

Obituary

Dr James Archibald passed away on December 11, 2004. During his 85 years he had a remarkable career, some might say he had multiple careers, influencing countless generations of veterinarians, not only in Canada but worldwide.



Dr Archibald was the Secretary-Treasurer of the Commonwealth Veterinary Association (CVA) from 1984-1991. He and a long time friend and colleague, Dr Laurent Choquette, were primarily responsible for rejuvenating the CVA in the early 1980's. Along with Dr Trevor Blackburn, they directed the very successful first PanCommonwealth Veterinary Conference in Harare, Zimbabwe in 1991. Dr Archibald was instrumental in recruiting the first editor of the CVA News, Dr Brock Cleland. The CVA News is now the Journal of Commonwealth Veterinary Association, edited by Dr Abdul Rahman.

Dr Archibald was responsible for my getting involved with the CVA. In 1985 he asked me if I would be interested in starting a Journal-Book program. The objective was to collect recent older editions of veterinary books and journals and send them to veterinarians in needy Commonwealth countries. Today, the Book Program is still going strong and has now spread to other countries and interestingly, the Convenor of the Program, Dr Brian Derbyshire, is a retired professor from the Ontario Veterinary College.

Dr Archibald was born in Scotland but moved first to the USA and then, as a young man, to Canada. Following a three year stint in the Canadian Army Medical Corps during the Second World War he enrolled in the Ontario Veterinary College, graduating in 1949. He joined the faculty and subsequently earned several post-graduate degrees in the field of surgery. As a researcher and a teacher

he was recognized as a pioneer in his field, co-authoring the textbook Experimental Surgery, and later was the editor of Canine Surgery, as well as many other books and articles. As a teacher he was unique. Not only was he an exceptional surgeon and researcher but was very interested in the arts. Whenever he came into the classroom one never knew what the topic was going to be for the day; it could be on surgery or it might be a recitation of Robbie Burns! Above all he instilled in his students a sense of professionalism, both in attitude and appearance.

Dr Archibald remained at the Ontario Veterinary College for his entire career. During this time he was instrumental in influencing the building of a new companion animal wing for the College, including a state of the art surgical suite, and later became Head of the Department of Clinical Studies. His last appointment at the OVC was Director of Animal Care Services. In 1986 he was appointed University Professor Emeritus.

Dr Archibald was active in a number of veterinary associations. He served as President of the Canadian Veterinary Medical Association in 1962-63, was an editor of the Canadian Veterinary Journal, and served for many years as the Chairman of the CVMA National Examining Board.

Dr Archibald was named to the Order of Ontario in 1990. He also supported many organizations including Amnesty International, Canadian Save the Children Fund, and the Council of Canadians.

~ RG Stevenson

Obituary

Tragic Veterinary Loss In Australia

An outstanding veterinarian with close involvement in CVA was tragically killed in an aircraft crash in northern Queensland on Saturday 7th May 2005. All fifteen occupants of the plane were killed within ten kilometres of it landing when it hit a tree-covered hillside and exploded. At the time of his death, Dr Banks held the very senior post of General Manager, Animal Biosecurity in the organisation, Biosecurity Australia and was working in this relatively remote region in his role of heightening Australia's preparedness to resist any animal quarantine threats to the Australian farming industries.



David graduated BSc from the University of London 1971 and BVet Med and MRCVS in 1975. He obtained the DVTM at the University of Edinburgh, Scotland in 1976 and his higher qualifications in Australia, MACVSc in Veterinary Epidemiology and PhD from James Cook University in 1985.

After a period as a private practitioner in Kent, England in 1975-6, he moved to Papua New Guinea where he held the position of Area Veterinary Officer, Goroka, and was later Chief Veterinary Officer from 1979 - 80. Not content with the knowledge he already possessed, 1980 he became Research Fellow in Tropical Veterinary Science at James Cook University North Queensland, where he studied and conducted research into epidemiology and coordinated overseas consulting activities. His next position was as Senior Research Scientist for CSIRO at the Koronivia Research Laboratory, Fiji where he managed projects researching parasitic diseases which covered the countries of Fiji, Solomon Islands, Vanuatu, Samoa and Tonga later adding to these Kiribati, Tuvalu, West Timor and Indonesia.

The next move in 1990 was to Canberra, Australia to become Principal Veterinary Officer in the Animal Quarantine and Exports Branch of the Animal Quarantine Inspection Services (AQIS), until joining its successor organisation, Biosecurity Australia, where he became the senior scientist in Animal Biosecurity.

But in the 53 countries of the CVA David Banks is best known as a warm and charming, dedicated worker anxious to help members from all countries but particularly including those from the developing world. For instance David had a real empathy with and concern for the constraints and special needs of the Pacific Islands. In working closely with

colleagues from developing countries, David practised and epitomised what is the essential 'spirit' of the CVA and that is the stronger assisting the less strong!

