

Tabbed at Tynnell dte a

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CVO BSE 1 16

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Re: 27/11

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cc. CVO ✓ JSH  
Mr K. Taylor

SEAC6:4

I.XI.90

②

Mr Harrison & per

POSSIBLE CHANGES IN THE SCRAPIE AGENT

R M Barlow

If as is believed the epidemic of BSE is a consequence of concentrate feedstuff-borne scrapie infection, it is possible that changes in the prevalence and patterns of scrapie may also have occurred through similar concentrates being fed to sheep and goats.

The feeding of concentrates to small ruminants is variable. It is least in hill sheep and fibre-producing goats and greatest in dairy goats, milking sheep and Downs breeds going for early lambs.

Thus the intention was to try to focus on the latter groups and compare the situation a decade ago with the last five years. Information has been sought on prevalence, breed/species distribution and any differences in patterns of pathology especially relating to cerebral cortex and age at onset.

I have concentrated on Scotland; the following information has been obtained from the Moredun Institute whose neuropathological diagnostic service handles material from all 8 Scottish VI Centres and to a variable extent those at Penrith and Newcastle.

Data presently available is "muddy". Computerised records only go back to June 1983; for economic reasons the number of blocks taken from suspect scrapies has been reduced from 11-13 to 4-5 concentrating on brain stem and archival material more than 10 years old has been drastically reduced. Furthermore the Shetland County Council/HIDB sheep health scheme material which includes scrapie has since 1986 been channelled through the Thurso VI Centre without being identified separately from mainland cases.

I am indebted to J S Gilmour FRCVS at Moredun for the following information:

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	<u>Confirmed Scrapie Cases Total</u>	<u>(% age of total submission) excluding Thurso</u>
1983 (June et seq)	6 (0.9%)	5 (0.8%)
1984	24 (1.8%)	22 (1.7%)
1985	25 (2.2%)	20 (1.7%)
1986	32 (2.5%)	22 (1.7%)
1987	27 (1.9%)	12 (0.9%)
1988	38 (2.7%)	17 (1.2%)
1989	46 (4.4%)	24 (2.3%)

No real pattern here but a trend could emerge with the 1990 figures.

#### Archival material

Slides/blocks are available as follows :-

1977	3 cases
1983	6 cases
1984	24 cases
1985	17 cases
1986	32 cases
1987	21 cases

The material from 85 - 87 may not be comprehensive. Currently, at my request full sets of blocks are processed to paraffin but may not be cut routinely.

Between 1979 and 1984 Anne Mackellar (Moredun) and I produced lesion distribution diagrams of naturally occurring and experimental scrapie cases with the intention of assessing any breed, regional or agent strain correlations. We had at least 7 groups within which there were subgroups and quite a lot of overlap. My recollections of this work are that cortical lesions in sheep were mild and none other than in the New Milton Suffolk flock which bred itself to extinction.

Since I have been at RVC I have examined rather fewer cases than formerly and rather more in goats than in sheep. I have been struck by the prevalence and severity of cortical lesions (mainly in the prefrontal and parietal regions) in many cases. However James Wood (CVL) has just completed an examination of goat material going back at least 20 years and

such lesions were present then as now.

This is a bit anecdotal but the data could possibly be firmed up though it would take time and money.

#### Prospective studies

I have discussed some possibilities with a pedigree sheep breeder who is also a veterinarian. He considered that many of the bigger breeders "have gone into their shells" since the advent of BSE and have a considerable moral dilemma - increased trade with Eastern Europe is now possible but requires owner declaration of freedom from scrapie.

This moral dilemma is more serious than the financial one of submitting to examination. However, he felt that with guarantees of confidentiality, the waiving of veterinary fees and £20.30 for each sheep "Seized" one might get owner collaboration. Owners of small flocks (<100 sheep) and minority breeds eg Charollais and Bleu De Maine might be more co-operative than Suffolks/Dorsets etc. He also felt that co-operation was more likely from S.W. England than Scotland! The Suffolk Health Scheme started by the late M.B. Parry, if still extant, might be a good place to start (convenor Bill Steel).

The National Sheep Association is clearly worried and has called together 6 people from the veterinary and production sides of the industry to discuss matters - hence my apologies for absence today. I will report on the meeting to Dr Tyrrell.