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Reference:
Date: 18-Jan-99

The Administrator
Animal and Plant Health Inspection Service
United States Department of Agriculture
Washington, DC
20250

For Attention: Dr. Joan M Arnoldi

Dear Dr. Arnoldi

THE BSE AND SCRAPIE STATUS OF SOUTH AFRICA

Thank you for your letter dated 13 October 1998 on the above-mentioned subject. Your questions have been referred to the Onderstepoort Veterinary Laboratory for comment, and I am now in a position to provide a final answer to the queries.

1) Surveillance:
   a) Though examinations for BSE and for Scrapie has been carried out on all cases in which definitive diagnosis of other causes could not be found (whenever nervous signs were reported) since 1986, we are still not in a better position to report on the actual number of brains examined. It became apparent that the pathologists themselves would have to scan through their case history files if meaningful results were to be extracted. They would have the best chance to identify cases which were actually examined for scrapie, or where the sections examined would constitute valid screening to exclude scrapie. Unfortunately, time restraints and costs involved with such an exercise makes it un-feasible.
   b) I have come across data collected earlier about sheep and goats being presented for examination and post mortem at regional veterinary laboratories throughout the country. (I believe this information was given to the USA in 1992, but it was not included in my submission to you.) Though this data would not have quite the same significance as data from animals of a specified age with described progressive nervous signs, it does show large numbers of animals which have been examined by the South African Veterinary Services veterinarians. These veterinarians may not all have been specialist pathologists, but they were all registered to practise in South Africa. It is our opinion that this data gives reasonable evidence of the

absence of scrapie from South African small stock. The data is attached to this letter as Annex A.

c) The ability of the South African Veterinary system to diagnose scrapie was proved when the disease was introduced and eradicated in 1967.

2) As far as importation of meat and bone meal is concerned, inquiries into actual imports revealed that no meat and bone meal actually entered the country legally from Zimbabwe. As for imports from Australia and New Zealand, records at out ports of entry shows that none entered from these countries either. This leaves Argentina, Namibia and Botswana as countries which could have contributed to meat and bone meal imports to South Africa.

3) Examination of brains for evidence of scrapie

The laboratory supplied me with the following explanation:

"Due to the fact that not only scrapie is excluded as cause of neurological signs, sections from the following areas of brain are examined on a routine basis:

a) Cerebellum (cortex and medulla)
b) Cerebrum (cortex and medulla)
c) Midbrain (brainstem, medulla oblongata and spinal cord)

Approximately 8 – 10 sections are examined per animal."

4) Examination of bovine brains for BSE:

"The protocol was discussed with Mr. Gerald Welsh from the Central Veterinary Laboratory, Weybridge, United Kingdom during a workshop in October 1998 at the Onderstepoort Veterinary Institute. During the workshop a surveillance programme for the region, which comply with OIE Standards was discussed and is currently implemented in South Africa. At present all brain specimens from ruminants with nervous symptoms submitted to the Onderstepoort Veterinary Laboratory are scrutinised for spongioform changes by/or under the supervision of a veterinarian with a postgraduate qualification in pathology."

Examination for BSE is based on a HE preparation of a histopathologic section through the obex of the brain. Any suspicious sample needing further investigation will be referred to Weybridge.

I trust you find the information provided in order.

Kindest regards

Yours sincerely

for The Director: Animal Health

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DEPARTEMENT VAN LANDBOU
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1999 -11- 18
PRETORIA 0001
DIRECTORATE OF ANIMAL HEALTH
DEPARTMENT OF AGRICULTURE

Annex A

SCHEDULES AS SUPPLIED BY THE VARIOUS DIAGNOSTIC LABORATORIES OF THE DEPARTMENT OF AGRICULTURE (ANIMAL HEALTH) THROUGHOUT SOUTH AFRICA, ON SHEEP AND GOATS, WITH PARTICULAR REFERENCE TO SCRAPIE SURVEILLANCE:

The following figures are given per column:

1. Number of full necropsies performed on sheep and goats (including macroscopic brain examination)
2. Number of cases showing central nervous symptoms
3. Microscopic brain examinations.
4. Percentage of necropsies showing nervous symptoms
5. Percentage microscopic brain examinations on cases showing clinical symptoms
6. Percentage microscopic brain examinations on all post mortems performed

The laboratories are listed in column 1. Comments of interest or importance are listed in the remarks column.
No scrapie or BSE has been diagnosed since 1972, when the introduced scrapie (in imported animals) was eradicated.