David Banks served as the Councillor for CVA of the Australian Veterinary Association from 1991-2001, its longest serving representative on CVA. He participated in all three of the Pan-Commonwealth Veterinary Conferences in Harare, Bangalore and Wellington NZ as a stimulating speaker and active regional Councillor. He likewise participated in all Regional Conferences in the Solomon Islands, Wellington, Singapore, Vanuatu and

Kuala Lumpur. But even more than his gifted lecturing skills which reflected his general communicative abilities, his assistance and advice for over 15 years to the Executive of CVA in countless ways, all achieved the result of helping veterinarians in smaller countries particularly the Pacific Islands and PNG.

CVA has lost one of its most gifted and dedicated sons and his death will be mourned by veterinarians and others throughout the Australasia/Oceania region and the rest of the Commonwealth. Its deepest sympathies have been extended to his wife Anne and their three children who have been his continual supporters even during his many absences from home. CVA is privileged to have known and be served so generously by David and his memory will linger with us in CVA for a very long time.

At the Celebration of his life held in Canberra recently over 300 people, many holding very senior positions, gathered to hear ten speakers cover the various aspects of the life journey of this remarkable man. CVA was honoured to be represented among the speakers and also by the presence of both the Treasurer and Secretary at the very moving event.

~ WJ Pryor



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President's Column



This year commenced on an extremely sad note for our Asian Region, with the destructive consequences of the late December Tsunami becoming more apparent each passing day in India, Sri Lanka, Maldives and Malaysia. The tragic losses included loved ones in 3 veterinary families in Sri Lanka and the loss of a significant number of livestock, pets and wildlife. In addition, severe damage was sustained to farms, facilities and to fodder and many rural families who depended heavily on livestock for their livelihoods suffered greatly.

The CVA played a lead role in bringing relief to those in need in the livestock sector by working closely with other agencies such as the Blue Cross of India and the Sri Lanka Veterinary Association [SLVA] in Sri Lanka. The CVA Secretary, Dr Abdul Rahman, was personally engaged in these operations and visited the most severely affected areas in the coastal districts of Tamil Nadu State, including Chennai, Nagapattinam and Tirunelveli. Dr. Rahman was appointed to a new coordinating body, the Tamil Nadu Animal Relief Task Force for this purpose, formed as a response to the need for special focus on animal welfare, which was not a high priority for the other relief agencies. The Task Force played a key role in facilitating both short and longer term assistance and relief, involving a wide range of activities.

In Sri Lanka, our Regional representative, Dr Swarna Herath, played a central role, working with members of the SLVA and other agencies, as well as with many volunteers in providing relief. The SLVA in fact participated fully in the wider relief effort targeting human survivors and developed their own "SLVA Survival Kit", with donations from many sources, including from veterinarians, for distribution to those in real need. The CVA made modest cash donations to provide some direct support for relief efforts in India, Sri Lanka [this included a donation to the immediate family of a veterinarian who lost his life] and Maldives.

We were deeply shocked to learn of the most untimely death of a CVA stalwart, Dr David Banks, past Councillor for Australia in a plane crash on 7th May, in far north Queensland, Australia. David perished while at work in a geographical area very close to his heart - the tropical Australian interface with the many developing island states of the Pacific Ocean and adjacent region. He had been based in both PNG and Fiji during his earlier career and more recently had also worked closely with Indonesia, Timor L'este and Malaysia. In fact David had a very real empathy with and concern for the special needs of the small and scattered Pacific Island States. David worked tirelessly for his profession and over and above this he was the model CVA volunteer and advocate. He was passionate about the CVA and strived at every opportunity to advance its mission, including after his term as Councillor. In the process, David made a great impact and was highly respected over a wide area. We are proud he was vital part of the CVA and we will miss him greatly.

This is the second issue of our new Journal. While we have received some positive feedback from our readers, we would appreciate views and suggestions on a regular basis, in order to assist with making this periodical more relevant and meaningful.

July, 2005

Robin Yarrow

Commonwealth News

Colin Ball retires

Mr. Colin Ball retired as Director of Commonwealth Foundation after working for nearly seven years with the Commonwealth Foundation.



Former President of Malta elected as new Chair of the Foundation

In September 2004, **Prof. Guido de Marco**, the former President of Malta was elected as the new Chairperson of the Commonwealth Foundation for a two-year term commencing 1 January 2005. He succeeds Graça Machel of Mozambique who led the Foundation from 2001 to 2004.



4th Pan Commonwealth Veterinary Conference, Barbados, West Indies November 4-8, 2007

The 4th Pan Commonwealth Veterinary Conference will be held at Barbados, West Indies from 4 - 8, November 2007. This conference which is jointly organised by the CVA and Barbados National Association has constituted a local Organising Committee comprising of Dr Gus Reader, CVA Council Barbados, as Chairman, Dr Derek Griffith, Secretary/Treasurer and Dr Will Huey, Dr Mark Trotman, Dr Carol Hull and Dr Dean Springer as members. Further details can be obtained from

Dr. Collin Boyle, RR Canada/Caribbean
menzo@caribsurf.com or
Dr Gus Reader
reader@sunbeach.net

New Director of the Commonwealth Foundation

Dr. Mark Collins has been appointed as the new Director of the Commonwealth Foundation. He has been working in the United Nations Environment Programme in Nairobi, Kenya. His role at UNEP was most recently in the Division of Environmental Conventions following an earlier role as Director of the UNEP World Conservation Monitoring Centre in Cambridge, UK.



