxin and organism identified
05/08/09	Cattle	Poultry litter	Indirect	No toxin and organism identified
31/07/09	Cattle	Poultry litter	Direct	No toxin and organism identified
17/08/09	Sheep	Poultry litter	Direct	No toxin and organism identified
03/09/09	Cattle	Poultry litter	Direct	Toxin type D and *C. botulinum* types C & D
03/09/09	Cattle	Poultry litter	Indirect	No toxin and organism identified
15/09/09	Sheep	Poultry litter	Direct	No toxin and organism identified
15/09/09	Cattle	Poultry litter	Direct	No toxin and organism identified
16/09/09	Cattle	Poultry litter	Indirect	No toxin and organism identified
05/10/09	Cattle	Poultry litter	Indirect	Toxin type D
16/10/09	Cattle	Poultry litter	Indirect	*C. botulinum* type D
16/10/09	Cattle	Poultry litter	Indirect	No toxin and organism identified
16/10/09	Cattle	Poultry litter	Indirect	No toxin and organism identified
17/10/09	Sheep	Poultry litter	Direct	*C. botulinum* type D

Date provided by VLA