



THE EFFECT OF ORAL DOSE ON ATTACK RATE AND INCUBATION PERIOD OF BSE IN CATTLE

Issue

1. The committee will be updated on the Defra funded project which is investigating the relationship between oral dose of bovine infected brain material on the incubation and attack rate of BSE in cattle. To date, six steers that received oral challenges ranging from 0.01-1.0g of bovine infected brain material have succumbed to BSE.

Background

2. In a previous attack study, four groups of calves (n=10 per group) were orally challenged with 1g, 10g and 100g and 4x100g of bovine infected brain homogenate. Clinical signs of BSE were observed in all the dose groups in 34/40 animals.
3. A second attack rate study is in progress to examine the infectivity of lower doses of BSE infective brain material. Single oral doses of brainstem homogenate from BSE-affected cattle, ranging from 0.001-0.1g were administered to castrated male calves (n=15 per group). An additional group (n=5) were inoculated with 1.0g and the control group (n=10) contained unchallenged calves.

Results

4. As at October 2003 the experiment is 68 months post infection and six cases of BSE have been confirmed. Table 1 shows the distribution of cases between the different dose groups.

Table 1: Cattle oral attack study results: October 2003

Dose / g (group size)	Cases	Months pi at death
1 (5)	2	59,65
0.1 (15)	3	56,58,63
0.01 (15)	1	59
0.001 (15)	0	

UPDATE ON BOVINE PATHOGENESIS STUDY

For Information only

5. The Committee will receive an oral update on the status of the Defra funded cattle pathogenesis study at VLA (see Annex 1).
6. No new “positives” have been reported since the last SEAC update.