Dr Collins's experience is in many parts of the Commonwealth, where he has worked with intergovernmental organisations, governments, international NGOs and the private and voluntary sectors. In addition to living in London and Cambridge, UK, his career has included postings to Nigeria and Malaysia with the UK Overseas Development Administration, a research post in Kenya with the International Centre for Insect Physiology and Ecology, and five years with the IUCN - The World Conservation Union.

Dr Collins studied for his first degree in natural sciences at Wadham College, Oxford University; for his doctorate in ecology at Imperial College, University of London, and for his certificate, diploma and master's in business administration with the Open University.

In the field of communications Mark has published 120 papers, written or edited eleven books, mainly on environmental and scientific matters, and has made frequent appearances in the press, television and radio. He plays an active role in public life, has served on many international committees, advisory groups and voluntary bodies, and in 2000 received the Royal Geographical Society Busk Medal in recognition of his work.

Mark is married to Melanie, an Assistant Director for Children Services in a local authority. They have two children, Charlotte (18) and George (15).

Journal of Commonwealth Veterinary Association

Instructions to Authors

The JCVA publishes original articles, case reports, short contributions and review articles. Please contact the Editor if you plan to write a review.

Send your manuscripts to:

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Editor, JCVA
#123, 7th "B" Main Road
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Bangalore 560011, INDIA

Covering Letter

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Animal Welfare

The handling and use of animals in experiments must conform to the International Code of Practice for the care and use of animals for scientific purposes.

Manuscript

Submit the manuscript in duplicate. Type it on one side of A4 paper, with 10 cpi font, leaving a left-hand margin of 3 cm and numbering every fifth line. Use double spacing throughout, including title page, abstract, text, acknowledgments, references, tables and legends for illustrations. Do not underline anything. Number all pages.

Alternatively a version can be provided on a computer diskette, preferably in PC format. Acceptable word processing programs are WordPerfect and MS Word. If you use a Macintosh send your manuscript as an email attachment or on a PC formatted disc. An email attachment can also be sent to shireen@blr.vsnl.net.in

Title

The title should be concise, specific and informative but should not make an assertive claim about the conclusions of the study.

Authors' Names And Addresses

Give initials and surnames in capitals without stops. Separate the authors' names with a comma, except the names of the penultimate and ultimate author, which are separated with 'and' in lower case letters. If a single postal address is applicable, type it in full below the authors' names. If there is more than one address, provide all as footnotes. An Email address may be included. The first named author is assumed to be the author for all correspondence, including requests for reprints. Kindly include your qualifications mentioning the degrees obtained.

Layout

Articles should have a structured abstract of no more than 250 words. The subdivision is up to the author, but should encompass the Objective, Design, Procedure, Results and Conclusion. Write subheadings in lower case bold letters, followed by the text on the same line. List nonstandard abbreviations and their explanations after the abstract. Use only the abbreviated form in the text. Avoid use of abbreviations in the abstract. The main headings, following an untitled introduction, are Materials and Methods, Results, Discussion, Acknowledgments and References. The introduction should state the purpose of the study. The contents of Materials and Methods should enable others to reproduce the work. Present the findings in Results concisely and logically. Evaluate and interpret the findings in the Discussion, but do not present new data. If possible, write the main conclusions at the end of the Discussion. Headings may vary from standard if the variation makes the article more informative.

Tables

Type each table double-spaced on a separate page. Number tables in Arabic in the order they are referred to in the text. Each table should have a concise title that describes its content adequately. Information in the table must not be repeated in detail in the text. Do not use vertical lines. Use horizontal lines to separate the table from the title, and footnotes and column headings from data.

Figures

Both black and white and colour photographs are encouraged to a maximum of five only. Figures can be submitted in digital form as separate files. They should be saved as TIFF, JPEG or EPS files with a resolution of 300 dpi. EPS files must be saved with the preview option. Illustrations provided as MS Word files will not be accepted. Write legends for figures and explanations of symbols on a separate page. Legends should contain enough information to make the figure comprehensible without reference to the text.

References

Cite only those publications that are essential for the understanding of the study. Number text references consecutively, in the order in which they are mentioned, by superscript Arabic numerals. Write and number the reference list in the sequence of the references in the text. References to journals, books, conference proceedings, organisational papers, anonymous editorials, foreign language articles and internet web sites, respectively, are written as follows:

1. Gibson KT, Hodge H, Whittam T. Inflammatory mediators in equine synovial fluid. *Aust Vet J* 1996; 73: 148-151.
2. Peterson ME, Randolph JF, Mooney CT. Endocrine diseases. In: Sherding RG, Editor. *The Cat: Diseases and Management*. 2nd edn. Churchill Livingstone, New York, 1994: 1403-1506.
3. Rhodes AP. Infectious bovine keratoconjunctivitis vaccination. In: *Proceedings of the 23rd Seminar, Sheep and Beef Cattle Society*, New Zealand Veterinary Association, June 1993.
4. Australian Veterinary Association. Tethering of sows and sow stalls. In: Greenwood PE, editor. *Members' Directory and Policy Compendium*. 1997: B5.
5. Where do we stand on manpower? [editorial] *Vet Rec* 1995; 137: 1.
6. Homberger FR. Mäusehepatitis-Virus. *Schweiz Arch Tierheilkd* 1996; 138:183-188.
7. Council of Docked Breeds. The case for docking. <http://www.cdb.org>. 1992. Retrieved 15 October 2001.

