HOUND SURVEY

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BACKGROUND

In its report dated June 1989, the Consultative Committee on Research into Spongiform Encephalopathies (Tyrrell Committee) commented that whilst natural spongiform encephalopathies had not been recognised in domesticated species other than cattle, sheep and goats, other species might prove susceptible to the unconventional agent of bovine spongiform encephalopathy (BSE). The Tyrrell Committee recommended that the health of animals fed offal, carcases or meat and bone meal, principally pigs, domestic cats and dogs, and poultry, should therefore be monitored.

As a consequence of that recommendation, it was decided that the State Veterinary Service should undertake a survey of hound packs as these represented a group of animals which were often fed bovine/ovine offals and meat and could therefore have been inadvertently exposed to the BSE agent in recent years.

Approximately 300 hound packs are thought to exist in Great Britain. Of these 250 are Foxhound packs and the remainder comprise packs of Beagles, Bassetts, Deerhounds, Staghounds, Draghounds and Fell packs.

Young hounds enter packs at approximately nine months to one year of age and have an expected working life of 7-9 years. Accurate data is not available on mortality rates in hounds but it is estimated that there is an annual replacement rate of approximately 20%. The first major culling period is between 2-4 years of age, predominantly because of behavioural problems (colloquially known as "wickedness") i.e. hounds fail to chase foxes, are generally disobedient, or fail to bay/bark. Thereafter pack numbers remain relatively static until old dogs 7-10 years of age are replaced by younger recruits. Culling usually takes place towards the end of the hunting season, generally March to June. A small number of hounds may die or be destroyed as a result of accidents and disease.

The diet of hound packs will vary considerably, depending on local condition and food availability. Most hound packs are fed on raw or cooked meat obtained from carcases of fallen farm livestock, mainly cattle and sheep with some horse and goats. Bones and offals from these animals usually go direct for rendering. Offals and meal may be fed, particularly when fallen carcases are in short supply.

THE SURVEY

The purpose of the survey was to examine the brains of all hounds over two years of age which died or had to be destroyed, for histological evidence of spongiform encephalopathy (SE) and for scrapie associated fibrils (SAF) by electron microscopy. With the agreement of the Hound Pack Associations, Masters of Hounds in charge of individual hunt kennels agreed to notify their local Animal Health Office (AHO) whenever a hound had died or was due to be culled for any reason. The Divisional Veterinary Officer (DVO) then arranged for a Field Veterinary Officer (VO) to visit the kennel as soon as possible to humanely euthanase any live cull animals and arrange transport of all carcases to the nearest Veterinary Investigation Centre (VIC). Under no circumstances were live

hounds to be removed from hunt kennels. A form VISE 2 (Appendix 1) was completed by the VO, giving details of the animal's age, sex, hound type, duration in pack, previous history, diet, and present clinical condition with particular emphasis on any neurological signs. A unique hound survey number, prefix HSE, was allocated to each hound carcase.

On receipt of the carcase at the local VIC, the whole brain was removed as soon as possible and placed in approximately 10 times its volume of 10% formal saline. After a minimum one week period of primary fixation, all brains were forwarded to Thirsk VIC for light microscopic examination by a designated Veterinary Investigation Officer (VIO) with specialist histopathology training to try to ensure standardised histological assessment.

For SAF studies, approximately 10 cms of unfixed cervical spinal cord posterior to the atlanto-occipital junction, was collected at necropsy and sent either chilled or frozen to Central Veterinary Laboratory (CVL) Weybridge for examination by electron microscopy. After testing, any residual spinal cord was retained by CVL at minus 70°C for possible protease resistant prion (PrP) detection by immuno blotting technique.

Spinal cord was not collected for histological examination.

At Thirsk VIC each whole brain was sliced transversely at 5 mm intervals and any gross lesions noted. Any physical trauma or mutilation accidentally caused during brain removal was noted, particularly if it involved proposed examination sites. Five standardised neuro-anatomic sites were selected for processing.

i) Medulla oblongata at the level of obex.
ii) Medulla oblongata through caudal cerebellar peduncles to include vestibular nuclei and reticular formation.
iii) Sagittal cerebellum.
iv) Mid-brain to include superior colliculus and red nucleus.
v) Cerebrum through frontal cortex to include basal ganglia.

Secondary fixation was carried out for one week on an orbital shaker to enhance penetration.

Standard histological processing and staining was carried out as for suspect BSE bovine brains.

DIAGNOSTIC CRITERIA

A scrapie-like SE had never been identified in dogs. The following guidelines were therefore proposed, based on the accumulated knowledge of scrapie/BSE and the very recent but limited experience of feline spongiform encephalopathy (FSE).

POSITIVE: open to the histopathologist's interpretation for SE in general, depending on vacuolation, astrocytosis and amyloid plaque formation. Vacuolation would be likely to affect grey matter neuropil and neuronal perikarya with a systematic and usually bilaterally symmetrical distribution.

NEGATIVE: Absence of significant spongiform lesions or other vacuolar change.

INCONCLUSIVE: Inadequate submission of material such that some target sites were either physically damaged or absent, or autolytic changes were too advanced for accurate histopathological interpretation.

UNRESOLVED: A fourth category had to be added to cover cases in which target sites were not mutilated, absent, or autolysed, but in which there was evidence of vacuolar change of unknown aetiology and indeterminate pathogenesis. Significance Selected cases were subsequently referred to pathology department CVL for more detailed histological evaluation.

ELECTRON MICROSCOPY FOR SCRAPIE ASSOCIATED FIBRILS (SAF)

Since first reported by Merz and Co-workers (1981) SAF are a consistent feature of transmissable spongiform encephalopathies due to unconventional pathogens or "prions." They are demonstrated by transmission electron microscopy (TEM) in detergent treated extracts of affected brain. SAF have been reported in natural scrapie (Dawson and Others 1987, Gibson and Others 1987, Rubenstein and Others 1987, Scott & Others 1987) as have similar fibrils in BSE (Scott and Others 1990) and FSE (Wyatt and Others 1990, Pearson & Others in press) For TEM 1gm samples of cervical spinal cord were extracted by modification of the method of Hilmert and Diringer (1984) as described by Scott & Others (1987). The grids were examined in a Philips 410 LS transmission electron microscope at magnifications above 25,000 and at an accelerating voltage of 80 kv. Each grid was examined for a minimum of 20 minutes.

DIAGNOSTIC CRITERIA

POSITIVE: Presence of fibrillar material typical of that encountered in cases of BSE/scrapie.

NEGATIVE: Absence of fibrils.

INCONCLUSIVE: Presence of fibrillar material of indeterminate composition.

Results of individual histological and SAF examinations were forwarded to Senior Veterinary Officer (SVO) Tolworth who evaluated all relevant case data. The overall result for each hound submission was passed back to the local DVO who subsequently informed the Master of Hounds at the submitting hunt kennel.

RESULTS

The Hound Survey ran from October 1990 to August 1991. During 1990, 91 hounds were submitted with a further 353 during 1991, giving a total of 444 brains for examination. Monthly submission rates and percentages are shown in appendix 2. All except six hounds which died naturally were euthanased by intravenous injection of pentabarbitone. The geographical distribution of submissions based on AHO location is shown in appendix 3. Clinical histories as stated on the VISE 2 form are summarised in appendix 4. Hound type, sex and age distribution are shown in appendices 5, 6, and 7. Details of the diet being fed at the 101 participating hunt kennels are shown in appendix 8. The number of hounds received at VICs and their submitting AHOs are summarised in appendix 9.

Light microscope observations were made in each case without prior knowledge

of the results of TEM and vice versa.

Results of histopathological and SAF examinations are tabulated in appendix 10. These have also been summarised by month (table 1) and by year (table 2). An overall summary sheet detailing all hound submissions for each AHO is shown in appendix 11.

PATHOLOGICAL OBSERVATIONS

Significant gross lesions were not detected with the exception of mild hydrocephalus in two brains (91/75 and 91/206).

Based on the criteria previously outlined for SE, no positive histological diagnoses were made in any of the 441 hound brains examined. An overall negative diagnostic rate of 54.3% was established. The reasons for inconclusive histological cases (10.1%) are summarised in table 3. Diffuse white matter vacuolation and intramyelinic oedema of unknown pathogenesis was recorded in one inconclusive case (91/202).

The unresolved category had to be used in 155/441 animals (34.9%). In these brains a variable degree of vacuolar change was present predominantly involving gracile, cuneate, accessory cuneate and lateral reticular nuclei of the medulla oblongata, often with some degree of symmetry. Much of this vacuolar change was clearly artefactual and associated with more generalised features of sub-optimal tissue preservation but the degree of autolytic change was judged insufficient to invoke the inconclusive category. Whilst most of the vacuoles appeared to be perineuronal, others were definitely located within the perikaryon. Vacuolation of perikarya in some instances and eosinophilic spheroid-like bodies indicating neuronal degeneration, probably represented an authentic pathological process, but they were not accompanied by detectable glial changes, nor other evidence of a systematic SE. Although vacuolation of neuropil was concentrated in the same anatomical areas of the medulla, there was frequently widespread generalised distribution of sparse vacuoles in grey and white matter throughout the brain.

Amyloid deposits were not detected in any of the brains by birefringence in polarised light or by the use of specific Benhold's congo red staining.

Analysis of these unresolved histological cases by age and breed of hound is shown in appendix 12.

A common microscopic finding (28.4%) associated with gracile and cuneate nuclei was the presence of small numbers of protozoan bodies morphologically resembling Toxoplasma gondii. In mose cases no host cellular response was observed. In some instances, however, these parasites showed degenerative change, possibly associated with ageing or host immunological response which further complicated accurate interpretation of the previously described vacuolar and neurodegenerative changes in the medulla. The seven cases of sub-acute to chronic non-suppurative encephalitis could have been related to this toxoplasma infection but recognisable protozoan parasites were not always identified within the inflammatory and degenerative foci. In only one of these animals (90/80) was the histological findings of encephalitis related to clinical neurological signs of blindness. Analysis of all cases where

toxoplasma cysts were visible shows an almost even distribution between negative and unresolved histological categories(appendix 13).

Three Basset hounds (91/246, 247 and 249), showed a diffuse encephalopathy with prominent intracytoplasmic basophilic inclusion bodies in many neurones and glial cells and apparent loss of cerebellar Purkinje cells. Special stains showed that these structures were periodic acid-Schiff (PAS) and Alcian blue positive and stained metachromatically with toluidine blue. On the basis of these findings, a diagnosis of Lafora's disease (Holland and Others 1970, Jian and Others 1990) was made although no clinical signs had been reported.

