The Australian Veterinary Association Limited
CAN 008 522 852
134-136 Hampden Road
Artarmon NSW 2064
PO Box 371
Artarmon NSW 1570
www.ava.com.au
Telephone: 02 9411 2733
Facsimile: 02 9411 5089
Email: avahq@ava.com.au

27 August 2002

Mr John Carter,
Inquiry Secretary,
Review of Australian's Quarantine Function
Joint Committee of Public Accounts and Audit
Parliament House
CANBERRA ACT 2600

Dear Mr Carter,

Thank you for your letter of 8 August 2002 and the enclosed proof copy of the transcript of evidence taken by the Committee when Jo Sillince and I appeared before it in a public hearing on Monday 5 August 2002.

The Hansard is an accurate representation of the evidence given by Or Sillince and myself. There are several small amendments that would improve the accuracy and address transcription errors.

At page 201 paragraph 2 line 2 the section beginning "... Veterinari4ris that the AVA collected....." should read "... veterinarians the AVA assembled and sent to the UK ...".

There are several references to the disease "bluetongue". This is given in the text as two words "blue tongue".

At page 207-second last paragraph line 6 the word "would" should be replaced by the word "should"

On page 209 paragraph 2 line 5 the acronym ", acronym refers to the Northern Australia Qua Page 206 line I should read "it is a disc cattle but causes clinical signs in sheep).

During the meeting the AVA representatives agreed to provide three pieces of information.

1. The decline in the numbers of rural veterinarians as demonstrated by Professor Heath. Attached is a copy of a report prepared by Professor Heath for this Association and which was later published in the Australian Veterinary Journal. The key findings of the paper demonstrate that the number of State Government veterinarians decreased by 4% between 1981 and 1991 and by a further 25% to 283 during the 1990s. The paper also records that simular decreased have occurred in the Commonwealth Government which now employs 170 veterinarians as compared with 226 in 1991.

The paper goes on to make other references to the difficulties in finding veterinarians practice in rural areas and the aging population.

2. The details of the incident in which unheated Canadian pig meat was spilled into a river into northern New South Wales. The attached document has been provided by AQIS and it was this information on which our testimony was based. It would be necessary to get any further information from AQIS. The spill shows the importance of risk analysis to determine whether such products can be treated and sterilised overseas with appropriate inspection and certification or whether it is safer to have them enter Australia under controlled circumstances and be treated after arrival. Import risk analysis is an important part of such a judgement. Australia's trading relations with other countries may also play a part in such a decision.

3. We commented at the hearing on the amount meat being introduced on each flight into the United Kingdom. This was based on oral discussions with AFFA officers and we have sought verification. Attached is an exchange on the subject that addresses the one kilo per person allowance for importation of pig meat. Properly cooked meat and meat properly prepared in hermetically sealed containers is of low risk. However there are reports of illegal imports some of which are mentioned in the attachment and reference is also made as to such during UK DEFRA investigations of the source of the 2001 outbreak. The Paper on the Origins of the UK Foot and Mouth Disease epidemic in 2001 by the UK Chief Veterinary Officer JM Scudamore is an example.

The figure of I00kgs per aircraft is the subject of further inquiry.

AVA stands ready to provide any further information you may require.

Yours sincerely,

Dr J. Sillince
President-Elect
Australian Veterinary Association

Dr Kevin Doyle
National Veterinary
Australian Veterinary Association

THESE CONDITIONS APPLY TO THE IMPORTATION OF DANISH PIG MEAT FOR HEAT PROCESSING.

NOTE:

THIS PERMIT IS NOT VALID UNLESS ALL CONDITIONS ON THIS PERMIT HAVE BEEN READ BY THE IMPORTER AND THE DECLARATION AT THE END OF THIS CONDITION HAS BEEN COMPLETED AND SIGNED.

1.. ON ARRIVAL THE CONSIGNMENT MUST BE ACCOMPANIED BY A CERTIFICATE ISSUED BY A DANISH VETERINARY SERVICE OFFICER. THE CERTIFICATE MUST INCLUDE THE FOLLOWING INFORMATION:

(a) the meat was derived from Danish domestic pigs slaughtered on ..... _..... (dates);

(b) the pigs from which the meat was derived passed ante- and post-modem veterinary inspection under official veterinary supervision; the meat is considered to be fit for human consumption;

(c) Denmark has been free from foot and mouth disease, rinderpest, African swine fever, classical swine fever, swine vesicular disease, Aujeszky's disease and trichinellosis for at least six months prior to slaughter of the pigs from which the meat was derived;

(d) the establishment where the pigs from which the meat was derived were slaughtered, the establishment where the meat was prepared and the establishment where it was stored, have current AQIS approval for facilities and hygienic operation;

Note: Name(s), address(es) and veterinary control number(s) of plant(s) must be specified;

(e) Officials of the veterinary authority of Denmark were present in plants at all times when pigs are being slaughtered for export to Australia;

(f) the establishment where the meat was prepared did not hold, prepare or process pig meat from countries other than Denmark while pig meat was being prepared for export to Australia;

(g) the meat has been deboned, prepared for expot and packed on ..... (dates), and the bags, wrappers or packing containers were clean and new;

(h) the meat was not derived from the head or pharyngeal region;

(i) the identification number of the slaughtering establishment and the establishment where the meat was prepared is readily visible on the meat or, where the meat is wrapped or packed, was marked on the package or wrapping containing the meat in

such a way that the numbers cannot readily be removed without damaging the meat, package or wrapping;
(j) the meat was not exposed to contamination prior to export;

(k) the meat is being transported to Australia in a clean container (Container: <<Container number») sealed with a seal bearing the number or mark <<Seal Numbem; the container contains only meat eligible for entry into Australia.

2. QUARANTINE ENTRY ON ARRIVAL

a) A quarantine entry must be completed. for each container of Danish pig meat on arrival to Australia.

b) The transport company moving the container from the wharf to the quarantine approved cold store or processor with an AQIS compliance agreement must be nominated on the quarantine entry (including contact person and contact telephone number). The names and contact telephone numbers for AQIS regional staff responsible for supervising imported pig meat must also be recorded on the quarantine entry.

c) A copy of the quarantine entry and a copy of this import permit must be provided to the transport company.

