



Ministry of Agriculture, Fisheries and Food  
Veterinary Investigation Centre  
West House, Station Road, Thirsk YO7 1PZ  
Telephone: 0845-522065 Fax: 0845-525224

Your reference

Mr P Gayford  
V I Section  
MAFF Tolworth (TJ)

Our reference R.JH/ASB

Date

4 November 1992

*JW*  
DEER SPONGIFORM ENCEPHALOPATHY SURVEY

Dear Paul

I have now found time to review the 10 deer brains collected from Mr. Walker's farm via Winchester VIC. In answer to your specific question was there sufficient difference in preservation of brain tissue to warrant the extra effort involved in rapid brain removal on the farm, the answer is definitely "Yes." The original five brains (Winchester ref M487/11) showed varying degrees of autolytic vacuolation affecting both white and grey matter throughout the brain, vacuolation and separation of Purkinje cells and marked perivascular spaces. These artifacts made interpretation of subtle, specific pathological vacuolation more difficult. By contrast the second submission (Winchester reference M736/2) showed excellent preservation of white and grey matter. Any vacuolar change present could be confidently interpreted as pathological, albeit of unknown pathogenesis.

I can only reiterate the comments made by Gerald Wells and myself at the preliminary discussion at Weybridge in Autumn 1991. If the survey's purpose is an accurate histopathological interpretation of brain tissue, the material must be collected in a pristine state. This is particularly valid when looking for an unrecognised and undefined spongiform encephalopathy in a new species. Deer brains are very large structures which take a lot of fixation and therefore must be handled sympathetically from the start. We have already seen the problems encountered in comparatively smaller hound brains where delayed fixation was a major limitation on interpretation of true pathological change.

The bottom line must be that if a pathologist's expertise is to be used, it is critical to collect artefact free brain material. If the politics or economics do not allow this, then I would suggest that an electron microscopy survey involving detection of scrapie associated fibrils would be much more appropriate.

Best wishes

Yours sincerely

R J HIGGINS  
VIO

92/11.4/2.1