ELECTRON MICROSCOPY FOR FIBRILS

SAF results are summarised in table 2. Overall 88.3% of hound brains were negative for SAF based on single spinal cord sample examination. In 7.4% of cases material was not submitted for examination at CVL. In the remaining 4.3% representing 19 cases there was an inconclusive result. The fibrils observed were generally slightly narrower than conventional scrapie/ BSE fibrils but in other respects closely similar. In all cases they were present in low concentrations. They could be differentiated from systemic amyloid and paired helical filaments of Alzheimer's disease.

Cases with inconclusive fibril results were only seen in hounds aged seven years or older, with the majority occurring in eight or nine year old animals (table 4). When breed incidence was examined (Foxhound 11, Beagle 7, Harrier 1) Beagles appeared somewhat over-represented.

When these cases were compared with the corresponding light microscope findings there was no absolute correlation with fibril detection (table 5), although the majority of cases did fall into the unresolved histological category. However fibrils were not detected in the remaining 141 unresolved histological cases.

IMMUNO BLOTTING STUDIES

Immuno-blotting of hound brain extracts was performed at CVL using pooled surplus cervical spinal cord as follows:-

Pool H+ = brains scored inconclusive by EM and unresolved histopathology.
Pool H? = brains scored inconclusive by EM and histopathology negative.
Pool H- = brains scored negative by both EM and histopathology.

Brain from a confirmed BSE case labelled B+ served as a positive control.

All four extracts (B+, H+, H?, and H-) were blotted and probed separately with each of four rabbit antisera.

1. Pre-immune rabbit sera.
2. Serum 1B3 ex neuropathogenesis unit (NPU) raised against mouse PrP.
3. Serum SP40 ex Institute of Psychiatry raised against sheep PrP peptide sequence.
4. Serum 6/N/Po ex Pocchiari raised against hamster PrP.

RESULTS

The three anti-PrP sera all bound to the extract of BSE affected brain, but there was no convincing evidence of binding to any of the three extracts of hound brain. This exercise therefore failed to provide conclusive evidence of the existence of SE related PrP in any of the hound spinal cord samples assayed.

DISCUSSION

The objective of the survey was to determine whether a previously unrecognised transmissible SE existed in hounds. Histopathological changes consistent with a florid SE similar to that recently reported in cats (Wyatt & Others 1990, 1991, Leggett & Others 1990) were not observed.

Interpretation of the light microscopic observations was limited by the design of the survey and resulted in the high percentage of unresolved/ inconclusive cases. Inadequacies of design were firstly that no control material from hounds housed and fed under different environmental conditions was available. Secondly, that spinal cord was not collected to complete histopathological examination of the central nervous system. Thirdly, that the method of sampling and primary fixation was inadequate for critical assessment of any pathological vacuolar change which was most pronounced at the level of obex, a neuro-anatomical site often of particular importance in SE diagnosis. In the first half of the survey, insufficient priority was given to the rapid removal, ca reful handling and prompt primary immersion fixation of brain. As a direct consequence, gross physical damage to the brain and widespread artefactual microscopic changes were commonly encountered. In an effort to overcome this, more detailed instructions emphasising the need for rapid removal and prompt fixation of brain were issued in March 1991 including recording of exact time intervals between euthanasia and brain removal and subsequent immersion in fixative. This latter request was clearly frequently not always carried out or the data incompletely or inaccurately recorded, resulting in only a marginal improvement in the quality of formalin fixed brain tissue received at Thirsk VIC during the second half of the survey. Handling artefact may also have contributed to the occurrence of vacuolar changes observed in the obex.

An analysis of the degree of histological artefact in those brains from multiple submissions of carcases to local VICs (appendix 14) showed a high percentage of unresolved/inconclusive histological cases among them, suggesting common causative factors within such batches (appendix 15). There were four such multiple submissions where 100% of cases were unresolved/ inconclusive on histopathology.

The majority of post-mortem change was attributable to the period up to primary fixation. Prolonged secondary fixation appeared to have no beneficial effect when attempted in a small number of cases. The undertaking not to remove live hounds for euthanasia at local VICs where immediate brain removal and fixation could have been carried out proved therefore an unsurmountable handicap in the design of the survey. Only in those brains where primary fixation was judged satisfactory could interpretation of any

vacuolation or neurodegenerative change be facilitated. Despite these reservations, there was a small number of hound brains which did show genuine vacuolation with some intraneuronal vacuoles which could not be ascribed to artefact.

A review of relevant published veterinary literature would also have been pertinent when planning the survey. Hound ataxia, a condition of unknown aetiology has been recognised for many years in Foxhound, Beagle, and Harriers fed an almost exlusive diet of ruminant fore stomachs (Palmer and Others 1984). Clinically affected hounds showed weakness and hindlimb incoordination. Pathologically, Wallarian type degeneration was reported in spinal cord white matter especially at the cervical and thoracic level. Secondary and relatively mild white matter degeneration occurred in ascending tracts of medulla oblongata and mid-brain, particularly medial leminiscus, medial longitudinal fasciculus, spinothalamic, and spinocerebellar tracts. A further report (Palmer and Medd 1988) indicated that hound ataxia had spontaneously disappeared in one hunt kennel after a change to a mainly meat-based diet, possibly suggesting a nutritional deficiency. A recent detailed clinical, biochemical and neuropathological study of ataxia in Irish Foxhounds and Harriers (Sheahan and Others 1991) classified the pathological lesion as a spinal myelinopathy. There was again a clear association with the feeding of ruminant fore stomach and biochemical data implicated methionine deficiency as the likely cause. In the present Hound Survey, the neurodegenerative changes detailed earlier in the medulla are not those described in hound ataxia/spinal myelinopathy, but the failure to examine spinal cord renders any accurate interpretation impossible. The pathogenesis of the neurodegenerative changes identified could not be determined within the limitations of the present survey but they may represent age-associated or incidental pathology. Their clinical significance must remain unknown since there was no thorough clinical neurological examination prior to euthanasia.

The role of toxoplasma infection in some of these changes is also unknown. The common observation of toxoplasma cysts was to be expected, given the dietary exposure to uncooked meat from grazing livestock. Since most hound packs are protected against canine distemper virus by regular vaccination it is tempting to implicate toxoplasma in the pathogenesis of non-suppurative encephalitis although protozoan bodies were not always recognisable in the inflammatory lesions. The fairly even distribution between negative and unresolved histological categories suggests that the role of toxoplasma in exacerbating non-specific vacuolar change in the brain stem was not important.

As in the light microscope study, the absence of suitable control material for TEM fibril detection was a handicap. Fibillar material of unknown significance was detected in 19 cases (4.3%) from 15 different hunt kennels.

The correlation between the small number of inconclusive fibril cases and the unresolved histological category was incomplete since fibrils could not be detected in the remaining 141 unresolved histological cases. There was no obvious explanation for either clustering of cases with inconclusive fibrils in the earlier part of the survey or the age incidence (seven years plus).

Although not part of the original survey protocol, some immuno-blotting

studies were subsequently carried out to try to resolve the nature of this fibrillar material. This exercise failed to provide conclusive evidence of the existence of SE related PrP in any of the hound spinal cord extracts assayed. However, without knowledge of canine PrP sequence, it is possible that the three antisera used (anti-mouse, anti-sheep, anti-hamster) would fail to recognise PrP in hound brain. After EM and immuno-blotting had been carried out on these equivocal cases, there was no fresh spinal cord material available for further tests. However detection of PrP might be attempted immunocytochemically on formalin fixed paraffin embedded material from this survey, but again would require technical development since no such work has been previously carried out in this species.

Material collected for the survey appeared to be geographically representative involving 101 hunt kennels in England, Wales and Scotland. Submissions were predominantly Foxhounds and Beagles with small unrepresentative numbers of the minor hound breeds. Age distribution correlated well with predicted or known hunt culling policies. Clinical histories were diverse but must be considered largely anecdotal in the absence of a thorough veterinary examination to include sound clinical neurological expertise. The large number of submissions with no specified clinical signs were presumably culls simply on the basis of age rather than disease.

The ability to detect a potential SE in working hounds may be seriously compromised because of the vigorous culling kprogramme usually operated in hound packs. Any incipient SE affecting performance would almost certainly result in early disposal from the pack at a stage when the condition could be poorly manifest clinically and pathologically. This is in contrast to the situation which would pertain in companion cats and dogs, where owners would seek veterinary advice and the case would be monitored through a substantial part of the clinical course. At death or euthanasia in such cases there would therefore be a far greater probability of detecting the disease.

SUMMARY

A total of 444 hound brains of mixed breeds from 101 hunt kennels widely distributed through England, Wales and Scotland were collected during October 1990 - August 1991. Histological examination of formalin fixed brain failed to reveal evidence of a florid SE likely to be associated with infection by an unconventional BSE/scrapie agent. 54.3% of brains examined were negative and 10.1% inconclusive due to autolysis or damage to target sites. Vacuolar changes involving certain anatomic nuclei in the medulla were commonly observed but were impossible to interpret because of sub-optimal tissue preservation and/or intercurrent neurodegenerative changes of unknown pathogenesis. As a result 34.9% of cases had to be classified as histopathologically unresolved.

EM studies of cervical spinal cord revealed fibrillar material of unknown composition and significance in 4.3% of cases. Immuno-blotting of selected cases including those with fibrillar material and/or unresolved pathology failed to detect PrP. Serious flaws in the design of the survey included the absence of control material, failure to examine spinal cord histologically, and excess artefactual vacuolation arising directly from inadequate care in handling of brain tissue and frequent delays in primary fixation.

RECOMMENDATIONS

1. Because of the inadequacies of fixation already highlighted, it is unlikely that a further more detailed histological study of the formalised brain material collected in this survey is warranted.

2. Further work to define the nature and significance of fibrillar material recognised by TEM may be warranted. Alternatively immunoperoxidase techniques for PrP detection in situ could be pursued on the formalised paraffin wax embedded material, particularly in unresolved histology/inconclusive fibril cases. However the sensitivities of this method used in other species are very variable and often do not detect PrP convincingly where it is present in low concentrations. Furthermore the technique requires development for use in the dog and thus far there is no positive control in this species. No fresh material remains for further fibril studies or transmission experiments. A third option would be to attempt mouse transmission (intracerebral and intraperitoneal routes) using residual formalised tissue pooled from inconclusive fibril/unresolved histology cases.