List all authors if there are five or fewer. When there are more than five authors, list only the first three and add 'et al'. Write titles of books, journals and other publications in italics. Capitalise only the first letter of the book titles. Do not underline or use bold letters. The abbreviation of journals follows that of Serial sources for the BIOSIS previews database. Cite references to unpublished work only in the text, with a notation of (personal communication) or (unpublished). Please send a copy of any cited work that is included in the reference list as 'in press'. It is the authors' responsibility to check the accuracy of reference citations.

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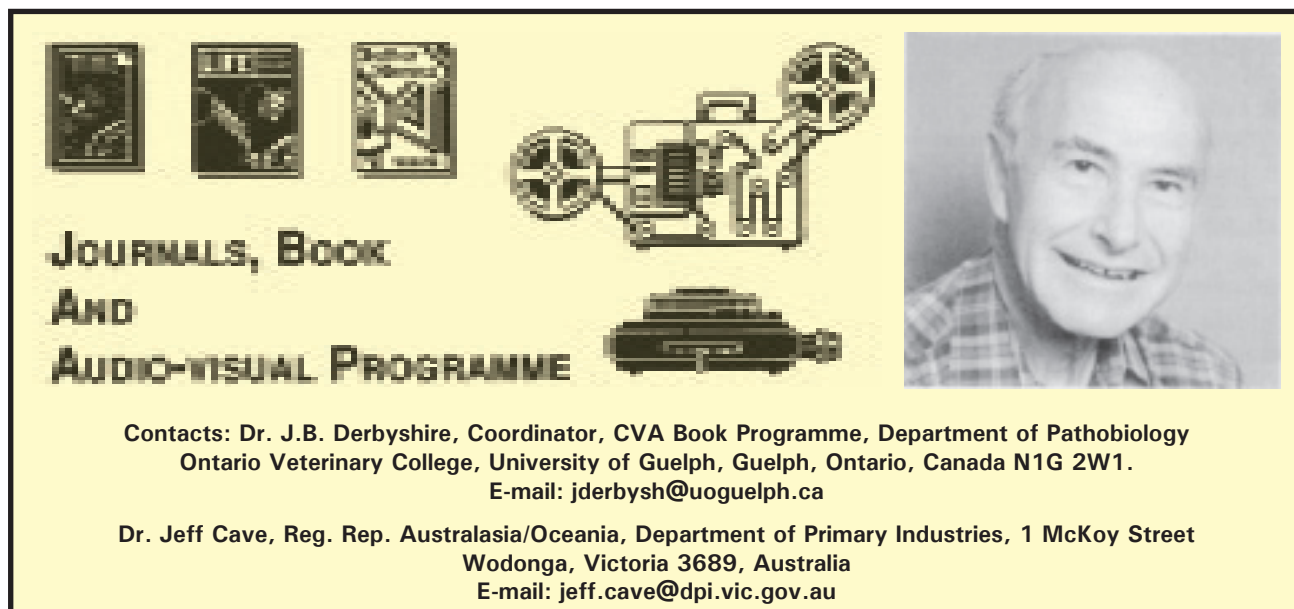
Articles of General Interest

Articles of general interest, experiences in treating of clinical cases, country reports, success stories in animal production, using innovative approaches and where possible enhancing the contribution of women and also using sustainable methods are also encouraged.

Review Articles

Reviews on a specific topic usually are written by invitation. Other authors wishing to submit a review should first enquire of the editor whether the topic is of interest to the Journal. A synopsis of the proposed article often will be requested before the writing of the full version is commenced. Reviews should provide a critical assessment of published works that have contributed to the development or understanding of the chosen topic. The soundness of experimental evidence and the validity of conclusions and recommendations in cited articles should be assessed. Conflicting observations and interpretations should be examined and evaluated.

~ Editor, JCVA



**JOURNALS, BOOK
AND
AUDIO-VISUAL PROGRAMME**

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CVA Book Programme

The CVA Book Programme is coordinated from the Ontario Veterinary College at the University of Guelph by Dr. Brian Derbyshire, assisted by Mr. Jim Brett, the College Librarian. A depot is also maintained in Australia by Dr. Jeff Cave. Books are donated by veterinarians in Canada and Australia, and they are available for distribution free of charge to graduate veterinarians, but not veterinary students, in CVA member countries in good standing. Priority is given to requests from institutional libraries, such as veterinary schools and veterinary associations, and requests from individuals are met as funds permit. Because of budgetary constraints and increasing mailing costs, the number of books which can be shipped is normally restricted to up to 30 titles for institutions, and up to 5 titles for individual veterinarians in any one year. Requests for books should indicate the required subject areas and/or preferred titles where possible, and they should include the mailing address to which the books should be sent. The latter should be abbreviated as much as possible in order that it may be accommodated in the limited space provided on the customs declaration. It is suggested that those wishing to submit a request should first obtain a copy of the current inventories of books available by contacting, preferably by e-mail, either Dr. Derbyshire or Dr. Cave (see above for contact information). Shipments are made by surface mail, and may take several months to reach their destination. The recipients are requested to acknowledge the safe arrival of the books.