3. TRANSPORTATION FROM WHARF TO NOMINATED PREMISES AND BETWEEN NOMINATED PREMISES

a) The importer must advise the transport company of requirements for secure transport of this product. Potentially suitable control systems may include leak-proof containers sealed with a numbered, tamper-proof seal at the point of origin for removal and retention at the point of destination or, alternatively, a system based on despatch and retrieval weights may be used to accurately account for control of the product,

b) The transport company must move the product directly to the premise nominated on the quarantine entry.

c) The transport company must contact an AQIS officer nominated on the quarantine entry if unable to deliver the container directly to the premise nominated on the quarantine entry. An example would be if the company is unable to deliver the container during the normal business hours of the nominated premise. In case of accident or spillage, it is the responsibility of the transport company to notify AQIS immediately.

d) Unprocessed Danish pig meat must only be transported between coldstores or processing establishments under quarantine direction. AQIS must receive the request for movement in writing at least 24 hours prior to the planned transport. The transport company must provide the copy of the quarantine direction documents to the coldstore or processor. The coldstore and processor must maintain these records for audit purposes.

e) Once unpacked from the original container, the transport of Danish pig meat between premises (including coldstores and processing establishments) requires that the Danish pig meat be shrink wrapped prior to transport. Loose cartons of Danish pig meat are not permitted to be transported between premises.

4. REQUIREMENTS FOR POST-ENTRY CONTROL AND HEAT PROCESSING OF UNCOOKED PIGMEAT IMPORTED FROM DENMARK

(a) The Danish pig meat must only be sold or distributed to smallgoods establishments approved by AQIS to process Danish pig meat and all records must be maintained.

(b) All Danish pig meat in each container must be adequately heat processed within six (6) months of its arrival in Australia, unless otherwise approved by the director of quarantine.

(c) Danish pig meat must only be processed by establishments approved by AQIS to heat process Danish pig meat in accordance with the approved compliance agreement

(d) A copy of this permit must accompany each consignment of uncooked pig meat imported from Denmark during transport to its destination and until it has been adequately heat processed.

(e) The imported, uncooked pig meat and its derivatives must be securely transported from the port of entry to the place(s) of storage, thence to the place(s) of manufacture and finally, with respect to inadequately processed surplus waste materials and by-products, to the AQIS approved place(s) of rendering

(f) Uncooked pig meat imported from Denmark and its derivatives must be clearly identified so that it can be readily distinguished from other products on the basis of visual observation until it has been adequately heat processed. This may include colour coded containers, etc whilst in the manufacturing establishment.

(g) Uncooked pig meat imported from Denmark and its derivatives must not come into contact with any Australian origin meat or meat products that will not also be adequately heat processed before distribution for retail or consumption by humans or animals. This requirement applies to the uncooked, imported pig meat while in storage and during manufacturing until it has been adequately heat processed.

(h) Uncooked pig meat imported from Denmark and its derivatives must be adequately processed before it is distributed for retail or consumption. Processing should be technically equivalent to exposure of all parts of the product to 56°C for not less than 60 minutes.

(i) All packaging or wrapping materials must be disposed of by incineration, deep burial, autoclaving or other AQIS approved methods. If this is done on a premise other than the smallgoods establishment, the waste disposal unit must be included in the Compliance Agreement and subject to AQIS approval and audit.

j) Companies with compliance agreements to process uncooked pig meat must retain appropriate physical evidence and documentary records to demonstrate full accountability for compliance with the above requirements and with the AQIS approved Compliance Agreement as it relates to:
- supply and dispatch of unprocessed Danish pig meat or its derivatives, including volumes, dates and identification numbers and codes as appropriate;
- secure transport of unprocessed Danish pig meat or its derivatives until it has been adequately heat processed, including dates, volumes and container and seal numbers/codes as appropriate;
- separation of unprocessed Danish pig meat or its derivatives during storage and during the stages of manufacture until it has been adequately heat processed, including identification measures and designation of holding areas as appropriate;
- manufacturing processes applied to the imported pig meat, including dates, volumes, times, temperatures, packaging disposal and by-product management.
-disposal of packaging and wrapping materials by incineration, autoclaving or other AQIS approved method.
-disposal of waste water by direction to the sewerage system or other AQIS approved method.

5. INSPECTION

a) The director of quarantine may choose to subject premises of importers, the imported pig meat, establishments where the imported pig meat is stored, processed or rendered, transport of the imported pig meat, the methods used to treat the pig meat and records associated with these to inspection at any time without prior notice.

b) The auditing of establishments that are processing imported pig meat will be undertaken at intervals of not greater than four months. Inspections may be performed by individual officers or by teams of officers as the situation may warrant. Routine inspections will usually be pre-announced.

c) The frequency and intensity of inspection may be increased in the event of non-compliance with these conditions or if discrepancies are detected during an inspection

6. HANDLER RESPONSIBILITIES

a) Responsibility for handling and processing the imported pig meat in accordance with these conditions must be home by the handler, including the responsibility for ensuring that the imported pig meat is handled in a manner that also complies with other relevant Commonwealth and State requirements,

b) Responsibility for the costs of handling the imported pig meat in accordance with these conditions must be borne by the handler, including the costs of inspection for the purpose of these arrangements.

7. REVIEW

a) These conditions may be reviewed if approved handlers fail to, or are unable to reasonably comply, at any time at the discretion of the director of quarantine.

8. IMPORTER'S DECLARATION:

The following declaration must be completed by the company representative responsible for the importation of Danish pigmeat. This permit is not valid unless the declaration has been completed.

I, ... for and on behalf of the importing company: ....., am responsible for the importation of Danish pigmeat and have read and fully understand the conditions on this permit.
I declare than I intend to ensure that all conditions on this import permit are adhered to.
Signed: ..... Date
...../...../..... Name:.....