3. Any proposal to carry out a future survey for novel SE in domesticated animals must take full account of the lessons to be learned from this hound survey.

a) A histological component in such a study would be essential, but cannot achieve its aims unless greater attention is paid to the collection of artefact-free formalin fixed tissue. Ideally this would involve perfusion techniques but if impractical, non-traumatic euthanasia must be followed by rapid brain removal and immersion fixation within minutes, using well-trained staff under direct veterinary supervision.

b) Spinal cord must be examined histologically to ensure a complete neuropathological assessment of the central nervous system.

c) The veterinary pathologist must have an appropriate level of expertise in neuropathology and have adequate laboratory technical resources.

d) Appropriate control material must be obtained.

e) Accurate clinical neurological examination prior to euthanasia should be an integral feature.

f) A small scale pilot study should be carried out to identify unforeseen factors, particularly subclinical neurodegenerative change, intercurrent neurological disease, and an assessment of artefactual changes in the central nervous system.

g) Fresh material must be collected for fibril detection, immuno-blotting a nd possible transmission studies.

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HSE SURVEY

TABLE 1

SUMMARY OF MONTHLY SUBMISSIONS AND RESULTS

MONTH/YEAR		TOTAL	HISTOLOGY UNR	IC	N	NT	SAFs IC	N	NT
Oct	90	6	-	-	6	-	-	6	-
Nov		53	14	5	34	-	9	35	9
Dec		32	14	2	16	-	2	27	3
Jan	91	47	21	7	16	3	1	40	6
Feb		42	15	5	22	-	3	32	7
Mar		64	19	12	33	-	-	62	2
Apr		48	11	2	35	-	-	48	-
May		48	13	5	30	-	3	40	5
Jun		50	31	1	18	-	1	47	2
Jul		50	14	6	30	-	-	50	-
Aug		4	3	-	1	-	-	4	-
		444	155	45	241	3	19	391	34

KEY

Histology UNR = unresolved
IC = inconclusive
N = negative
NT = not tested

SAFs IC = inconclusive
N = negative
NT = not tested

HSE SURVEY

TABLE 2

HISTOLOGY RESULTS

	1990		1991		Overall	
Negative	56	61.5%	185	52.4%	241	54.3%
Inconclusive	7	7.7%	38	10.7%	45	10.1%
Unresolved	28	30.8%	127	36.0%	155	34.9%
Positive	0		0		0	
Not tested	0		3	0.9%	3	0.7%
TOTAL	91	100%	353	100%	444	100%

ELECTRON MICROSCOPY - SAF RESULTS (SCRAPIE ASSOCIATED FIBRILS)

	1990		1991		Overall	
Negative	68	74.7%	324	91.8%	392	88.3%
Inconclusive	11	12.0%	8	2.2%	19	4.3%
Positive	0		0		0	
Not tested	12	13.2%	21	6.0%	33	7.4%
TOTAL	91	100%	353	100%	444	100%

HSE SURVEY

TABLE 3

INCONCLUSIVE HISTOLOGY CASES

Advanced Autolysis	9
Mutilation of target sites	21
Autolysis/mutilation	11
Not received at Thirsk VIC	3
Diffuse white matter oedema	1
TOTAL	45

HSE SURVEY

TABLE 4

INCONCLUSIVE SAF CASES - AGE DISTRIBUTION

No. of samples	0	0	0	0	0	0	1	7	7	1	0	2	1
Age of animal (Yrs.)	1	2	3	4	5	6	7	8	9	10	11	12	13

HSE SURVEY

TABLE 5

INCONCLUSIVE SAF CASES - HISTOLOGICAL DIAGNOSES

Total No. of cases	Negative	Positive	Inconclusive	Unresolved
19	3	0	2	14 (73.7%)

Appendix 1

Department of Agriculture and Fisheries for Scotland
Welsh Office Agriculture Department

Case Reference No: HSE /

Spongiform Encephalopathy – Hound Survey

Head / Brain for examination

Please use BLACK INK and BLOCK LETTERS

Submitted to _____ Veterinary Investigation Centre

Date received _____ Laboratory Reference No _____

Name and address of kennel

_____

_____

Postcode _____

Veterinary Practice _____

Type of hound _____ Age _____ Sex _____

Duration in pack _____ Origin _____

Died _____ Destroyed _____ Date _____

Clinical history and diet

_____

Where fostered and diet

_____

DVO notified _____ Brain sent to Thirsk _____

Brain received at _____ VIC

Date _____

Lab. Ref. _____

Result: *(Tick appropriate box)*

BSE Positive ☐

Negative ☐

Inconclusive ☐

Comment if applicable

_____

Signature _____ Date _____

For HQ (Tolworth) Use Only

Tick appropriate box

YES ☐ NO ☐

Date report received _____

Disease confirmed

Signature _____ /

MAFF 2 (10-90)

000016

HSE SURVEY

APPENDIX 2

MONTHLY SUBMISSION RATE/PERCENTAGES

	Numbers	%
Oct 90	6	1.4
Nov	53	11.9
Dec	32	7.2
Jan 91	47	10.6
Feb	42	9.4
Mar	64	14.4
Apr	48	10.8
May	48	10.8
Jun	50	11.3
Jul	50	11.3
Aug	4	0.9
TOTAL	444	100%

HSE SURVEY

APPENDIX 3

ANIMAL HEALTH OFFICES

	No. examined.	No. of Hunt Kennels
ENGLAND & WALES		
Beverley	3	1
Caernarfon	11	3
Cardiff	12	2
Carlisle	5	2
Carmarthen	45	5
Chelmsford	6	2
Crewe	11	3
Dorchester	5	2
Exeter	29	7
Gloucester	12	2
Guildford	3	1
Huntingdon	22	6
Leeds	9	2
Leicester	8	3
Lincoln	4	2
Llandrindod Wells	3	1
Maidstone	5	2
Newcastle	10	7
Northallerton	12	6
Norwich	12	2
Nottingham	3	2
Oxford	15	3
Preston	17	3
Stafford	3	1
Taunton	48	6
Trowbridge	26	5
Truro	20	5
Winchester	37	4
Worcester	15	6
SCOTLAND		
Dumfries	6	1
Galashiels	8	1
Inverness	7	2
Perth	12	1
	444	101

HSE SURVEY

APPENDIX 4

CLINICAL HISTORY

No specified reason	218
Old age	76
Behavioural problems	67
Locomotor problems	35
Surplus to requirements	15
Poor body condition	13
Blindness	7
Tumours (various)	7
Dental problems/jaw abnormality	5
"Can't keep up with hunt"	5
Respiratory problems	3
Poor conformation	3
Suspect poisoning	3
Sudden death	2
Passing blood	2
Posterior ataxia	2
Nervous signs	1
Road traffic accident	1
Abscess	1
Peritonitis	1
Infertility	1
Hernia	1
Renal disease	1

HSE SURVEY

APPENDIX 5

HOUND TYPE

	1990	1991	% overall
Foxhound	54	234	(64.8%)
Beagle	27	68	(21.4%)
Harrier	3	22	(5.6%)
Basset	3	5	(1.8%)
Welsh	2	6	
Buckhound	-	3	
Buckhound Cross (X)	-	4	
Basset X Beagle	-	1	
Beagle X	-	1	
Fell X	-	1	
Welsh X	-	4	
Sheepdog X	-	1	
Not specified	2	3	
TOTAL	91	353	

HSE SURVEY

APPENDIX 6

SEX DISTRIBUTION

	1990	1991	Overall	
FEMALE	48	185	233	(52.4%)
MALE	43	154	197	(44.5%)
NOT SPECIFIED	-	14	14	(3.1%)
	91	353	444	100%

HSE SURVEY

APPENDIX 7

AGE DISTRIBUTION

	1990	1991	Overall	%
Less than 1 year	1	0	1	0.2
1 year	0	8	8	1.8
2	11	40	51	11.5
3	8	52	60	13.5
4	9	33	42	9.5
5	9	25	34	7.7
6	12	39	51	11.5
7	15	49	64	14.4
8	15	45	60	13.5
9	8	24	32	7.2
10	1	11	12	2.7
11	0	8	8	1.9
12	-	4	4	0.9
13	-	1	1	0.2
17	-	1	1	0.2
'Aged'	2	-	2	0.4
Not specified	-	13	13	2.9
TOTAL	91	353	444	100%

HSE SURVEY

APPENDIX 8

DIET OF SUBMITTING KENNELS

Raw meat	34
Raw meat/offal	17
Meat (Unspecified)	12
Offal	5
Fallen stock (unspecified)	10
Raw/cooked meat	12
Raw/cooked meat/offal	1
Cooked meat	3
Cooked meat/offal	2
Swill/raw meat	2
Dried meat	2
Proprietary dog food	1
Waste catering food	5
Fish farm waste	1
Dry feed	1

HSE SURVEY

APPENDIX 9

VIC SUBMISSIONS

ENGLAND & WALES VIC		ORIGINATING AHO
Aberystwyth	10	Carmarthen
Bangor	11	Caernarfon
Bristol (Langford)	82	Dorchester, Gloucester, Taunton, Trowbridge
Cambridge	28	Chelmsford, Huntingdon
Carmarthen	50	Cardiff, Carmarthen, Llandrindod Wells
Lincoln	4	Lincoln
Newcastle	10	Newcastle
Norwich	12	Norwich
Penrith	5	Carlisle
Preston (Barton Hall)	17	Preston
Reading	15	Oxford
Shrewsbury	14	Crewe, Stafford
Starcross (Exeter)	29	Exeter
Sutton Bonington (Nottingham)	12	Leeds, Leicester, Nottingham
Thirsk	23	Beverley, Leeds, Northallerton
Truro	20	Truro
Winchester	40	Guildford, Winchester
Worcester	24	Gloucester, Worcester
Wye	5	Maidstone
SCOTLAND		
Auchincruive	6	Dumfries
Inverness	7	Inverness
Perth	12	Perth
St. Boswells	8	Galashiels
TOTAL	444	

HOUND SURVEY 1990
APPENDIX 10

Histology
N = Negative
IC = Inconclusive (autolysis or mutilation)
NR = Not Received
UR = Unresolved

T = Toxoplasma

SAFs
N = Negative
IC = Inconclusive

cm ICC. R-P

RESULTS

MONTH	HSE REF 90/-	AHO	SAFs	HISTOLOGY	
OCT	1	Dorchester	N	N	
	2	"	N	N	
	3	"	N	N	
	4	Gloucester	N	N	
	5	Trowbridge	N	N *	T
	6	Inverness	N	N	
NOV	7	Worcester	N	N	
	8	Huntingdon	IC	N *	
	9	Winchester	N	N	
	10	"	N	N	
	11	Carmarthen	N	UR*	
	12	Huntingdon	N	N*	Enceph
	13	"	N	N*	T
	14	"	N	N*	T
	15	Newcasatle	IC	UR*	
	16	Chelmsford	N	IC	
	17	Newcastle	N	N	
	18	Gloucester	IC	UR*	
	19	Exeter	IC	UR*	
	20	"	IC	UR*	
	21	Huntingdon	N	N	
	22	Gloucester	N	N	
	23	"	N	N	
	24	Newcastle	IC	N	
	25	"	N	UR	
	26	"	N	N	
	27	Cardiff	N	N	
	28	"	N	UR	T
	29	"	N	UR	T
	30	Northallerton	N	UR	T
	31	"	N	IC	
	32	Worcester	N	N	
	33	Leeds	N	N	
	34	"	N	N	
	35	Oxford	N	N	
	36	"	N	N	
	37	"	N	UR	T
	38	Chelmsford	N	UR	T
	39	"	N	N	
	40	Lincoln	N	N	
	41	"	N	N	
	42	"	N	N	
	43	Perth	N	N	
	44	"	N	N	