During the period July 2004 to June, 2005, 19 shipments totaling 219 books were sent from Guelph to 8 Commonwealth countries as follows: Nigeria (97 books), Pakistan (71 books), Fiji (12 books), Barbados (9 books), Jamaica (11 books), Tanzania (9 books), India (8 books)

and Kenya (2 books). Eight of the shipments were to institutions (164 books), and 11 were to individual practicing veterinarians (55 books). Between July and December, 2004, 79 books were shipped from the Australian depot to 3 countries as follows: Nigeria (48 books), Fiji (26 books) and Barbados (5 books).

The current inventory at Guelph comprises over 400 titles and over 800 volumes, while the Australian depot holds close to 250 volumes. Most areas of veterinary medicine are covered. These include anatomy, anesthesia, animal science, avian, fish, laboratory animal & wildlife medicine, biochemistry & biology, equine medicine & surgery, farm animal medicine & surgery, histology & hematology, immunology, microbiology, parasitology, anatomic & clinical pathology, pharmacology, physiology, public health, zoonoses & epidemiology, radiology, small animal medicine, small animal surgery, theriogenology and toxicology, as well as miscellaneous titles such as veterinary dictionaries and indexes. The most extensive stocks are in small animal medicine and surgery, in which the greatest number of donations are received, and in anatomy & histology. Most of the books were published during the last 20 years; older editions are discarded each year.

June, 2005

**J.B. Derbyshire
Coordinator
CVA Book Programme**

CVA STUDY FUND

The Fund

This fund has been established by the Commonwealth Veterinary Association (CVA) in conjunction with the Commonwealth Foundation to honour the contributions made by Mr. John Anderson and Dr. L.P.E. Choquette in establishing and promoting the activities of the Commonwealth Veterinary Association.

Financial support to match the funds contributed by the Commonwealth Veterinary Association and the several national and local veterinary associations throughout the Commonwealth may be provided by the Commonwealth Foundation.

1. Purpose

Its purpose is to provide financial assistance to:

1. Veterinarians who are members in good standing of their respective national associations to undertake short term study visits to schools, institutions or to undertake short term study courses in veterinary medicine, animal production or related areas in other Commonwealth countries.
2. Animal Health Assistants recommended by the appropriate CVA Council Member and Regional Representative, to undergo further short-term training at a school or institution in another Commonwealth country.

It is expected that such visits will promote professional and para-professional contacts and provide grantees with new knowledge and expertise in their respective fields of interest. Study proposals which will directly benefit the rural poor and disadvantaged will receive sympathetic consideration. All proposals will be expected to describe how they will benefit the home institution, veterinary organization and community. The visit is also expected to result in a broadening of cultural experience and horizons and to promote Commonwealth understanding.

2. Guidelines

1. Grants will be limited to persons with field experience and not holding senior positions.
2. The awards are not normally available for University academic or research staff.
3. Preference will be given to related regions with 'south-south' movements being encouraged. In exceptional cases, visits to institutions outside the regions qualifying under south-south arrangement will be considered as long as the cost of the visit does not exceed the allocated fund award (Aus \$ 3000). In exceptional circumstances and where approved by the President grantees may receive training in a non-Commonwealth country within that Region.
4. The study period should be preferably between 2-3 weeks.
5. Awards will normally be distributed equally amongst Regions, however, on occasion, the President may authorize additional awards to a particular Region in any one year.
6. The study visits will be financed at a maximum of Aus \$ 3000 including a prepaid air ticket for the least expensive and most direct route.
7. Grants are provided only for periods of concentrated study or training on a particular topic or activity and cannot be made

for attendance at conferences, meetings etc., nor to underwrite a tour of visits to a number of institutions.

8. A report must be submitted to the Secretary CVA within three months of the completion of the study visit. At the completion of the study visit, the participant must receive a letter of release, which should clearly indicate duration of stay, and satisfactory completion of course. The letter should also confirm that at the time of departure, the participants have not left any debts unsettled. This requirement must be conveyed by the Regional Representative or Programme Director to the host institution before arrival of participant.
9. It will be necessary for the host institution to agree to assist in arranging suitable accommodation etc. affordable by the applicant.
10. Grantees will be expected to give one or two lectures at the host institution or veterinary association on aspects of animal health and production activities in their home country. These lectures should emphasize how their studies in the host country will benefit the rural poor and disadvantaged as well as their impact upon the environment.
11. These lectures and the discussions of topics, both professional and social, with the staff of the host institution or veterinary association will serve to further the aims and objectives of the Commonwealth Veterinary Association.