SUMMARY 1984 - 1994

Laboratory	1 (full necropsies)	2 (nervous signs)	3 (microscopic examinations)	Remarks
Potgietersrus	1545	543	502	
Allerton	1823	-	712	data for 8 years only
Middelburg Cape	3913	225	Submitted to OVI	
Kroonstad	-	-	-	Not available
Stellenbosch	2134	-	1379	
Bloemfontein	1063	82	321	
Ermelo	1340	185	185	
Grahamstown	713	706	713	
Potchefstroom	-	-	-	Not available
Ellisras	103	40	79	Only operational for 2 years at time of census
Vryheid	316	45	45	Data for 4 years only
Louis Trichardt	433	326	411	
Beaufort West	296	12	12	
Queenstown	898	107	78	
Onderstepoort	9455	Not specifically recorded	Not specifically recorded, but done on all suitable tissue, including many referrals from other laboratories and private practices	Main reference laboratory in South Africa
Total	24032	2271	4437	

Data for each laboratory listed per year							
Potgietersrus	1.	2.	3.	4.	5.	6.	
84/85	103	39	36	38%	92%	35%	
85/86	106	43	42	41%	98%	40%	
86/87	187	65	58	35%	89%	31%	
88/89	195	82	82	42%	100%	42%	
89/90	198	91	87	46%	96%	44%	
90/91	214	57	53	27%	93%	25%	
91/92	169	48	36	28%	75%	21%	
92/93	85	26	23	31%	88%	27%	
93/94	86	22	22	26%	100%	26%	
Total:	1545	543	502	35%	91%	32%	

Allerton	**1**	**2**	**3**	**4**	**5**	**6**	
84/85							
85/86	232	Not available	74	Cannot be calculated	32%		
86/87	324	Not available	79	"	24%		
87/88	132	Not available	76	"	58%		
88/89	177	Not available	66	"	37%		
89/90	163	Not available	53	"	33%		
90/91	141	Not available	32	"	23%		
91/92	153	Not available	127	"	83%		
92/93	230	Not available	126	"	55%		
93/94	271	Not available	79	"	29%		
Total	**1832**		**712**		**39%**		

Data for each laboratory listed per year (continued)							
Middelburg Cape	1	2	3	4	5	6	
84/85	312	17	17	5%	5%	100%	
85/86	318	14	14	4%	100%	4%	
86/87	355	18	18	5%	100%	5%	
88/89	258	22	22	9%	100%	9%	
89/90	466	14	14	3%	100%	3%	
90/91	860	22	22	3%	100%	3%	
91/92	339	52	52	15%	100%	15%	
92/93	353	28	28	8%	100%	8%	
93/94	302	17	17	6%	100%	8%	
Total:	3913	225	225	6%	100%	6%	

Kroonstad							
84/85							
85/86							
86/87							
87/88							
88/89							
89/90							
90/91							
91/92							
92/93							
93/94							
Total							

Stellenbosch	1	2	3	4	5	6	
84/85	174	not	77	can	100%	44	
85/86	200	available	118			59	
86/87	157	lots	121	not	With	77	
87/88	203	of	135			67	
88/89	235	poisonous	175	be	Nervous	74	
89/90	289	plants	206			71	
90/91	253	causing	158	processed	Signs	62	
91/92	204	nervous	111			54	
92/93	213	symptoms	138		examined	65	
93/94	206		140			68	
Total	**1899**		**1379**			**73%**	

Post mortems done by lab, but samples include submissions by private veterinarians.

Bloemfontein	1	2	3	4	5	6	
84/85	110	14	27	13%	193%	25%	
85/86	112	16	20	14%	125%	18%	
86/87	121	2	36	2%	1800%	30%	
87/88	118	-	52	0	-	44%	
88/89	132	9	57	7%	633%	43%	
89/90	167	15	34	9%	227%	20%	
90/91	85	9	33	11%	366%	39%	
91/92	79	2	21	3%	1050%	27%	
92/93	64	6	17	9%	283%	26%	
93/94	75	9	24	12%	267%	32%	
Total	**1063**	**82**	**321**	**77%**	**391%**	**30%**	