NOVEMBER (Contd.)	45	Taunton	IC	UR *	
	46	"	IC	UR *	
	47	Taunton	IC	UR *	
	48	"	N	N	
	49	"	N	N	
	50	"	N	N	T
	51	Exeter	NR	IC	
	52	"	NR	IC	
	53	"	NR	IC	
	54	"	NR	N	
	55	Crewe	NR	N	
	56	"	NR	N	
	57	"	NR	N	T
	58	"	NR	N	
	59	Maidstone	NR	N	
DECEMBER	60	Chester	N	UR	
	61	"	N	UR	T
	62	Huntingdon	NR	N	
	63	Carmarthen	N	UR	
	64	"	N	N	
	65	Truro	N	UR	T
	66	"	N	N	T
	67	Trowbridge	N	UR	T
	68	Leicester	N	N	T
	69	"	N	N	
	70	"	N	N	T
	71	Maidstone	N	N	
	72	"	N	N	
	73	Worcester	N	UR	
	74	Taunton	IC	UR	T
	75	"	N	UR	T
	76	"	N	UR	T
	77	"	N	UR *	T
	78	"	N	UR	T
	79	"	N	IC	
	80	Truro	N	N	T Enceph
	81	"	N	N	
	82	"	N	UR	
	83	"	IC	UR	T
	84	Llandrindod Wells	N	N	
	85	" "	N	N	T
	86	" "	N	N	T
	87	Perth	N	N	
	88	Northallerton	N	N	
	89	Huntingdon	N	N	T
	90	Exeter	NR	IC	
	91	"	NR	UR	T

HOUND SURVEY 1991 APPENDIX 10 (Contd.)

MONTH	HSE REF 91/-	AHO	SAFs	HISTOLOGY	
JANUARY	1	Caernarfon	IC	UR	T
	2	Gloucester	N	N	T
	3	"	N	N	T
	4	"	N	UR	T
	5	"	N	UR	
	6	"	N	N	T
	7	Carmarthen	N	N	T
	8	"	N	N	
	9	"	N	UR	
	10	"	N	UR	
	11	"	N	N	
	12	"	N	N	
	13	"	N	UR	T
	14	Huntingdon	N	IC	T
	15	"	N	IC	T
	16	"	N	IC	T
	17	Maidstone	N	UR	T
	18	"	N	UR	T
	19	Chelmsford	N	N	
	20	"	N	N	
	21	"	N	UR	
	22	Newcastle	N	N	
	23	Worcester	N	IC	
	24	"	N	IC	
	25	"	N	IC	T
	26	"	N	IC	T
	27	Preston	N	UR	
	28	"	N	UR	T
	29	"	N	UR	T
	30	"	N	UR	
	31	Gloucester	N	N	
	32	"	N	N	
	33	"	N	N	
	34	Galashiels	N	UR	
	35	"	N	UR	
	36	"	N	N	
	37	"	N	N	T
	38	"	N	UR	T
	39	"	N	UR	
	40	"	N	UR	T
	41	"	N	UR	
	42	Huntingdon	NR	UR	
	43	"	NR	UR	T
	44	"	NR	N	
	45	"	NR	NR	
	46	"	NR	NR	
	47	"	NR	NR	
FEBRUARY	48	Worcester	NR	N	
	49	Lincoln	N	IC	
	50	Caernarfon	IC	UR	T
	51	"	IC	UR	T
	52	"	N	N	
	53	"	N	N	
	54	"	N	N	
	55	"	N	IC	
	56	Exeter	N	UR	

MONTH	HSE REF 91/-	AHO	SAFs	HISTOLOGY	
FEBRUARY (Contd.)	57	Exeter	N	N	
	58	"	N	UR	
	59	"	N	IC	
	60	"	N	IC	
	61	Leicester	N	N	
	62	Exeter	N	UR	T
	63	Leicester	N	N	
	64	"	N	N	
	65	Inverness	N	N	T
	66	"	N	N	T
	67	"	N	UR	
	68	"	N	UR	T
	69	Stafford	N	N	T
	70	Winchester	NR	N	
	71	"	NR	N	
	72	"	NR	N	
	73	"	NR	UR	
	74	"	NR	UR	
	75	"	NR	N	Hydrocephalus
	76	Northallerton	N	UR	
	77	Carmarthen	N	N	
	78	"	N	N	
	79	"	N	IC	
	80	"	N	N	
	81	"	N	N	
	82	Preston	IC	N	T
	83	"	N	N	
	84	"	N	N	T
	85	"	N	UR	
	86	Northallerton	N	UR	T
	87	"	N	UR	
	88	"	N	UR	
	89	"	N	UR	T
MARCH	90	Preston	N	N	T
	91	Winchester	N	UR	
	92	"	N	N	
	93	Trowbridge	N	N	T
	94	"	N	N	
	95	"	N	UR *	
	96	"	N	N	T
	97	Carmarthen	N	UR	T
	98	"	N	UR	T
	99	"	N	IC	
	100	"	N	UR	
	101	"	N	UR *	T
	102	"	N	UR *	
	103	"	N	UR	
	104	Stafford	N	N	
	105	"	N	N	
	106	Crewe	N	UR	
	107	"	N	UR	T
	108	"	N	UR	T
	109	"	N	UR	
	110	"	N	N	
	111	"	N	N	T
	112	Cardiff	N	N	
	113	"	N	N	

MONTH	HSE REF 91/-	AHO	SAFs	HISTOLOGY	
MARCH (Contd.)	114	Cardiff	N	N	
	115	"	N	N	
	116	Exeter	NR	N	T
	117	"	NR	UR	
	118	Northallerton	N	IC	
	119	"	N	N	
	120	"	N	N	
	121	Oxford	N	UR	*
	122	"	N	N	
	123	"	N	N	T
	124	"	N	N	
	125	"	N	N	
	126	"	N	N	
	127	"	N	N	
	128	"	N	N	
	129	"	N	N	
	130	Norwich	N	IC	
	131	"	N	IC	
	132	"	N	N	
	133	"	N	N	
	134	"	N	N	
	135	Perth	N	N	T
	136	"	N	UR	
	137	"	N	UR	
	138	"	N	N	
	139	"	N	IC	
	140	"	N	UR	
	141	"	N	UR	T
	142	"	N	IC	
	143	"	N	UR	
	144	Winchester	N	N	T
	145	"	N	N	
	146	"	N	N	T
	147	Dumfries	N	IC	
	148	"	N	IC	
	149	"	N	IC	
	150	"	N	IC	
	151	"	N	IC	
	152	"	N	IC	
	153	Newcastle	N	N	T
APRIL	154	Winchester	N	UR	T
	155	"	N	UR	
	156	Leeds	N	UR	
	157	"	N	N	
	158	"	N	N	
	159	"	N	UR	T
	160	"	N	N	
	161	"	N	N	T
	162	Trowbridge	N	UR	T
	163	"	N	N	
	164	"	N	N	T
	165	"	N	N	T
	166	"	N	UR	
	167	"	N	N	T
	168	"	N	N	
	169	"	N	N	T
	170	"	N	N	
	171	"	N	UR	

MONTH	HSE REF 91/-	AHO	SAFs	HISTOLOGY	
APRIL (Contd.)	172	Truro	N	N	
	173	Caernarfon	N	N	T
	174	"	N	N	
	175	"	N	N	T
	176	"	N	N	
	177	Leicester	N	IC	
	178	"	N	N	
	179	Oxford	N	N	
	180	"	N	N	
	181	"	N	N	
	182	Huntingdon	N	N	T
	183	"	N	N	
	184	"	N	UR	T
	185	Carlisle	N	N	T
	186	"	N	N	
	187	"	N	N	
	188	"	N	N	T
	189	Winchester	N	N	
	190	"	N	IC	
	191	"	N	N	T
	192	"	N	UR	T
	193	"	N	N	
	194	"	N	N	T
	195	"	N	UR	T
	196	Trowbridge	N	N	
	197	"	N	N	T
	198	"	N	N	
	199	"	N	N	T
	200	"	N	UR	T
	201	"	N	N	T
MAY	202	"	IC	IC	WM OEDEMA
	203	Carlisle	IC	UR	
	204	Guildford	N	N	
	205	"	N	N	
	206	"	N	UR	Hydrocephalus
	207	Norwich	N	N	T
	208	"	N	N	
	209	Carmarthen	N	N	T
	210	"	N	N	
	211	Taunton	NR	N	
	212	"	NR	UR	
	213	"	NR	N	
	214	"	NR	N	
	215	"	NR	N	
	216	Exeter	N	N	
	217	"	N	N	
	218	Northallerton	N	UR	T
	219	"	N	N	T
	220	Exeter	N	UR	T
	221	"	N	UR	T
	222	"	N	N	
	223	"	N	UR	Encephalitis
	224	"	N	UR	
	225	"	N	N	Enceph.
	226	"	N	UR	
	227	"	N	IC	

MONTH	HSE REF 91/-	AHO	SAFs	HISTOLOGY	
MAY (Contd.)	228	Exeter	N	N	
	229	Taunton	IC	IC	
	230	"	N	N	T
	231	"	N	N	
	232	"	N	N	Encepha-litis
	233	"	N	N	
	234	"	N	N	
	235	"	N	IC	
	236	"	N	UR	
	237	"	N	UR	
	238	Truro	N	N	
	239	"	N	N	
	240	"	N	N	T
	241	"	N	N	
	242	Leeds	N	IC	T
	243	Nottingham	N	N	
	244	"	N	UR	
	245	Worcester	N	UR	
	246	"	N	N	Lafora
	247	"	N	N	Lafora
	248	"	N	N	
	249	"	N	N	Lafora
JUNE	250	Truro	N	UR	
	251	"	N	UR	
	252	"	N	UR	
	253	"	N	UR	
	254	"	N	UR	
	255	"	N	UR	
	256	"	N	UR	
	257	"	N	UR	
	258	Taunton	N	UR	
	259	"	N	N	
	260	"	N	N	
	261	"	N	N	
	262	"	N	UR	
	263	"	N	N	
	264	"	N	N	
	265	"	N	UR	
	266	"	N	UR	
	267	"	N	UR	
	268	"	N	N	
	269	"	N	N	
	270	"	N	UR	
	271	"	N	N	
	272	"	N	UR	
	273	"	N	N	
	274	"	IC	UR	*
	275	"	N	UR	*
	276	"	N	UR	*
	277	"	N	UR	
	278	"	N	UR	
	279	"	N	N	
	280	Northallerton	N	N	T
	281	"	N	UR	
	282	Carmarthen	N	N	
	283	"	N	UR	