IMPORTED PIGMEAT INCIDENT

A truck carrying the 640 cartons (16,517kg) of imported Danish pigmeat from Sydney to Brisbane was involved in an accident on the Morom Bridge on the Pacific Highway near Maclean on the 29 August 2000. The pig meat was being transported from a quarantine approved cold store in Sydney to Brisbane for heat processing at an AQIS approved processing establishment. The truck was a new Kenworth and hit the side of the bridge tipping on its side. The load was thrown up against the roof, which came off throwing the majority of the load onto the bridge and into the river.

AQIS Action

- The company involved immediately advised AQIS of the accident, allowing AQIS to quickly implement recovery producers.
- State Emergency Services (SES) crews recovered pigmeat that had floated to the surface. AQIS officers also patrolled the riverbank collecting pigmeat. A diver was sent in to retrieve pigmeat still on the bottom of the river.
- All of the pigmeat that could be recovered has been. It was impossible to ensure that there was a 100% recovery as the pigmeat broke up into to smaller pieces and became water-logged (hence we cannot say how many cartons remained unaccounted for). In addition the river is tidal, deep and murky.
- Following the incident a full review was undertaken and the permit conditions for imported pigmeat were amended on 4 December 2000. Importers must now nominate each transport company that moves imported meat from the wharf, between cold stores and processors, and between processors prior to AQIS issuing a movement direction for the meat. The transport company listed on the quarantine entry must move the product directly to the premise nominated on the quarantine entry and notify AQIS of any changes to transport arrangements, particularly in the case of delays or accidents. The quarantine entry also provides the transport company contact details for AQIS officers supervising imported pigmeat in case of an accident or delay. The current import permit conditions for Danish pigmeat are attached. The Canadian pigmeat post entry requirements are identical.

CHANGES IN THE DISTRIBUTION OF AUSTRALIAN VETERINARIANS, WITH PARTICULAR REFERENCE TO THOSE IN RURAL AREAS AND IN GOVERNMENT SERVICE, OVER THE LAST 20 YEARS

A report to
The Board of The Australian Veterinary Association
By

Emeritus Professor Trevor Heath
BVSc, MA, MHPEd, PhD, FACVSc, FAIBiol

[t.heath@mailbox.uq.edu.au]

August 2001

Objective:
To obtain data on changes in the distribution of Australian veterinarians, with particular reference to those in rural areas and in government service, over the last 20 years, and to comment on some implications of these changes.

Definition:
The term `rural' is used to refer to those rural and regional areas outside the capital cities and major regional cities as defined in Table 3.

Table of contents:

Key findings:

I. Over the last 20 years, there has been an average net increase of 159 a year in the number of registered veterinarians working in Australia. Of that number:

- 100 or 63% were females, and the percentage of females on the rolls has increased from 15% to 39% since 1981.
- The number in rural areas was 68/year between 1981-1991, but this decreased to 46 between 1991-2001.
- In rural areas they are more likely to work in closely-settled areas, and these enjoy a higher absolute *and* relative increase than the less densely-settled, mainly inland, areas.
- The net number of male veterinarians entering rural areas decreased from 33/year in 1981/91 to I0/year in 1991/01.

2. It is now extremely difficult for principals of rural practices to recruit experienced associates. Although more than half of recent graduates find their first job in mral mixed practice, they stay for an average of less than two years. Many leave to travel and work in the UK, although some move to other jobs in Australia.

3. Farm animals make up a decreasing proportion of the work of the average rural practice. This, and the relatively short time that many recent graduates spend in rural practices, must have an effect on their experience and competence with farm animals. 4. The number of females now entering mixed rural practice is about three times that of males, but on average they are less likely than males to

- be interested in full time work over the longer term;
- be prepared to be on call after hours;
- work predominantly with farm animals;
- be interested in managerial or ownership responsibilities.

5. The number of veterinarians employed in state and territory Departments of Agriculture or equivalent decreased by 12% between 1981 and 1991, and by a further 25% to 283 during the 1990s. Similar decreases have occurred in the Commonwealth government, which now employs 170 veterinarians compared with 226 in 1991.. 6.

There are insufficient veterinarians with special expertise available to replace the many government veterinarians who will soon retire. This is particularly evident for diagnostic services generally, as more than half of Australia's veterinary pathologists are more than 50 years old, and there are few in training programs.

7. If current trends continue, it will become increasingly difficult for:

- government agencies to recruit and retain veterinarians with adequate expertise and experience in specific areas, especially veterinary pathology.
- rural practices to recruit and retain veterinarians (a) with adequate expertise and experience with farm animals, (b) who will accept full time continuing employment, and (c) who are interested in management or ownership.

8. Veterinarians who have grown up on farms that derive their primary income from animals are about twice as likely to remain in rural practice as those from other backgrounds.' Thus the number likely to remain in rural practice should increase if preference is given to veterinary school applicants who have gown up on farms with animals. However, selection based on predictions made at interview is unlikely to have any beneficial effect, and selection based on gender would be illegal.

Methods

Four main methods were used:

1. Rolls for 1981, 1991 and 2001 were obtained from the Veterinary Surgeons Boards (or their equivalents) in each state and territory. The rolls used for 2001 data were those that were current at 30 June 2001.

Excel databases were used to enter the post code and gender of each veterinarian listed with a business address (where that was provided; otherwise a personal address) in that state or territory, and who was not designated as being retired. As this excluded those resident interstate or overseas, and those who indicated by a designation in the roll (where this was provided for) that they were retired, the numbers recorded in this report are lower than those listed in each roll. However, some veterinarians of advanced age or known to be not engaged in veterinary activity (but had not made this clear in the roll), are included here, as exclusion of them would have involved arbitrary decisions based on inadequate information.

Furthermore, as the rolls include those in part-time and casual veterinary work, the veterinary work force in full-time equivalents would be many fewer than the numbers given here. Despite these caveats, this represents the best efforts, based on data from the relevant roll, to record each veterinarian who was both resident and working in that state/territory. Finally, as not all the rolls reported the type of work being done, this has not been included. An exception was made for government veterinarians, but, as set out in 4 below, other steps were taken to obtain their numbers.