3. Applications

- i) There is a set Study Application Form/Application. Forms are available from the CVA Secretary, or through the CVA Website.
- ii) Applications should be submitted to the appropriate Regional Representative for processing, at least 6 months prior to the proposal visit.
- iii) The applicants should provide the following:
 - a) A complete curriculum vitae to the Regional Representative
 - b) Two passport size photographs
 - c) A letter of acceptance from the person who will supervise the study program in the host country
 - d) Evidence that the study has the support of his/her home institution or national association

4. Administration

- i) The Study Application Form with supporting documents must be sent to the appropriate Regional Representative
- ii) The Regional Representative will review the application and make a recommendation to the Secretary, CVA.
- iii) The Secretary, CVA will make a recommendation to the CVA President, who will make the final decision.
- iv) The Secretary, CVA will then inform the Regional Representative who will inform the candidate.

Last date of submission of request to Council Members / Reg. Rep. is 30th Oct. 2005. RRs to submit their recommendations before 30th Nov. 2005 to the Secretary, CVA.

Animal Welfare – An International Perspective

A.C. David Bayvel

*Director
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Introduction

Over the last 50 years, there have been dramatic increases in agricultural productivity, due to general advances in agricultural and veterinary science, specific improvements in genetics, nutrition and disease control and prophylaxis, plus the impact of agriculture support programmes. There has also been an inexorable and substantial move to more intensive systems of production, especially in the more densely populated nations of Europe, Asia and North America and particularly with pigs, poultry and beef cattle. More extensive systems of production continue to be practised in Africa, Australia, New Zealand and South America, for grazing species, and there is a strong public perception that more extensive management systems are synonymous with better welfare.

Seminal texts by authors including Harrison, Singer, Regan, Rollin, Webster, et al, plus the UK Brambell report (cited in Appleby and Hughes, 1997), the concept of the "five freedoms" and the influence of behavioural science, have all had a significant impact, particularly in Europe and North America, on the attitudes to animal welfare of scientists, the public at large and, through them, politicians. Welfare aspects of animal agriculture, and associated consumer preference behaviour, have also attracted increasing attention from some agricultural economists (McInerney 1998, Harper 1998) and agricultural ethicists.

In their paper "Animal Welfare and Product Quality", Jago et al (2000) emphasise the importance of science-based animal welfare standards and the value of the five freedoms by stating, "Most concepts of animal welfare include avoidance of undue suffering, optimising animal health and vigour and are aimed at achieving practices and environmental conditions which are fair and reasonable for the animal. Although the concept of animal welfare is widely regarded as being important, currently there is no single definition of animal welfare that has met with universal

approval. People's beliefs and understanding of what is meant by "welfare" and what is optimal or sub optimal welfare will vary, depending on such factors as their cultural, scientific, religious and political backgrounds."

According to Kellert (1988), the attitudes people have towards animals can be classified into nine categories including naturalistic, ecologicistic, humanistic, moralistic, scientific, aesthetic, utilitarian, dominionistic and negative and that differences exist between countries in the predominant attitude. Despite these differing attitudes towards animals, there is a biological basis for evaluating animal health and welfare, and widespread acceptance that decisions about animal welfare should be based on good scientific evidence.

The Council of Europe has played a key role in developing standards for Europe and which are taken note of internationally. These standards are based on both scientific evidence and practical experience and also emphasize the importance of the relationship between animal health and animal welfare.

It is helpful to have basic guidelines or rules to refer to when making decisions that may impact on an animal's welfare. Probably the most widely utilised set of guidelines is the five freedoms (Farm Animal Welfare Council 1993). These state that for an animal's welfare not to be compromised it must have: freedom from thirst, hunger and malnutrition; freedom from discomfort; freedom from pain, injury and disease; freedom to express normal behaviour; and, finally, freedom from fear and distress. Sometimes slight modifications are made to these basic freedoms (e.g. fear is sometimes omitted from the final freedom), however, they generally serve as a set of goals towards which animal owners and handlers should strive. The five freedoms have been used by many legislators and frequently appear as the basis upon which animal welfare codes and practices have been established.

As guidelines, the five freedoms provide a most useful paradigm. They should, however, not be taken as absolute requirements and, increasingly, they are seen to have important limitations by forward-looking animal welfare science thinkers (Mellor Pers. Comm. 2003).

There is an unfortunate tendency to underestimate the importance of animal health in relation to animal welfare. The prevention and control of disease in all species makes a major contribution to animal welfare and veterinarians, in general, and the OIE, in particular, play a vital role in this regard.

Adams (2001), in reviewing the publication "Livestock in 2020: The New Food Revolution" (Delgado, 1999) emphasises the opportunity for veterinarians "to act locally but think globally" about animal welfare. This joint publication of the International Food Policy Research Institute in Washington, the Food and Agriculture of the United Nations (FAO) and the International Livestock Research Institute in Nairobi provides detailed information on the dramatic increase in the world's consumption of food, derived from animals, over the last 30 years.

Expanding human populations, urbanisation and income growth are expected to continue, and even accelerate, the trend and Adams (2001) asks "is it time to rejuvenate the science of animal husbandry to ensure that animals are better protected?" The importance of knowledgeable and caring animal husbandry is recognized as an essential prerequisite to maximising animal welfare (Hemsworth, 1993).