MONTH	HSE REF	91/-	AHO	SAFs	HISTOLOGY	
JUNE (Contd.)		285	Carmarthen	N	N	
		286	"	N	UR	
		287	"	N	UR	
		288	"	N	N	
		289	Norwich	N	N	
		290	"	N	N	
		291	"	N	UR	T
		292	"	N	N	
		293	"	N	IC	
		294	Exeter	N	UR	T
		295	Truro	N	UR	
		296	Inverness	NR	UR	
		297	"	NR	UR	
		298	Worcester	N	UR	
		299	"	N	UR	
JULY		300	Preston	N	UR	
		301	"	N	IC	
		302	"	N	N	
		303	"	N	N	T
		304	"	N	UR	
		305	"	N	UR	
		306	"	N	N	
		307	"	N	UR	T
		308	Winchester	N	N	
		309	"	N	IC	
		310	"	N	N	
		311	Cardiff	N	UR	
		312	"	N	UR	
		313	"	N	N	
		314	"	N	N	
		315	"	N	N	
		316	Huntingdon	N	UR	T
		317	"	N	UR	T
		318	"	N	UR	
		319	"	N	UR	
		320	Winchester	N	N	
		321	"	N	IC	
		322	"	N	IC	
		323	"	N	N	
		324	"	N	N	
		325	"	N	IC	
		326	"	N	IC	
		327	"	N	N	
		328	Exeter	N	N	Encephalitis
		329	"	N	N T	Encephalitis
		330	Winchester	N	N	
		331	"	N	N	
		332	"	N	N	T
		333	"	N	N	
		334	Carmarthen	N	N	
		335	"	N	N	
		336	"	N	N	
		337	"	N	N	
		338	"	N	N	
		339	"	N	N	
		340	"	N	N	

MONTH	HSE REF 91/-	AHO	SAFs	HISTOLOGY	
JULY (Contd.)	342	Carmarthen	N	UR	T
	343	"	N	UR	
	344	"	N	UR	T
	345	Newcastle	N	N	
	346	"	N	UR	
	347	Carmarthen	N	N	T
	348	"	N	N	
	349	"	N	N	
AUGUST	350	Trowbridge	N	UR	T
	351	"	N	UR	
	352	"	N	N	
	353	Newcastle	N	UR	

APPENDIX 11

REF NO.	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
BEVERLEY AHO						
91/118	Hunsley Beacon Beagles	4	Thirsk	3/91	IC	NEG
119	" " "	4	"	"	NEG	NEG
120	" " "	4	"	"	NEG	NEG

DIETS

Hunsley Beacon Beagles - Fallen stock (flesh/offal)
Biscuit

TOTAL SUBMISSIONS: 3

REF NOS.	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
CAERNARFON AHO						
91/1	Pen Yr Arfa Nebo (Hughes)	12	Bangor	1/91	IC	UNR
91/50	Treriffi Hounds	9	"	2/91	IC	UNR
51	" "	9	"	"	IC	UNR
52	" "	2	"	"	NEG	NEG
53	" "	7	"	"	NEG	NEG
54	" "	2	"	"	NEG	NEG
55	" "	8	"	"	NEG	IC
91/173	Anglesey Foxhounds	7	"	4/91	NEG	NEG
174	" "	3	"	"	NEG	NEG
175	" "	11	"	"	NEG	NEG
176	" "	9	"	"	NEG	NEG

DIETS

Anglesey Foxhounds - Flesh, offal, but not head/brain - 9 months.
Meal - 3 months.

Pen Yr Arfa Nebo (Hughes) - Beef, maize.
Treriffi Hounds - Meat, meal.

TOTAL SUBMISSIONS: 11

REF NOS.	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
CARMARTHEN AHO						
90/11	Emlyn Beagles	2	Carmarthen	11/90	NEG	UNR
63	Prembrokeshire Hunt	3	"	"	NEG	UNR
64	" "	7	"	"	NEG	NEG
91/7	Llanybri & St. Clears Hunt	5		1/91	NEG	NEG
8	" " "	4	"	"	NEG	NEG
9	" " "	5	"	"	NEG	UNR
10	" " "	6	"	"	NEG	UNR
11	" " "	7	"	"	NEG	NEG
12	" " "	7	"	"	NEG	NEG
13	" " "	9	"	"	NEG	UNR
77	Llangeitho Hunt (Dix)	4	Aberystwyth	2/91	NEG	NEG
78	" "	8	"	"	NEG	NEG
79	" "	8	"	"	NEG	IC
80	" "	8	"	"	NEG	NEG
81	" "	6	"	"	NEG	NEG
97	Pembrokeshire Hunt	6	Carmarthen	3/91	NEG	UNR
98	" "	7	"	"	NEG	UNR
99	" "	8	"	"	NEG	IC
100	" "	5	"	"	NEG	UNR
101	" "	2	"	"	NEG	UNR
102	" "	2	"	"	NEG	UNR
103	" "	7	"	"	NEG	UNR
209	Llangeitho Hunt (Cotswold)	9	Aberystwyth	5/91	NEG	NEG
210	" " "	9	"	"	NEG	NEG
282	Teifiside (Tivyside) Hunt	7	Carmarthen	6/91	NEG	NEG
283	" " "	5	"	"	NEG	UNR
284	" " "	3	"	"	NEG	NEG
285	" " "	3	"	"	NEG	NEG
286	" " "	2	"	"	NEG	UNR
287	" " "	4	"	"	NEG	UNR
288	" " "	2	"	"	NEG	NEG
334	" " "	3	"	7/91	NEG	NEG
335	" " "	2	"	"	NEG	NEG
336	" " "	3	"	"	NEG	NEG
337	" " "	3	"	"	NEG	NEG
338	" " "	2	"	"	NEG	NEG
339	" " "	3	"	"	NEG	NEG
340	" " "	3	"	"	NEG	NEG
341	" " "	3	"	"	NEG	NEG
342	Langeitho Hunt (Dix)	17	Aberystwyth	"	NEG	UNR
343	" "	10	"	"	NEG	UNR
344	" "	10	"	"	NEG	UNR
347	Teifiside (Tivyside) Hunt	3	Carmarthen	"	NEG	NEG
348	" " "	NS		"	NEG	NEG
349	" " "	3	"	"	NEG	NEG

CARMARTHEN AHO Contd.....

DIETS

Emlyn Beagles - Animal Carcases
Llangeitho Hunt - Raw and cooked horses, cattle (sheep before 1988)
Offal
Some proprietary meal
Llanybri & St. Clears Hunt - Carcases (sheep, calves)
Waste food ex Chinese Restaurant
Pembrokeshire Hunt - Flesh/bone from fallen stock (no offal/heads)
Teifiside (Tivyside) Hunt - Raw meat (sheep, cattle), offal.

TOTAL SUBMISSIONS: 45

REF NOS.	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
CARDIFF AHO						
90/27	Llangeinor Hunt Kennels	7	Carmarthen	11/90	NEG	NEG
28	" " "	7	"	"	NEG	UNR
29	" " "	7	"	"	NEG	UNR
91/112	" " "	4	"	3/91	NEG	NEG
113	" " "	8	"	"	NEG	NEG
114	" " "	8	"	"	NEG	NEG
115	" " "	5	"	"	NEG	NEG
311	Banwen Miners Hunt	6	"	7/91	NEG	UNR
312	" " "	11	"	"	NEG	UNR
313	" " "	5	"	"	NEG	NEG
314	" " "	3	"	"	NEG	NEG
315	" " "	2	"	"	NEG	NEG

DIETS

Banwen Miners Hunt - Flesh ex fallen stock.
Llangeinor Hunt Kennels - Raw flesh.

TOTAL SUBMISSIONS : 12

REF NOS.	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
CARLISLE AHO						
91/185	Bewcastle Kennels	11	Penrith	4/91	NEG	NEG
186	" "	7	"	"	NEG	NEG
187	" "	9	"	"	NEG	NEG
188	" "	9	"	"	NEG	NEG
203	Ullswater Foxhounds	12	"	5/91	IC	UNR

DIETS

Bewcastle Kennels - Butcher's offal.
Ullswater Foxhounds - Raw meat, cooked meat. Meal.

TOTAL SUBMISSIONS : 5

REF NOS.	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
CHELMSFORD AHO						
90/16	East Hertfordshire Puckeridge Hunt	6	Cambridge	11/90	NEG	INC
38	" "	AGED	"	"	NEG	UNR
39	" "	AGED	"	"	NEG	NEG
91/19	Newmarket Beagles	3	"	1/91	NEG	NEG
20	" "	4	"	"	NEG	NEG
21	" "	3	"	"	NEG	UNR

DIETS

East Hertfordshire Puckeridge Hunt - Tripe/cow viscera.
Newmarket Beagles - Raw meat ex butcher's off cuts.
Occasional meat ex farm (calves, sheep).
"Valumix."

TOTAL SUBMISSIONS: 6

REF NOS.	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
CREWE AHO						
90/54	Forest & District Beagles	3	Shrewsbury	11/90	NR	NEG
55	" " "	3	"	"	NR	NEG
56	" " "	5	"	"	NR	NEG
57	" " "	5	"	"	NR	NEG
58	" " "	6	"	"	NR	NEG
91/106	North Staffordshire Moorland	/*11	"	3/91	NEG	UNR
107	" " "	/ *10	"	"	NEG	UNR
108	" " "	/ **9	"	"	NEG	UNR
109	" " "	7	"	"	NEG	UNR
110	" " "	/***12	"	"	NEG	NEG
111	" " "	/*/***10	"	"	NEG	NEG

* Previously at Cheshire Forest
** " " Brocklesby Park
*** " " High Peak

DIETS

Cheshire Forest - Meat (more adult cattle).

Forest and District - Raw meat (sheep, cattle, mainly calves) 90%
Cereal 10%.

North Staffordshire Moorlands - Meat (calves, sheep, occasional cow) 80%.
Protein mix 20%.