2. A questionnaire was sent to the principals of 246 practices in rural areas to elicit information and opinion on the veterinary situation from their perspective. A total of 221 (90%) were returned. They came from 47 centres in NS W, 41 in V ic, 34 in Q, 32 in WA, 24 in SA, 12 in Tas and five in the Northern Territory -a total of 197 rural and regional centres. The respondents indicated that most (71%) of these centres had a population of less than 10,000, and only 8% contained more than 30,000 people. The practices varied in size from 1-15 veterinarians (median 2.2), and they contained a total of 681 veterinarians of whom 265 were female.

3. Some information was drawn from previous surveys, [1-6] including the Vet Lifestyle survey of AVA members in 2000,' and a longitudinal study of two cohorts who began their veterinary course in 1985/86, and graduated just over 10 years ago. 4,5

4. Some data on government veterinarians were collected from Board rolls. However, the rolls varied in the information given regarding employment, and the help of current or recently-retired senior veterinariansfom the Commonwealth and each of the states and territories was used in efforts to obtain complete and accurate data, especially for 1991 and 1981. Even so, there remained some potential sources of variation. One was the necessity to make decisions about some positions at the margins, including contract positions and unfilled positions). A second was that any government veterinarians who were not registered, and could not be remembered, would have been overlooked. The third was human fallibility. Notwithstanding these potential problems, best efforts have been made to ensure the accuracy of the data.

Table I:Total numbers of veterinarians

	1981	1991	2001	%'	Inc[2]	%inc[3]
NSW	1204	1663	2142	33	47	29
Vic	672	1156	1432	23	38	24
Q	662	955	1217	19	28	18
WA	235	386	799	13	28	18
SA	221	298	410	6	9	6
Tas	86	139	156	3	3	2
ACT[4]	59	96	132	2	4	2
NT	38	64	70	1	2	1
Total	**3177**	**4757**	**6358**	**100**	**159**	**100**

1. Each state as percent of total
2. Average increase/year,1981-2001
3. Percent of total increase for 1981-2001 contributed by that state or territory
4. Accurate figures for the ACT for 1981 and 1991 were not available, and as a result all figures for ACT except those for 2001 are estimates.

Table 2: Number of female veterinarians

	1981	1991	2001	%inc'	Inc[2]	Tot[3]	%F[4]
NSW	201	594	811	300	30	47	64
Vic	85	323	560	230	24	38	63
Q	84	223	403	140	16	28	57
SA	33	84	164	390	7	9	69
WA	30	107	385	1180	18	28	64
ACT[5]	19	37	56	190	2	4	51
Tas	10	37	50	400	2	3	57
NT	5	20	39	680	1	2	106
Total	**467**	**1425**	**2468**	**430**	**100**	**159**	**63**

l. Percent increase in that state/territory between 1981 and 2001
2. Percent of total increase for 1981-2001 contributed by that state or territory
3. Average increase per year in total veterinarians (from Table 1)
5. Percent of females in average annual increment of total veterinarians 5
6. Accurate figures for the ACT for 1981 and 1991 were not available, and as a result all figures for ACT except those for 2001 are estimates.

Results

Numbers of veterinarians

The Rolls of the Veterinary Surgeons Boards or their equivalents for each of the states and territories for 2001 contain the names of 6358 veterinarians who were resident and apparently engaged in some veterinary activity in that state or territory. One-third (33%) of these were in NSW, 23% in Victoria, 19% in Queensland and 13% in WA; and the remaining 12% were spread over SA, Tas, NT and ACT (Table 1).

The number of registered veterinarians in 1991 was 50% greater than that in 1981; that in 2001 was 100% greater than in 1981 figure. The average net increases for the two decades 1981-1991 and 1991-2001 were virtually identical: 158 and 160 per year respectively, so that the average net increase for the 20-year period was 159/year. Factors that must be considered in relation to this rate of increase include gender, distribution between states and territories, and between urban and rural areas.

Gender.- Of the average net increase of 159/year, 100 or 63% were female. As a result of this, the percentage of females listed on the rolls increased from 15% to 39% between 1981 and 2001. Although the percentage of females in veterinary graduating classes between 1981 and 2001 was less than 63%,' it is likely that this figure also reflects males retiring from the existing, male-dominated veterinary population.

States and territories.- The net increase in veterinary numbers was concentrated heavily in the states with veterinary schools (Table 1). In this connection, the difference between SA and WA is instructive. In 1981, a few years after Murdoch University graduated its first class, these two states has similar numbers of veterinarians, but 20 yeas later the number in WA was almost twice that in. SA. During this period, the net annual increase i veterinary numbers in WA was 28: more than three times that for SA (Table 1).

Although females represented 63% of the net increase on a national level, the figure ranged from 57% in Queensland (the value for ACT being disregarded because it is based on estimates) to 106% for the NT: the number of females increased from 5-39 while that of males decreased from 33-31 (Table 2; Appendix 1).

Urban and rural areas.

*Survey data.-*The average (median) number of veterinarians in the 221 practices surveyed was 2001 was 2.2 in 2001, an increase from 1.9 in 1991 and 1.2 in 1981. The average total number of private, government and any other veterinarians in these centres was 3.9 in 1981, 4.5 in 1991and 5.8 in 2001.

When the number of veterinarians in each centre in 2001 was compared with that in 1991, it was found that 13% had fewer, 40% had the same number and 47% had more veterinarians than 10 years previously. In similar vein, 81% of the centres had more veterinarians than in 1981., 12% had the same number and 7% had fewer veterinarians than 20 years previously. For the most pat then, almost all of these rural centres
had either the same number or more veterinarians compared with 10 and 20 years ago.