Fraser (1999, 2001) has emphasised the importance of the linkage between animal ethics and animal welfare and the vital relationship, in terms of public and societal opinion, between historical cultural attitudes to animals and their use in modern agricultural systems. He argues that there is an urgent need to create a new consensus regarding the use of animals in agriculture. The veterinary profession, at large, and the OIE, in particular, are well positioned to make an important contribution to this debate.

The appearance of Bovine Spongiform Encephalopathy (BSE) and recent outbreaks of Classical Swine Fever (CSF) and Foot and Mouth Disease (FMD) in Europe have led to the slaughter of millions of animals and intense political and professional debate on the ethics and scientific basis of certain production systems.

International Trade Considerations

The conclusion of the General Agreement on Tariffs and Trade (GATT) Uruguay Round, in 1994, and the establishment of the WTO, with its associated Sanitary and

Phytosanitary (SPS) and Technical Barriers to Trade (TBT) agreements plus the Agreement on Agriculture, were seen to set the stage, and create a framework, for all member nations to reap the benefits of agricultural trade liberalisation. There has, however, been a growing concern, particularly amongst some non-governmental organisations (NGOs), (Bowles 2000; RSPCA 1998; RSPCA et al 1998; RSPCA & Eurogroup for Animal Welfare 1999; RSPCA 2000), that the WTO rules-based trading system does not adequately address consumer interests and that the credibility of, and public support for, the WTO is thus at risk. The NGOs involved believe that the outcome of the tuna/dolphin, shrimp/turtle and leghold trap issues support their views. These three specific cases essentially support the view that animal welfare considerations cannot be used as a trade impediment (RSPCA 1998). Bayvel (1993, 1996, 2000 and 2004) has reviewed the topic from both a New Zealand and international perspective.

There is no single international organisation with a standard setting role or a responsibility for the provision of expert advice on animal welfare, although a number of organisations and agencies have a significant interest in the area. The largest of these is the Council of Europe, which developed the convention on farm animals in 1976 and now has three other conventions on animal welfare relating to welfare during transport, welfare at slaughter and welfare of companion animals. The Council of Europe has over 40 member countries and the standards developed relate to European farm systems. By the late 1990s, there was growing support for the proposal that the OIE could be an appropriate, established, inter-governmental organisation to address animal welfare issues and seek agreement on international standards.

"Market Place" Trends

In parallel with the policy debate on animal welfare and international trade, important initiatives have been taken by some producers and retailers. A number of OIE member countries, including some European countries, Australia, New Zealand, the USA and Canada have also gained valuable experience in the role of Industry-led Quality Assurance programmes, in promoting animal welfare standards. This approach, underpinned by science-based national standards, provides an opportunity to benchmark animal welfare outcomes. It is preferred to, and seen to be a much more cost-effective option than, a prescriptive regulatory approach. These schemes have, undoubtedly, had a positive impact on animal welfare and have helped to directly address consumer concerns.

Animal Welfare Standards

Defining and assessing animal welfare has become the subject of a significant body of literature over the last two decades. The most commonly accepted definition is that, "the welfare of an individual animal is its state as regard its attempt to cope with its environment, with attempts to cope including the functioning of body repair systems, immunological defences, the physiological stress response and a variety of behavioural responses." (Broom, 1996).

The 1998 and 2001 European Directives on layer hens 99/74/EC (Anon 1999) and pigs 2001/88/EC, (Anon 2001) are both based on extensive scientific reviews conducted by the European Commission Scientific Committee on Animal Health and Welfare. These Directives support the view that public perception does not necessarily equate to optimum animal welfare standards and, thus, both Directives continue to permit the use of (enriched and larger) cages for layer hens and confinement of sows one week pre-partum and four weeks post-mating.

As a matter of policy, the standards developed by the OIE follow the same science-based approach and draw on contemporary scientific consensus. To address the public perception issue, it is recommended, as advocated by Fraser (1999), that animal welfare policy and standards should also be complemented by robust ethical analysis. Blokhuis et al (2000) and MAFF (2001) further emphasise the important interaction between science and society.

Fraser (1999) emphasises the importance of both scientific and ethical inputs by stating,

"As it has unfolded to date, the debate has been disappointing intellectually, ethically, and politically: intellectually, because the debate has not resulted in a genuine understanding of how animal agriculture affects animals, the environment, and the good of the public; ethically, because the polemical nature of many of the accounts of animal agriculture has tended to polarise the debate and to prevent real ethical analysis of important issues; and politically, because this polarised debate has failed to create a climate of dialogue and consensus building. As a first step towards rectifying these problems, there is an urgent need for scientists and ethicists to avoid simply aligning themselves with advocacy positions and instead to provide knowledgeable research and analysis of the issues."

These sentiments, and this strategic approach, are highly relevant to ensure that the OIE is to be both politically and publicly credible in the area of animal welfare.