TOTAL SUBMISSIONS: 11

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
DORCHESTER AHO						
90/1	Cattistock Hunt Kennels	4	Bristol	10/90	NEG	NEG
2	" " "	5	"	"	NEG	NEG
3	" " "	5	"	"	NEG	NEG
60	South Dorset Hunt Kennels	6	"	"	NEG	UNR
61	" " " "	5	"	"	NEG	UNR

DIETS

Cattistock Hunt Kennels - Raw meat, liver, heart.
Maize.

South Dorest Hunt Kennels - Cooked/raw meat ex fallen stock.

TOTAL SUBMISSIONS: 5

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
EXETER AHO						
90/19	Taw Vale Beagles	8	Starcross	11/90	IC	UNR
20	" " "	8	"	"	IC	UNR
51	Dulverton East Foxhounds	6	"	11/90	NR	IC
52	" " "	6	"	"	NR	IC
53	" " "	6	"	"	NR	IC
90	Cotley Harriers	10	"	12/90	NR	IC
91	" "	9	"	"	NEG	UNR
91/56	Spooners & West Dartmoor	2	Starcross	2/91	NEG	UNR
57	" " "	3	"	"	NEG	NEG
58	" " "	3	"	"	NEG	UNR
59	" " "	3	"	"	NEG	IC
60	" " "	8	"	"	NEG	IC
62	" " "	9	"	"	NEG	UNR
116	North Devon Beagles	9	"	3/91	NR	NEG
117	" " "	6	"	"	NR	UNR
216	South Tetcott Kennels	5	"	5/91	NEG	NEG
217	" " "	5	"	"	NEG	NEG
91/220	Dulverton East Foxhounds	6	"	"	NEG	UNR
221	" " "	2	"	"	NEG	UNR
222	" " "	3	"	"	NEG	NEG
223	" " "	6	"	"	NEG	UNR
224	" " "	7	"	"	NEG	UNR
225	" " "	8	"	"	NEG	NEG
226	" " "	4	"	"	NEG	UNR
227	" " "	1	"	"	NEG	IC
228	" " "	7	"	"	NEG	NEG
294	Holcombe Rogus Beagles	9	"	6/91	NEG	UNR
328	Dulverton East Foxhounds	1	"	7/91	NEG	NEG
329	" " "	1	"	"	NEG	NEG

ETS

Cotley Harriers - Flesh ex fallen stock, cereal.
Dulverton East Foxhounds - Raw meat, tripe.
Holcombe Rogus Beagles - Flesh (sheep, calves, occasional cow).
Paunch (calves), liver lights.
North Devon Beagles - Raw flesh (no offal).
Occasional cooked meat.
Biscuit once daily.
South Tetcott Kennels - Raw fallen stock.
Spooners & West Dartmoor - Raw flesh (no offal).
Taw Vale - Tripe and bibles.
Calves/sheep from one local farm.

TOTAL SUBMISSIONS : 29

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
GLOUCESTER AHO						
90/4	Cotswold Hunt Kennels	5	Worcester	10/90	NEG	NEG
18	" " "	9	"	11/90	IC	UNR
22	" " "	1	"	"	NEG	NEG
23	" " "	4	"	"	NEG	NEG
91/2	" " "	6	"	1/91	NEG	NEG
3	" " "	6	"	"	NEG	NEG
4	" " "	4	"	"	NEG	UNR
5	" " "	7	"	"	NEG	UNR
6	" " "	3	"	"	NEG	NEG
31	Beaufort Hunt Kennels	4	Bristol	"	NEG	NEG
32	" " "	3	"	"	NEG	NEG
33	" " "	4	"	"	NEG	NEG

DIETS

Beaufort Hunt - Cooked meat twice weekly.
Raw meat.
Wheat, maize.

Cotswold Hunt - Fallen stock (cattle, sheep, horses) half raw/half boiled.
Oatmeal/biscuits.

TOTAL SUBMISSIONS: 12

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
GUILDFORD AHO						
91/204	Surrey & North Sussex Beagles	8	Winchester	5/91	NEG	NEG
205	" " " "	8	"	"	NEG	NEG
206	" " " "	8	"	"	NEG	UNR

DIETS

Surrey and North Sussex Beagles - Whole carcases (cattle, sheep).

TOTAL SUBMISSIONS: 3

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
HUNTINGDON AHO						
90/8	Pytchley Hunt Kennels	8	Cambridge	11/90	IC	NEG
12	Trinity Foot Beagles	2	"	"	NEG	NEG
13	" " "	4	"	"	NEG	NEG
14	" " "	4	"	"	NEG	NEG
21	Caxton Hunt Kennels	2	"	"	NEG	NEG
62	Horningsea Hunt Kennels	7	"	12/90	NR	NEG
91/14	Oakley Kennels	3	"	1/91	NEG	IC
15	" "	6	"	"	NEG	IC
16	" "	3	"	"	NEG	IC
42	Fitzwilliam Hunt Kennels	8	"	"	NR	UNR
43	" " "	7	"	"	NR	UNR
44	" " "	6	"	"	NR	NEG
45	" " "	8	"	"	NR	NR
46	" " "	2	"	"	NR	NR
47	" " "	7	"	"	NR	NR
182	Pytchley Hunt Kennels	7	"	4/91	NEG	NEG
183	" " "	7	"	"	NEG	NEG
184	Fitzwilliam Hunt Kennels	9	"	"	NEG	UNR
316	Trinity Foot Beagles	11	"	7/91	NEG	UNR
317	" " "	10	"	"	NEG	UNR
318	" " "	11	"	"	NEG	UNR
319	" " "	10	"	"	NEG	UNR

DIETS

Caxton Hunt - Raw meat.
Fitzwilliam Hunt Kennels - Offal, flesh from farms.
Horningsea Hunt - Raw flesh (cattle, horse, sheep).
Oatmeal.
Oakley Hunt Kennels - Offal.
Pytchley Hunt Kennels - Flesh
Weetabix.
Trinity Foot Beagles - Dead farm stock - few carcases, offal. -
Waste pub food.

TOTAL SUBMISSIONS: 22

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
LEEDS AHO						
90/33	Ecclesfield Kennels	6	Thirsk	11/90	NEG	NEG
34	" "	6	"	"	NEG	NEG
91/156	" "	8	"	4/91	NEG	UNR
157	" "	8	"	"	NEG	NEG
158	" "	8	"	"	NEG	NEG
159	" "	11	"	"	NEG	UNR
160	" "	7	"	"	NEG	NEG
161	" "	6	"	"	NEG	NEG
242	Barlow Hunt Kennels	4	Sutton Bonington	5/91	NEG	IC

DIETS

Barlow Hunt Kennels - Raw meat.
Ecclesfield Kennels - Raw meat (cattle, sheep, pig), no head, guts, offal.
Dry feed from 12/90.

TOTAL SUBMISSIONS: 9

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
LEICESTER AHO						
90/68	Westerby Bassets	2	Sutton Bonington	12/90	NEG	NEG
69	" "	2	" "	"	NEG	NEG
70	" "	7	" "	"	NEG	NEG
91 61	Fernie Hunt	5	" "	2/91	NEG	NEG
63	" "	4	" "	"	NEG	NEG
64	" "	3	" "	"	NEG	NEG
177	Quorn Hunt	2	" "	4/91	NEG	IC
178	" "	3	" "	"	NEG	NEG

DIETS

Fernie Hunt - Meat, bones ex fallen stock.
Quorn Hunt - Raw/ cooked meat.
Westerby Bassets - Raw meat, bones.

TOTAL SUBMISSIONS: 8

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
LINCOLN AHO						
90/40	Brocklesby Park Hunt Kennels	6	Lincoln	11/90	NEG	NEG
41	" " " "	6	"	"	NEG	NEG
42	" " " "	6	"	"	NEG	NEG
91/49	East Lincs Harehounds	6	"	2/91	NEG	IC

DIETS

Brocklesby Hunt Kennels - Fallen stock (calves, sheep).
East Lincs Harehounds - Cooked meat, offal.

TOTAL SUBMISSIONS: 4

SF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
LLANDRINDOD WELLS AHO						
90/84	Brecon Farmers Hunt Kennels	2	Carmarthen	12/90	NEG	NEG
85	" " " "	7	"	"	NEG	NEG
86	" " " "	6	"	"	NEG	NEG

DIETS

Brecon Farmers Hunt Kennels - Meat, carcases.

TOTAL SUBMISSIONS: 3

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
MAIDSTONE AHO						
90/59	Pevensey Marsh Beagles	2	Wye	11/90	NR	NEG
71	" " "	2	"	12/90	NEG	NEG
72	" " "	6	"	"	NEG	NEG
91/17	East Kent Hunt Kennels	7	"	1/91	NEG	UNR
18	" " " "	5	"	"	NEG	UNR

DIETS

East Kent Hunt Kennels - Raw flesh, offal.
Pevensey Marsh Beagles - Raw meat, carcases ex slaughter stock (calves, sheep)
Raw bibles ex slaughterhouse.

TOTAL SUBMISSIONS: 5

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
NEWCASTLE AHO						
90/15	College Valley Hunt Kennels	8	Newcastle	11/90	IC	UNR
17	Tynedale Hunt Kennels	5	"	"	NEG	NEG
24	Newcastle & District Beagles	8	"	"	IC	NEG
25	" " "	8	"	"	NEG	UNR
26	" " "	2	"	"	NEG	NEG
91/22	Border Hunt Kennels	3	"	1/91	NEG	NEG
153	West Percy Hunt Kennels	3	"	3/91	NEG	NEG
345	Milvain Hunt Kennels	5	"	7/91	NEG	NEG
346	" " "	6	"	"	NEG	UNR
353	Percy Hunt Kennels	10	"	8/91	NEG	UNR

DIETS

Border Hunt Kennels - Raw/cooked knacker meat.
Cereal.
College Valley Hunt Kennels - Cooked meat ex fallen stock
Small amount raw meat
Meal.
Milvain Hunt Kennels - cooked meat ex fallen stock.
Meal.
Percy Hunt Kennels - Raw meat ex fallen livestock (no offal).
Newastle & District Beagles - Raw flesh.
Tynedale Hunt Kennels - Raw flesh.
West Percy Hunt Kennels - Raw meat ex fallen stock (no offal).
Meal.

TOTAL SUBMISSIONS: 10

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
NORTHALLERTON AHO						
90/30	Claro Beagles	9	Thirsk	11/90	NEG	UNR
31	" "	9	"	"	NEG	IC
88	York & Ainsty Hunt Kennels	2	"	12/90	NEG	NEG
91/76	Saltersgate Farmers Hunt Kennels	5	"	2/91	NEG	UNR
86	Bedale Hunt Kennels	4	"	"	NEG	UNR
87	" " "	4	"	"	NEG	UNR
88	Claro Beagles	10	"	"	NEG	UNR
89	" "	7	"	"	NEG	UNR
218	Goathland Hunt Kennels	9	"	5/91	NEG	UNR
219	" " " / *	9	"	"	NEG	NEG
280	Staintondale Hunt Kennels	3	"	6/91	NEG	NEG
281	" " "	8	"	"	NEG	UNR

* Previously at Glaisdale Hunt Kennels.