Table 3: Distribution of veterinarians between urban and rural areas

	1981			1991			2001		
	TOT	F	M	TOT	F	M	TOT	F	M
Capital cities'									
Syd	642	135	507	877	283	594	1159	490	669
Mel	362	54	308	623	193	430	781	315	466
Bri	346	54	292	505	132	373	678	236	442
Per	153	22	131	226	57	169	563	284	279
Ade	150	21	129	223	61	162	310	122	188
Can	59	19	40	96	37	59	132	56	76
Dar	22	4	18	44	13	31	46	27	19
Hob	19	2	17	31	8	23	46	14	32
Regional cities[2]									
	92	12	80	118	30	88	167	65	102
Total cities									
	1845	**323**	**1522**	**2743**	**814**	**1929**	**3882**	**1609**	**2273**
Rural									
NSW	526	72	454	739	192	547	902	294	608
VIC	313	31	282	533	130	403	651	244	407
QLD	268	22	246	385	77	308	459 1	34	325
WA	82	8	74	160	50	110	236	111	125
SA	71	12	59	73	22	51	97	41	56
TAS	67	8	59	110	29	81	116	36	80
NT	5	0	5	14	4	10	15	6	9
Total rural									
	1332	**153**	**1178**	**2014**	**504**	**1510**	**2476**	**866**	**1610**

1. Numbers for capital cities include veterinarians in surrounding areas. Those for:

- Sydney include Central Coast, Carnden/Campbelltown area, and Blue Mountains (postcodes 22502265, 2560-2575, 2745-2787 and, for 2001, the box office postcodes between 1232 and 1800).
- Melbourne include area from Frankston in south-east to Geelong in south-west (3000-3220).
- Brisbane include Ipswich and Gold and Sunshine Coasts (4000-4209, 4210-4230, 4300-4306, 4516-4521,4550-4567).
- Adelaide include Adelaide Hills (5000-5251)
- Perth include postcodes 6000-6200, 6801-6991.
- Canberra include posteodes 2600-2618, 2902-2913. As ACT Rolls for 1981 and 1991 were not available, values were estimated by extrapolation from 1971 and 2001 figues.
- Darwin include postcodes 800-835, or 5789-5794 for 1981.

- Hobart include postcodes 7000-7019

2. Values for Newcastle (2280-2319), Townsville (4810-4814), Cairns (4868-4879) and Alice Springs (870-871; 5750 in 1981) were separated out from figures for the rural areas on the grounds that the vast majority of their veterinary services are directed at the residents of the cities and not the surrounding area. This was an arbitrary decision, and it is possible that simular arguments could be mounted for some other regional critics.
3. These rural areas included the following postcode ranges, excluding those postcodes listed above for the cities:

- New South Wales 2266-2880
- Victoria 3221-3999
- Queensland4231-4880
- Western Australia 6201-6800
- South Australia 5252-5800
- Tasmania 7020-7500
- Northern Territory 836-890 (5760, 5780 for 1981)

*Postcode data.-*Although the distinction between urban and rural areas must be highly arbitrary, the distinction set out with Table 3 revealed that in 1981 58% of the 3177 registered veterinarians in Australia were in major urban areas.

The total number had increased by 50% to 4757 ten years later, but again 58% were in major urban areas. By 2001, with net 1601 veterinarians added to the national pool, that percentage had increased to 61%. Conversely, the percentage in rurat Australia declined slightly from 42% to 39% between 1991 and 2001.

The number of veterinarians in rural Australia increased. from 1332 to 2014 - an average of 68/year - between 1981 and 1991 (Table 3). But by 2001 the total was only 2476: the rate of increase had decreased from 68 to 46/year.

Two facets of this increase must be considered. Firstly, both the absolute increase and the percentage increase was higher in the more closely settled areas than in those with lower population density. In NS W for example, the number in coastal areas increased by 45% during 1991-2001 while the increase in areas to the west was only 13%. In WA too, a state with a higher rate of increase in veterinary numbers, the numbers in the southwest increased by 62% while those in the rest of rural WA increased by 28% (Table 4).

The second facet is gender. Virtually all of the decrease between the eighties and the nineties was in the number of males. Specifically, the number of females in rural areas increased from 153 to 504 - 35/year- between 1981 and 1991, and to 866 (36/year) by 2001 (Table 3). However, the number of males increased from 1178 to 1510 (33/year) in 1981-

1991, but to 1610 (10/year) over the next decade (Tables 3,5). As a result, there were only 10 males in the net increase of 46; 36, or 78% were females

Reasons for the decrease in the net increase in males include the:

- decrease in the number of male veterinary graduates over recent decades' to the extent that males may now constitute 30% or less of graduating classes
- retirement of male practitioners, who have traditionally predominated in rural practices (88% of veterinarians registered in rural areas in 1981 were male).

Another key factor is the migration of recent graduates through mixed practice on their way to other career paths. Although one-half to two-thirds of graduates find their first veterinary job in rural mixed practice, most of them leave over the next five years and do not return. For example, in a longitudinal study of two cohorts who graduated in 1989 and 1990, 60% started in mixed practice, 26% were still there five years later and by 10 years only 18% remained in mixed practice. 4,5 Similar results were found for two cohorts who had graduated five years earlier. [6] As a result, it is extremely difficult for practice principals to recruit and retain associates, especially those with experience. This was confirmed in the current survey.

Table 4: Differences in the rate of increase in veterinary numbers in different rural areas of the same state

Total veterinarians				Percent increase	
	1981	1991	2001	81-01	91-01
New South Wales					
NSW coast	152	206	298	96	45
NSW inland'	386	523	590	53	13
Western Australia					
Southwest [3]	42	92	149	254	62
East and north[4]	39	68	87	123	28

1. North, from (but excluding) Newcastle, to Q border (postcodes 2403-2488), south from (but excluding) Wollongong to Victorian border (2502-2554).
2. Generally from coastal strip (as set out in 1 above, together with Sydney and surrounds) west, south and north to borders with South Australia, Victoria and Queensland: postcodes 2790-2880, 2576-2738 and 2320-2402.
3. Post codes 6201-6400
4. Postcodes 6401-6800

Table 5: Changes in gender distribution over time

	Percent female			Increase per year			
Method	1981	1991	2001	1981-1991		1991-2001	
Postcode analysis				F	M	F	M
Major Cities[1]	18	30	41	49	41	80	34
Rural[1]	11	25	35	35	33	36	10
Total	15	28	39	84	74	116	44
Survey[2]	19	33	39				

1. As set out in Table 3
2. Percent of female veterinarians in the 221 rural practices for which information was obtained in the current survey

The statement `It is difficult to recruit experienced veterinarians' elicited a much stronger response than any other item. Two-thirds (68%) of the principals surveyed strongly agreed, and another 21% agreed with this statement. One principal, who had recently sold out, commented that a
significant reason as to why I sold my practice is the ongoing difficulty with finding suitable associates.