Ermelo	1	2	3	4	5	6	
84/85	14	2	2	14%	100%	14%	
85/86	69	6	6	9%	100%	9%	
86/87	82	11	11	13%	100%	13%	
87/88	84	16	16	19%	100%	19%	
88/89	128	24	24	19%	100%	19%	
89/90	131	26	26	20%	100%	20%	
90/91	174	19	19	11%	100%	11%	
91/92	136	28	28	21%	100%	21%	
92/93	236	17	17	7%	100%	7%	
93/94	286	36	36	13%	100%	13%	
Total	**1340**	**185**	**185**		**100%**	**14%**	

Grahamstown	1	2	3	4	5	6	
84/85					all	all	
85/86							
86/87	2	2	2	100%	brains	brains	
87/88	7	2	7	29%			
88/89	146	145	146	99%	examined	examined	
89/90	130	130	130	100%			
90/91	42	40	42	95%	micro=	micro=	
91/92	160	157	160	98%	scopically	scopically	
92/93	87	86	87	99%			
93/94	139	139	139	100%			
Total	**713**	**706**	**713**	**99%**			

Potchefstroom	1	2	3	4	5	6	
84/85							
85/86							
86/87							
87/88							
88/89							
89/90							
90/91							
91/92							
92/93							
93/94							
Total							

Ellisras	1	2	3	4	5	6	
84/85			microscopic		microscopic		
85/86			brain		examination		
86/87			examinations		done		
87/88			are done		on		
88/89			on all		all cases		
89/90			post mortems		where		
90/91			with nervous		macro=		
91/92			signs and if		scopic		
92/93	82	32	definite diagnoses	39%	diagnosis	71%	
93/94	21	8	cannot be made	38%	is not made	100%	
Total	**103**	**40**		**39%**		**77%**	

Vryheid	1	2	3	4	5	6	
84/85							
85/86							
86/87							
87/88							
88/89							
89/90							
90/91	79	4	4	5%	100%	79%	
91/92	85	14	14	16%	100%	85%	
92/93	97	9	9	16%	100%	97%	
93/94	55	9	9	16%	100%	55%	
Total	**316**	**45**	**45**	**14**	**100%**		

Microscopic brain examination done on all PM's because of heartwater prevalence

Louis Trichardt	1	2	3	4	5	6	
84/85	29	26	29	90%	115%	100%	
85/86	18	14	15	78%	107%	83%	
86/87	19	12	19	63%	158%	100%	
87/88	87	54	84	62%	156%	97%	
88/89	47	38	45	81%	118%	96%	
89/90	60	52	60	87%	115%	100%	
90/91	54	32	46	59%	143%	85%	
91/92	39	36	35	90%	97%	90%	
92/93	37	27	35	95%	130%	95%%	
93/94	44	35	43	98%	123%	98%	
Total	**433**	**326**	**411**	**75%**	**126%**	**95%**	

Beaufort West	1	2	3	4	5	6	
84/85	39	1	1	2%	100%	2%	
85/86	47	2	2	4%	100% of	4%	
86/87	41	5	5	12%	animals	12%	
87/88	68	2	2	3%	with	3%	
88/89	14	-	-	0%	clinical	0%	
89/90	22	-	-	0%	nervous	0%	
90/91	16	1	1	6%	signs	6%	
91/92	24	-	-	0%	are	0%	
92/93	12	-	-	0%	examined	0%	
93/94	12	1	1	8%	microscopically	8%	
Total	**296**	**12**	**12**	**4%**	**100%**	**4%**	

Queenstown	1	2	3	4	5	6	
84/85	70	8	5	11%	63%	7%	
85/86	143	18	16	13%	89%	11%	
86/87	193	15	13	8%	87%	7%	
87/88	117	26	20	20%	77%	17%	
88/89	132	12	6	9%	50%	5%	
89/90	91	4	2	4%	50%	2%	
90/91	21	4	1	19%	25%	4%	
91/92	37	6	5	16%	83%	14%	
92/93	63	5	2	8%	40%	3%	
93/94	31	9	8	29%	89%	26%	
Total	**898**	**107**	**78**	**12%**	**73%**	**9%**	

Onderstepoort	1	2	3	4	5	6	
84/85							
85/86		Not	Available				
86/87							
87/88	1088	on all	All ruminant				
88/89	1114	animals	Brains				
89/90	915	with nervous	Tested for				
90/91	1200	signs (!15%)	Rabies				
91/92	1415	a brain	With negative				
92/93	2652	histopath	Results are				
93/94	1071	is done	Screened				
Total	**9455**						