DIETS

Bedale Hunt Kennels - Cooked meat (Sheep, calves, cows).
Claro Beagles - Boiled swill including fallen stock (calves, sheep)
Complete dog food "Woofles."
Goathland Hunt Kennels - Raw fallen stock.
Saltersgate Farmers Hunt Kennels - fish shop scraps.
Fish innards from trout farm.
Staintondale Hunt Kennels - Raw fallen stock.
York & Ainsty Hunt Kennels - Cooked meat, offal.

TOTAL SUBMISSIONS: 12

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
NORWICH AHO						
91/130	Norfolk Beagles	3	Norwich	3/91	NEG	IC
131	" "	3	"	"	NEG	IC
132	" "	3	"	"	NEG	NEG
133	" "	3	"	"	NEG	NEG
134	" "	3	"	"	NEG	NEG
207	West Norfolk Hunt Kennels	5	"	5/91	NEG	NEG
208	" " " "	4	"	"	NEG	NEG
289	Norfolk Beagles	4	"	6/91	NEG	NEG
290	" "	4	"	"	NEG	NEG
291	" "	8	"	"	NEG	UNR
292	" "	3	"	"	NEG	NEG
293	" "	3	"	"	NEG	IC

DIETS

Norfolk Beagles - Omasum only.
West Norfolk Hunt Kennels - Raw meat (sheep, calves, cow, horse). Tripe, hearts.

TOTAL SUBMISSIONS: 12

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
NOTTINGHAM AHO						
90/89	Grove and Rufford	5	Sutton Bonington	12/90	NEG	NEG
91/243	Meynell Hunt Kennels	6	" "	5/91	NEG	NEG
244	" " "	3	" "	"	NEG	UNR

DIETS

Grove and Rufford - Knackery material.
Meynell Hunt - Raw flesh
Biscuits/meal.

TOTAL SUBMISSIONS: 3

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
OXFORD AHO						
90/35	Old Berkshire Hunt Kennels	8	Reading	11/90	NEG	NEG
36	" " " "	8	"	"	NEG	NEG
37	" " " "	8	"	"	NEG	UNR
91/121	Eton College Beagles	10	"	3/91	NEG	UNR
122	" " "	9	"	"	NEG	NEG
123	" " "	8	"	"	NEG	NEG
124	" " "	8	"	"	NEG	NEG
125	" " "	7	"	"	NEG	NEG
126	" " "	5	"	"	NEG	NEG
127	" " "	5	"	"	NEG	NEG
128	" " "	3	"	"	NEG	NEG
129	" " "	2	"	"	NEG	NEG
179	Faringdon Hunt Kennels	6	"	4/91	NEG	NEG
180	" " "	4	"	"	NEG	NEG
181	" " "	7	"	"	NEG	NEG

DIETS

Eton College Beagles - Flesh
Faringdon Hunt Kennels - Cooked/raw meat - no offal.
Biscuits.

Old Berkshire Hunt Kennels - Knackery flesh.
Dog biscuits, vit/mineral supplement.

TOTAL SUBMISSIONS: 15

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
PRESTON AHO						
91/27	Vale of Lune Harriers	8	Preston	1/91	NEG	UNR
28	" " "	8	"	"	NEG	UNR
29	" " "	8	"	"	NEG	UNR
30	" " "	8	"	"	NEG	UNR
82	" " "	9	"	2/91	IC	NEG
83	" " "	9	"	"	NEG	NEG
84	" " "	1	"	"	NEG	NEG
85	" " "	9	"	"	NEG	UNR
90	Holcombe Hunt Kennels	7	"	3/91	NEG	NEG
300	Pendle Forest & Craven	2	"	7/91	NEG	UNR
301	" " "	2	"	"	NEG	IC
302	" " "	2	"	"	NEG	NEG
303	" " "	4	"	"	NEG	NEG
304	" " "	1	"	"	NEG	UNR
305	" " "	1	"	"	NEG	UNR
306	" " "	1	"	"	NEG	NEG
307	" " "	7	"	"	NEG	UNR

DIETS

Holcombe Hunt Kennels - Raw knacker meat (beef).
Pendle Forest & Craven - Raw flesh (sheep, calves, occasional cow).
Vale of Lune Harriers - Raw flesh ex fallen stock (cattle).

TOTAL SUBMISSIONS: 17

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
STAFFORD AHO						
91/69	(Elliot) North Staffordshire Moorlands/	*8	Shrewsbury	2/91	NEG	NEG
104	" " "	3	"	3/91	NEG	NEG
105	" " "	3	"	"	NEG	NEG

*Previously at Cheshire Beagles

DIETS

North Staffordshire Moorlands - Flesh.
Proprietary dog food (Vitalin).

TOTAL SUBMISSIONS: 3

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
TAUNTON AHO						
90/45	Ilminster Beagles	9	Bristol	11/90	IC	UNR
46	" "	9	"	"	IC	UNR
47	" "	9	"	"	IC	UNR
48	" "	4	"	"	NEG	NEG
49	" "	5	"	"	NEG	NEG
50	" "	4	"	"	NEG	NEG
74	West Somerset Foxhounds	8	"	"	IC	UNR
75	" " "	7	"	"	NEG	UNR
76	" " "	7	"	"	NEG	UNR
77	" " "	7	"	"	NEG	UNR
78	" " "	7	"	"	NEG	UNR
79	" " "	8	"	"	NEG	IC
91/211	" " "	7	"	5/91	NEG	NEG
212	" " "	5	"	"	NR	UNR
213	" " "	1	"	"	NR	NEG
214	" " "	5	"	"	NR	NEG
215	" " "	5	"	"	NEG	NEG
229	Weston & Banwell Harriers	7	"	"	IC	IC
230	" " "	7	"	"	NR	NEG
231	" " "	6	"	"	NEG	NEG
232	" " "	6	"	"	NEG	NEG
233	" " "	8	"	"	NEG	NEG
234	" " "	6	"	"	NEG	NEG
235	" " "	6	"	"	NEG	IC
236	" " "	6	"	"	NEG	UNR
237	" " "	7	"	"	NEG	UNR
258	Taunton Vale Foxhounds	2	"	6/91	NEG	UNR
259	" " "	3	"	"	NEG	NEG
260	" " "	3	"	"	NEG	NEG
261	" " "	4	"	"	NEG	NEG
262	" " "	3	"	"	NEG	UNR
263	" " "	2	"	"	NEG	NEG
264	" " "	3	"	"	NEG	NEG
265	" " "	3	"	"	NEG	UNR
266	Beacon Beagles	NS	"	"	NEG	UNR
267	" "	NS	"	"	NEG	UNR
268	" "	NS	"	"	NEG	NEG
269	" "	NS	"	"	NEG	NEG
270	" "	NS	"	"	NEG	UNR
271	" "	NS	"	"	NEG	NEG
272	" "	NS	"	"	NEG	UNR
273	" "	NS	"	"	NEG	NEG
274	(Roffe) Silvester Foxhounds	10	"	"	IC	UNR
275	Taunton Vale Harriers	8	"	"	NEG	UNR
276	(Roffe) Silvester Foxhounds	9	"	"	NEG	UNR
277	Taunton Vale Harriers	7	"	"	NEG	UNR
278	(Roffe) Silvester Foxhounds	3	"	"	NEG	UNR
279	" " "	3	"	"	NEG	NEG

DIETS

Beacon Beagles - Raw meat on bone (no offal).
Ilminster Beagles - Raw flesh (cattle, sheep).

TAUNTON AHO Contd...

(Roffe) Silvester Foxhounds - Raw meat on bone (no offal).
Taunton Vale - Raw meat on bone (no offal).
West Somerset Foxhounds - Raw flesh, liver, spleen, heart (no offal).

Weston & Barnwell Harriers - Meat, bone, bibles (calves, sheep).

TOTAL SUBMISSIONS: 48

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
TROWBRIDGE AHO						
90/5	Wilton Hunt Kennels	8	Bristol	10/90	NEG	NEG
67	Marlborough College Beagles	7	"	12/90	NEG	UNR
91/93	" " "	7	"	3/91	NEG	NEG
94	" " "	7	"	"	NEG	NEG
95	" " "	8	"	"	NEG	UNR
96	" " "	8	"	"	NEG	NEG
162	Tedworth Hunt Kennels	5	"	4/91	NEG	UNR
163	" " "	5	"	"	NEG	NEG
164	" " "	5	"	"	NEG	NEG
165	" " "	5	"	"	NEG	NEG
166	" " "	5	"	"	NEG	UNR
167	" " "	5	"	"	NEG	NEG
168	" " "	5	"	"	NEG	NEG
169	" " "	5	"	"	NEG	NEG
170	" " "	5	"	"	NEG	NEG
171	" " "	5	"	"	NEG	UNR
196	Warminster & Infantry Beagles	2	"	4/91	NEG	NEG
197	" " "	4	"	"	NEG	NEG
198	" " "	2	"	"	NEG	NEG
199	" " "	9	"	"	NEG	NEG
200	" " "	5	"	"	NEG	UNR
201	" " "	8	"	"	NEG	NEG
202	Pimpernell Beagles	13	"	5/91	IC	IC
350	" "	10	"	8/91	NEG	UNR
351	" "	12	"	"	NEG	UNR
352	" "	11	"	"	NEG	NEG

DIETS

Marlborough College - Swill ex College, raw flesh.
Pimpernell Beagles - Knacker meat, frozen mince up to 1987.
Dried meat, maize/barley 1988-90.
Tedworth Hunt - Raw meat ex fallen stock.
Warminster & Infantry Beagles - Raw meat (calves, sheep).
Wilton Hunt Kennels - Raw meat (calves, cow, sheep) - no head/offal.