Another commented
I personally believe rural vets are a dying race. I have been advertising for 2 years for a mixed vet one hour from (capital city). I have been forced to close a self-sufficient branch practice because of lack of vets.

Although male veterinarians are entering rural Australia at a decreasing rate, the number of females appears to be increasing at a fairly constant rate of about 35/year (Table 5). For the most part, they are now well accepted by farmers. In fact, only 11% of principals disagreed with the statement `Female veterinarians are well accepted by our farmers'. Some went on to volunteer complimentary comments, including, from male principals:

- I have just employed my first female and she is excellent
- the females have a better work ethic and take advice better,
- our present female employee (is) brilliant -the best I've ever had

and, from a female principal:

- our focus is on building strong client-focussed relationships and some men have a lot of trouble with this.

Furthermore, on average there is no difference in the time they stay in the job. Far example, although 21% of principals reported that male associates stayed longer than females, the remainder reported either that females stayed longer (10%) or that there was no difference between genders. For the 830 recent graduates reported on in the survey, this was an average of 1.9 years. In the longitudinal survey mentioned above, equal numbers of males and females graduated, but 20% of the females and 15% of the males were still in mixed practice ten years after they graduated.

Although they stay in a job for a similar time to males, female veterinarians are less likely than males to continue to work full time. For example, in the longitudinal survey, 73% of the males but 48% of the females were working full time after 10 years; 37% of the females but 16% of the males were working part-time and the rest were not doing any veterinary work. A number of principals commented that female veterinarians who bad worked. for them were reluctant to be on call after hours. Furthermore, the provision of maternal leave can cause additional difficulties for practice principals, especially given the difficulties in recruiting associates.

Some of these issues were highlighted by a principal with two experienced female veterinarians. One, married to a local man,
is away having babies and is employed between parturitions. The other recently came to town after her husband was transferred here (lucky for us). The main trouble we have with female vets is when they leave to have babies and then want to return to work. Their replacement finds love and then wishes to stay in town. Practice gets bigger and we travel further to keep the work up.

And another
...what is becoming the part-time nature of work for female vets, i.e. leave to have children. and then only return part-time or not at all. Female vets are certainly more dedicated in their early years than male vets...

Although the desire of women for part time and/or casual rather than full time work may create difficulties for principals seeking to maintain a stable workforce, there are others for whom their potential availability is seen as a bonus.

One other important issue is that females in general are less interested in the business aspects of veterinary practice than males, and are much less likely to become part or sole owners of practices. Some evidence for this assertion came from the Lifestyle survey of 2000? Females who had graduated up to ten years ago were less than half as likely to be owners than were males, and amongst those who had graduated 10-20 years ago, half the females but three-quarters of the males had some ownership of the practice. [3]

In the current survey, females constituted 39% of the total veterinarians, but only 14% of the owners/partners. Although part of the explanation for the difference in ownership between males and females undoubtedly lies in the family responsibilities of many of the females, it does seem that females in general are less inclined towards managerial positions than their male counterparts. [3,8]

The combination of a decrease in the number of males entering rural practice, and a low interest amongst females in continuous full time work (and especially in after hours) and in practice ownership, will have serious implications for rural veterinary practices. It has already become extremely difficult for principals to attract and retain suitable associates, and for some the future is bleak. Evidence for this was obtained in the current survey, where 70% of the practice principals, most of them male, strongly agreed (42%) or agreed (28%) that 'I am seriously concerned about whether I will be able to sell my practice/partnership when I want to retire'.

One principal, after commenting that it had been virtually impossible to attract a locum, indicated that
if it were physically possible, I would have been out of rural practice years ago. While the practice has provided us with a sound income, it will inevitably be a noose around our necks.

Another commented:
There are few buyers for rural practices. Most young male vets can't accumulate the deposit and most female vets don't want the responsibility when they can get as much well paid part time work as they want without the headaches. The other problem with rural practices is that the buildings may be over-capitalised, and the real estate presents no capital gain potential.

One other slightly tangential point is that in some practices at least, the female veterinarians do a disproportionate amount of the small animal work. In the Lifestyle survey, for example, it was found that the average male in rural practice spent 54% of his time on dogs and cats, whereas the corresponding percentage for females was 79%.[9]

It is therefore significant that as the number of female associates is increasing, so the percentage of practice time devoted to small animals is increasing. Not only was this clear from the Lifestyle survey, but in the current survey the average percentage of time spent on farm animals decreased from 55% in 1981 to 49% in 1991 and 34% in 2001.

Although the increasing relative strength of the small animal work helps to maintain the financial viability of most rural practices, it does have a potential disadvantage in that some recent graduates-males as well as females-may not see enough farm animal cases to develop their range of skills in this area. As one principal observed:
With university funding cutbacks etc, practices are the only resources available to help get students up to a remotely employable level of skill. ..Further, with rural contraction in many areas, it will take a new grad in mixed practice 5-6 years to acquire the mixed caseload I acquired in 2.5-3 years back then (1976)-hence the consuming public's interest will in fact be less well served. True `GENERALIST PRACTITIONERS' will be needed for a long time yet, I believe.

Comment
Although the number of veterinarians in rural Australia continues to increase, most of the net increase is in female veterinarians. On average, they are less likely than males to seek continuing full-time work with farm animals, especially if it involves after hours work, and fewer of them will become owners of practices. Furthermore, although more than half of recent graduates seek experience in rural practice, most leave after about two years, never to return. As a result, it is very difficult and in some cases impossible for principals to attract experienced associates and potential practice partners. These factors have severe implications for the maintenance of practices that can provide adequate veterinary services for the animal industries.

Working hours and after hours on call are key reasons why some leave rural areas, 1,2'4,5 although in the current survey fewer than half (46%) of principals agreed that `After hours duty is an important reason why vets leave here'. Furthermore, although sexist attitudes of some farmers and colleagues were reported by female respondents to the Lifestyle survey to be a major disadvantage of working in a rural area, 1,2 most principals (76%) responding to the current survey disagreed that `sexist attitudes discourage women from staying in rural practice'. Remuneration, the tiring and often dangerous work, and the social and professional isolation were also seen as disadvantages of rural practice."

It has frequently been argued that the recruitment and retention of recent graduates in rural practice would be greater if more of them came from the types of farms served by rural practitioners. Not only would they be better able to understand the needs of farmers and to communicate effectively with them it is argued, but they would be less likely to be deterred by hard work, long hours and social isolation.

The current survey contained two items on this topic: `recent graduates from farms fit in better than others', and `recent graduates from farms stay longer than those from cities'. The response rate to these items was relatively low, because, as one principal pointed out `(we) haven't seen any, BUT WE WOULD LIKE TO. We take final year students from Syd uni and have only seen one country person (girl) in 10 years - and she will be good.' However, most of those who did express a view agreed that those from farms did fit in better (90%) and did stay longer (78%).

In the past the case that farm origin be used as a selection criterion for veterinary students has lapsed for want of objective evidence. However evidence in support of this case is now available from the longitudinal study referred to earlier. When they entered the course in 1985 and 1986, the 154 participants in that study were asked about their background, especially in relation to farms and animals. They were asked bow long they had spent on farms where the principal income came from animals. The path taken by each participant was tracked, and it was found that when they graduated, 83% of those who had spent more than two years on farms started in mral practice, compared with 55% of those with less or no farm experience.' Five years later, 44% of those from farms were still in rural practice, compared with 22% of those without farm experience. Ten years after graduation, the percentages in rural practice were 28% of those from farms, and 14% of the rest. Thus although there was a high attrition rate from both groups, the likelihood of being in rural practic**e at five and** 10 years after graduation was twice as great for those who had grown up on animal farms as for those from other backgrounds.'

Just as the longitudinal study has produced evidence to support selection based on what the applicants have done -lived. on animal farms- it has also produced evidence against using what the applicants say they will do -against the use of interviews to help predict career path.5 When these students entered the course they were asked what type of work they expected to be doing five years after graduation. Then 26% predicted that that they would be in mixed practice, 5% small animal practice, 29% were uncertain and the rest predicted other types of veterinary work. Ten years later, five years after graduation, only 31 *% of those who predicted they would be in mixed practice* were in mixed practice. This was very similar to the percentage of the whole group (26%) and those who were uncertain at the time of entry (28%).˚"

This clearly indicated that a prediction made at the time of entry to the course is of no value in predicting the subsequent career path, and that views expressed at interview are unlikely to help overcome the problems of recruitment and retention for rural practice.
Some principals proposed that the gender imbalance be corrected during the selection process, but this is precluded by the Commonwealth Antidiscrimination Act 1991.

Table 6: Changes in the number of veterinarians employed by state, territory and commonwealth government departments responsible for animal health'

	1980/81	1990/91	2000/01
States and territories			
Northern Territory	20	22	15
Australian Capital Territory	O[2]	2	1
New South Wales [3]	113	102	90
Victoria	86	53	40
Queensland	86	85	59
South Australia	41[4]	35[4]	17
Western Australia	41	50	39
Tasmania	27	16	14
Total states/territories	**414**	**365**	**275**
Commonwealth			
DPIE/AFFA[5]	185	204	146
CSIRO	36	22	14
National Registration Authority			10
Total commonwealth	**221**	**226**	**170**
TOTAL-AUSTRALIA	**635**	**591**	**445**

1. Numbers for each state and territory have been generated with considerable help from relevant senior government veterinarians. Dr Andrew Cupit of Agriculture, Fisheries and Forestry Australia provided those for the Commonwealth government.
2. ACT was then under a commonwealth department
3. Includes Rural Lands Protection Boards as well as NSW Agriculture 4. Includes Institute of Medical and Veterinary Science
5. Department of Primary Industries and Energy/Agriculture, Fisheries and Forestry - Australia

Government veterinarians

States and territories.- The number of veterinarians in Departments of Agriculture (or their equivalents) in the states and territories has decreased by 34% over the last 20 years (Table 6). This decrease began during the eighties, with the number of state and territory veterinarians decreasing by 12% from 414 to 365 between 1981 and 1991. The rate of decrease accelerated during the nineties, and by 2001 there were only 275 veterinarians employed in these departments - a decrease of 25% in the 10 years since 1991 (Table 6).

Some of these changes have resulted from specific events such as the winding down of BTEC and the transfer o£ quarantine responsibilities from states to commonwealth. Other changes have been associated with the closure of regional diagnostic laboratories, including those at Armidale and Wagga Wagga in NSW, Benalla, Hamilton, Baimsdale and Bendigo in Victoria, and Struan in South Australia.

These decreases have been associated with other matters of concern. For example, few positions have been available to appoint younger veterinarians who would then be able to acquire relevant skills and experience. Furthermore. the average age of government veterinarians with specialist skills is increasing progressively, and many of them will retire over the next few years leaving major gaps in expertise. Even if replacement positions are available, it is likely to be difficult to recruit veterinarians with adequate training and experience.

One reason for this is that the pool of potential applicants is relatively small because few younger veterinarians now gain extensive experience with farm animals. Secondly, those with an interest in farm animal health may have been discouraged from seeing the government (or university) as a career path by the paucity of positions available in this field. And thirdly, the cutbacks in university and government funding have decreased the opportunities provided for advanced training relating to farm animals.