TOTAL SUBMISSIONS: 26

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
TRURO AHO						
90/65	Cury Hunt Kennels	9	Truro	12/90	NEG	UNR
66	" " "	7	"	"	NEG	NEG
80	Four Burrows Hunt Kennels	6	"	"	NEG	NEG
81	" " " "	3	"	"	NEG	NEG
82	" " " "	3	"	"	NEG	UNR
83	" " " "	8	"	"	IC	UNR
91/172	Tetcott Hunt Kennels	4	"	4/91	NEG	NEG
238	Western Hunt Kennels	9	"	5/91	NEG	NEG
239	" " "	4	"	"	NEG	NEG
240	St. Kew Beagles	9	"	"	NEG	NEG
241	" " "	4	"	"	NEG	NEG
250	Four Burrows Hunt Kennels	2	"	6/91	NEG	UNR
251	" " " "	2	"	"	NEG	UNR
252	" " " "	4	"	"	NEG	UNR
253	" " " "	7	"	"	NEG	UNR
254	" " " "	5	"	"	NEG	UNR
255	" " " "	7	"	"	NEG	UNR
256	" " " "	7	"	"	NEG	UNR
257	" " " "	3	"	"	NEG	UNR
295	Tetcott Hunt Kennels	2	"	"	NEG	UNR

DIETS

Cury Hunt Kennels - Flesh (calves, sheep, occasional cow) - not heads.
Biscuit.
Four Burrows Hunt Kennels - flesh.
St. Kew Beagles - Dog mince ex abattoir.
Biscuit.

Tetcott Hunt Kennels - Flesh ex fallen stock.
Meal.

Western Hunt Kennels - Raw meat, offal.

TOTAL SUBMISSIONS: 20

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
WINCHESTER AHO						
90/9	Hampshire Hunt Kennels	3	Winchester	11/90	NEG	NEG
10	" " "	4	"	"	NEG	NEG
91/70	" " "	7	"	2/91	NR	NEG
71	" " "	8	"	"	NR	NEG
72	" " "	7	"	"	NR	NEG
73	" " "	6	"	"	NR	UNR
74	" " "	6	"	"	NR	UNR
75	" " "	5	"	"	NR	NEG
91/91	Vine & Craven Hunt Kennels	7	"	3/91	NEG	UNR
92	" " " "	7	"	"	NEG	NEG
144	" " " "	6	"	"	NEG	NEG
145	" " " "	7	"	"	NEG	NEG
146	" " " "	8	"	"	NEG	NEG
154	New Forest Foxhound Kennels	7	"	4/91	NEG	UNR
155	" " " "	7	"	"	NEG	UNR
189	New Forest Buckhounds	8	"	"	NEG	NEG
190	" " "	2	"	"	NEG	IC
191	" " "	2	"	"	NEG	NEG
192	" " "	3	"	"	NEG	UNR
193	" " "	3	"	"	NEG	NEG
194	" " "	6	"	"	NEG	NEG
195	" " "	7	"	"	NEG	UNR
308	Hampshire Hunt Kennels	7	"	7/91	NEG	NEG
309	" " "	7	"	"	NEG	IC
310	" " "	2	"	"	NEG	NEG
320	" " "	2	"	"	NEG	NEG
321	" " "	2	"	"	NEG	IC
322	" " "	2	"	"	NEG	IC
323	" " "	2	"	"	NEG	NEG
324	" " "	5	"	"	NEG	NEG
325	" " "	8	"	"	NEG	IC
326	" " "	7	"	"	NEG	IC
327	" " "	7	"	"	NEG	NEG
330	" " "	3	"	"	NEG	NEG
331	" " "	3	"	"	NEG	NEG
332	" " "	2	"	"	NEG	NEG
333	" " "	4	"	"	NEG	NEG

DIETS

Hampshire Hunt Kennels - Raw/cooked meat ex fallen stock (cattle, sheep, horse).

New Forest Buckhounds - Raw fallen stock (cattle, sheep, horses)
Cooked meat occasionally.

New Forest Foxhounds - Fallen stock ex farms (cattle, sheep, horses).

Vine & Craven Hunt Kennels - Raw flesh (sheep, horses, cattle, goats).

TOTAL SUBMISSIONS: 37

EF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
WORCESTER AHO						
90/7	Croome Hunt Kennels	2	Worcester	11/90	NEG	NEG
32	Albrighton & Woodland Hunt	8	"	"	NEG	NEG
73	Radnor & West Hereford Hunt	3	"	12/90	NEG	UNR
91/23	North Hereford Hunt	2	"	1/91	NEG	IC
24	" " "	2	"	"	NEG	IC
25	" " "	4	"	"	NEG	IC
26	" " "	3	"	"	NEG	IC
48	Worcestershire Hunt Kennels	4	"	2/91	NR	NEG
245	Oliver Bassets	4	"	5/91	NEG	UNR
246	" "	8	"	"	NEG	NEG
247	" "	8	"	"	NEG	NEG
248	" "	6	"	"	NEG	NEG
249	" "	8	"	"	NEG	NEG
298	North Hereford Hunt	4	"	6/91	NEG	UNR
299	" " "	5	"	"	NEG	UNR

DIETS

Albrighton & Woodland Hunt - flesh (cattle, sheep, horse).
Proprietary meal since 5/90.
Croome Hunt Kennels - Boiled meat.
North Hereford Hunt - Carcase meat only.
Oliver Bassets - Raw flesh (cattle, sheep).
Radnor & West Hereford Hunt - Raw meat ex fallen stock (sheep, cattle).

Worcestershire Hunt Kennels - Raw meat/offal.

TOTAL SUBMISSIONS: 15

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
SCOTLAND						
DUMFRIES AHO						
91/147	Wigtownshire Hunt Kennels	8	Auchincruive	3/91	NEG	IC
148	" " "	8	"	"	NEG	IC
149	" " "	9	"	"	NEG	IC
150	" " "	8	"	"	NEG	IC
151	" " "	8	"	"	NEG	IC
152	" " "	8	"	"	NEG	IC

DIET

Wigtownshire Hunt Kennels - Raw flesh (calves, occasional sheep, horses).
Some offal.
Hotel Waste.

TOTAL SUBMISSIONS: 6

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF HIST
SCOTLAND					
GALASHIELS AHO					
91/34	Berwickshire Hunt Kennels	7	St. Boswells	1/91	NEG UNR
35	" " "	3	"	"	NEG UNR
36	" " "	2	"	"	NEG NEG
37	" " "	2	"	"	NEG NEG
38	" " "	2	"	"	NEG UNR
39	" " "	7	"	"	NEG UNR
40	" " "	6	"	"	NEG UNR
41	" " "	2	"	"	NEG UNR

DIET

Berwickshire Hunt Kennels - Raw meat (cattle, occasional sheep).

TOTAL SUBMISSIONS: 8

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS SAF	RESULTS HIST
SCOTLAND						
INVERNESS AHO						
90/6	Three Straiths Fox Control Assocn	3	Inverness	10/90	NEG	NEG
91/65	" " " " "	4	"	"	NEG	NEG
66	" " " " "	5	"	"	NEG	NEG
67	" " " " "	10	"	"	NEG	UNR
68	" " " " "	3	"	"	NEG	UNR
296	Lochaber & Sunart Foxhounds	2	"	6/91	NR	UNR
297	" " "	5	"	"	NR	UNR

DIETS

Lochaber & Sunart Foxhounds - Raw and cooked meat ex carcases (sheep, cattle)
Maize.

Three Straiths F.C.A. - Dried meat after fat extraction at factory.
Maize.

TOTAL SUBMISSIONS: 7

REF NOS	NAME OF HUNT	AGE	VIC	MONTH	RESULTS	
					SAF	HIST
SCOTLAND						
PERTH						
90/43	Fife Foxhounds	4	Perth	11/90	NEG	NEG
44	" "	8	"	"	NEG	NEG
87		4	"	"	NEG	NEG
91/135	" "	8	"	3/91	NEG	NEG
136	" "	8	"	"	NEG	UNR
137	" "	7	"	"	NEG	UNR
138	" "	7	"	"	NEG	NEG
139	" "	7	"	"	NEG	IC
140	" "	5	"	"	NEG	UNR
141	" "	5	"	"	NEG	UNR
142	" "	5	"	"	NEG	IC
143	" "	4	"	"	NEG	UNR

DIETS

Fife Foxhounds - Meat ex fallen stock (cattle).

TOTAL SUBMISSIONS: 12

HSE SURVEY

APPENDIX 12

UNRESOLVED HISTOLOGICAL CASES
AGE DISTRIBUTION

AGE	
1	2
2	15
3	13
4	10
5	16
6	13
7	27
8	18
9	16
10	11
11	5
12	3
17	1
NOT STATED	4
'AGED'	1
	155

BREED	
Foxhound	106
Harrier	15
Beagle	30
Basset	1
Sheepdog	1
NOT STATED	2
	155

HSE SURVEY

APPENDIX 13

POSITIVE TOXOPLASMA CASES - HISTOLOGICAL DIAGNOSES

DIAGNOSIS	1990	1991	OVERALL
Negative	12	43	55
Unresolved	15	43	53
Inconclusive	-	6	6
Encephalitis	2	5	7
TOTAL	29	97	126
			(28.4%)

HSE SURVEY APPENDIX 14

MULTIPLE SUBMISSIONS - ANALYSIS OF RESULTS

		UNR	IC	NEG	% IC/UNR
SIX HOUNDS					
Langford	90/74-9	5	1	-	100
	91/196-201	1	-	5	20
Auchincruive	91/147-52	-	6	-	100
Shrewsbury	91/106-11	-	4	2	66
Bangor	91/50-5	2	1	3	50
Winchester	91/70-5	2	-	4	33
SEVEN HOUNDS					
Carmarthen	91/7-13	4	-	3	57
	91/97-103	6	1	-	100
	91/282-8	4	-	3	57
EIGHT HOUNDS					
St. Boswells	91/34-41	6	-	2	75
Truro	91/250-7	8	-	-	100
Starcross	91/220-7	5	1	2	75
Preston	91/300-7	4	1	3	62
Carmarthen	91/334-41	-	-	8	0
NINE HOUNDS					
Langford	91/229-37	2	2	5	44
Perth	91/135-43	5	2	2	66
Reading	91/121-9	1	-	8	11
TEN HOUNDS					
Langford	91/162-71	3	-	7	30
TWENTY-TWO HOUNDS					
Langford	91/258-79	12	-	10	55

APPENDIX 15

FACTORS WHICH IMPINGE ON METHODOLOGY

(a) Each hound brain would have taken up to 30 minutes to remove from the cranium, depending on the skill of the operator.

(b) Transportation delays from sometimes distant hunt kennels often resulting in hound carcases arriving very late in the working day.

(c) Conflicting priorities and workloads in VIC post-mortem rooms (BSE heads and chargeable diagnostic work). Late submissions, pressure of other work, and insufficient training and/or skill in brain removal were likely causes of damage to the tissue. In the earliest part of the survey, some brains received at Thirsk VIC had caudal medulla including obex missing, presumably as a result of over-enthusiastic sampling for TEM studies. This inability to distinguish between brain stem and anterior cervical spinal cord illustrated a deficiency in neuro-anatomical knowledge or veterinary supervision of lay staff in the post-mortem room.