Although not restricted to veterinary pathology, these concerns can be seen starkly in relation to this discipline. Dr Richard Miller, Chief Pathologist of Idexx Laboratories in Brisbane, has estimated that 50% of the veterinary pathologists in Australia are more than 50 years old, and only 10% are less than 35.' The figure is much higher for those who are registered specialists: 72% are more than 50 years old. Furthermore, the number of veterinarians in pathology training programs in Australia- six -will not be enough to replace those who will retire over the next few years. Miller has pointed out that it is unlikely that the shortfall could be made up' from overseas, as the position internationally is similar, but the salaries overseas are much higher than in Australia.[10]

There has also been a decrease in the number of veterinarians employed by the commonwealth (Table 6). Whereas the Department of Primary Industries and Energy employed 204 veterinarians in 1990, its successor, Agriculture, Fisheries and Forestry-Australia employed only 146 in 2000. Similarly, the number of veterinarians within CSIRO has decreased from 36 in 1980 to 22 in 1990 and 14 in 2000 (Table 6). Despite this, the number of veterinarians in the Emergency Response Group at the Australian Animal Health Laboratory within CSIRO has remained constant at five."

Acknowledgements
The Registrars of each of the Veterinary Boards in Australia were most helpful in arranging for the relevant rolls to be made available.

Senior government veterinarians helped by arranging for lists of government veterinarians to be checked for completeness and accuracy. The help of Drs Brian Radunz (NT), In Denney and Frank Doughty (NSW), Hugh Millar and Wal White (Vic), Kevin Dunn (with help from Rod McMahon)(Q), Robin Vandergraaff(SA), John Edwards (WA) and John Gilham (Tas) was particularly valuable. Drs Gander Murray and Bob Biddle and members of their staff, most notably Andrew Cupit, kindly provided details of Commonwealth veterinarians.

The help of Dr Richard Miller of Idexx in providing details of veterinary pathologists Australia, and Dr Harvey Westbury of AAHL for information about the Emergency Response Group in that Laboratory, is also acknowledged with sincere thanks.

Principals of 221 practices throughout rural Australia provided valuable information by completing questionnaires and in many cases by providing additional comment. This help was invaluable, and is acknowledged with grateful thanks.

References
1. Heath TJ and Niethe GE (2000a) Veterinary Lifestyle Survey--2000, Report to Australian Veterinary Association Board.
2. Heath TJ and Niethe GE (2001) Veterinary practitioners in rural Australia: a national survey. Australian Veterinary Journal. 79, 464-469.
3. Heath TJ and Niethe GE (2001) Effect of gender on ownership and income in veterinary practice. Australian Veterinary Journal. In press.
4. Heath TJ (1998) Longitudinal study of career plans and directions of veterinary students and recent graduates during the first five years after graduation. Australian *Veterinary* Journal 76, 181-186.
5. Heath T (2001) *Fifteen* years in the *lives of THE YOUNG VETS.* Book in preparation. 6. Heath T (1996) Career paths of veterinarians during the first 10 years. Australian *Veterinary* Practitioner. 24, 187-192.
7. Heath T (1996) On looking forward from graduation: 1960-1995. Australian Veterinary Practitioner. 26, 156-157
8. Poole ME and Langan-Fox J(1997) Australian women and careers. Psychological and contextual *influences* over the *life* course. Cambridge University Press, Cambridge.
9. Heath T and Niethe G (2000) What percentage of their time do private practitioners spend with each species of animal? Australian *Veterinary* Practitioner 30, 120-123.
10. Miller R (2001). Vet pathology coming close to extinction. Australian Veterinary Journal 79, 522-523.
11. Westbury, H (2001) Personal communication.

MEAT INTRODUCED INTO UK ON AIRCRAFT

AVA comments were derived from oral conversations with officers of Agriculture, Fisheries and Forestry, Australia. Some confirmation sought from UK has not arrived at the time of writing. Amounts of meat estimated to have been imported on each aircraft are still being confirmed.

Messages have included

Chris Bunn
Program Manager, Emergency Preparedness

ph:02 6272 5540
Fax 02 6272 3372
chris.bunn@affa.gov.au

Still awaiting details. However, inspections of individual flights from Gambia early 2001 was finding over 1 tonne being imported for "personal use"! Passengers can bring in up to 1 KG of cooked meat for "personal use" under EU law (see Q&As from DEFRA website below). Also, I have been cold of detection of shipping containers being part filled with hard cargo (shoes, etc) and then bulk packages of tonnes of meat hidden behind. Cases quoted have been from China and Saudi Arabia. Thus, the figure of 100KG is way too low. The following info from a Press Release in February 2002 might be of interest:
"At Heathrow Airport last week an exercise by customs and health officials resulted in the seizure of 315 kilograms of prohibited food produce. Passengers were checked going through customs controls, and some were found to be carrying illegal imports. Most of this

was fish. There was some meat, chickens and whelly (dried pig/cow skin with fat attached). Similar exercises in the past have revealed similar animal products."
I will let you know if I find out more specific details. Regards,
Neil

Q&As on Food Imports from DEER A website.
What can you bring back from outside the European Union? Meat and meat products. You may only import a maximum of one kg (2.2 lbs) of fully cooked meat products from any non EU country. These meat products (including poultry meat products) must be fully cooked in hermetically sealed containers (see below) and must be intended for personal consumption. Such consignments must be imported as part of a traveller's luggage or contained within a postal package sent from abroad. Postal packets may not be divided after arrival in Great Britain. If they are in excess of one kilogram they will be refused entry.

Consignments landed in contravention of these regulations are liable to be seized, without compensation.
Hermetically sealed containers are any containers which are designed and intended to protect the contents against the entry of micro-organisms both during and after beat treatment. They include cans, glass jars and flexible pouches. The fully cooked meat product must have been beat treated in the hermetically sealed container so that it remains sterile when stored at ambient temperatures.
Ends

Australian Veterinary Association
22 August 2002