Office International des Épizooties

Since its establishment in 1924, the OIE has made a major indirect contribution to animal welfare, at a global level, via

the organisation's role in epizootic disease control. The OIE animal health code includes a chapter on minimum animal welfare standards for trade and a standard setting role has also been played in respect of animal transportation. In 1994, the publication "Animal Welfare and Veterinary Services" was included in the OIE Scientific and Technical Review Series (Moss 1994) and provides a valuable State Veterinary Service perspective on animal welfare capability and specific animal welfare issues.

In drawing up its strategic plan for the period 2001 to 2005, animal welfare and food safety were identified as two areas for future OIE involvement and these were formally accepted as strategic initiatives at the 2001 OIE General Session meeting. An international expert group was established to provide specific recommendations on the nature and scope of the OIE animal welfare role. The expert group's recommendations were reviewed and adopted, as Resolution No. XIV, at the May 2002 OIE General Session meeting. A permanent international working group was established and met for the first time in October 2002.

The working group drafted a mission statement plus policies and guiding principles, and reviewed the scope, drafted terms of reference and identified potential members for four separate ad-hoc groups to address initial priority areas. Detailed annual work programmes were developed for 2003, 2004 and 2005. Resolutions XXVI were adopted at the 2003 and 2004 General Session meetings and a successful Global Conference on Animal Welfare was held in Paris in February, 2004. At the 2005 OIE General Session, four sets of animal welfare guidelines were adopted unanimously by all 167 OIE member countries.

Conclusions

Animal welfare is a complex, multi-faceted public policy issue which includes important ethical, economic and political dimensions. There is a real concern, in some quarters, that its recognition as an international trade policy issue is sought for "trade protectionism", rather than "animal protection" reasons. A strategic approach underpinned by science-based policy and standards and an incremental approach to animal welfare change management (Mellor and Stafford, 2001) helps, however, to directly address such concerns.

The need for international leadership in respect of animal welfare policy and standards has been evident for some time and is likely to be an expanding core role for the OIE in the decades ahead. International scientific and professional organisations such as the International Society for Applied Ethology (ISAE), World Veterinary Association (WVA) and the Commonwealth Veterinary Association

(CVA) have confirmed their interest in working closely with the OIE, as have international industry and animal welfare advocacy organisations. Other organisations such as the FAO and World Bank are also taking an interest in animal welfare and in March, 2003, the Government of the Philippines hosted an inter-governmental meeting attended by 25 countries to discuss the possible development of a United Nations Declaration on Animal Welfare.

There is also, of course, a significant increase in interest in animal welfare at University undergraduate and postgraduate level and the establishment of Animal Welfare Chairs in Universities in Canada, the USA, the EU and New Zealand and Australia, over the last few decades, has provided academic and research direction to this interest. Progress in the area of animal welfare will, of course, be a case of "evolution not revolution" based on the principle of incremental change management. It is vitally important that all such changes be science-based and validated, be implemented over realistic time frames and take account of economic and cultural factors.

Implementation of the agreed OIE strategic initiative on animal welfare presents significant challenges to ensure identification of priorities, an appropriate focus and effective use of resources. The approach adopted must recognise the intense interest of non-governmental organisations, the public and politicians and the significant scientific contribution, which can be made by non-veterinarians. In its third and fourth strategic plans the OIE has given increased priority, and allocated additional resources, to increasing its public profile and communication effectiveness. This initiative is particularly relevant to any future enhanced animal welfare role, as all forms of media take an active, ongoing interest in animal welfare issues.

In addition to full ownership of, and "buy-in" to, OIE's animal welfare role by its 167 member countries, it is considered strategically and politically important that other stakeholder groups, including industry groups, NGOs and the WTO, are also fully supportive of this role. The major international conference held in February 2004, thus included all stakeholder groups.

The progress made by the OIE, to date, in relation to international animal welfare leadership is, by any standards, impressive. The future OIE modus operandi will be characterised by a commitment to communication, consultation, continuous improvement and incremental change, as part of a long-term 'journey', rather than any expectation of reaching a short to medium-term 'destination'.

The notion of approaching animal welfare change management on a truly global, rather than a regional, basis,

represents a significant paradigm shift. The support goodwill and esprit de corps so evident during the 2004 Global Conference bode well for the future.

References

- Adams D. 2001. Animal Welfare Column. *Aust. Vet. J.* 79(7): 448.
- Anon 1999. Council Directive 99/74/EC Laying Down Minimum Standards for the Protection of Laying Hens. *OJ* 1999 L203 P.53
- Anon 2001. Council Directive 2001/88/EC Laying Down Minimum Standards for the Protection of Pigs. *OJ* 2001 L316 P.1
- Anon 2002. OIE General Assembly Meeting Resolution, No.XIV, OIE, Paris France.
- Appleby MC and Hughes BO 1997. (Eds) *Animal Welfare* CAB International. Wallingford, UK.
- Bayvel ACD 1993. Animal Welfare - A Threat or an Opportunity for Research, Farming and Trade. *Proceedings of the NZ Society of Animal Production*, 53: 223-225.
- Bayvel ACD May 1996. *Animal Welfare and International Trade Second Pan Pacific Veterinary Conference*, Christchurch.
- Bayvel ACD September 2000. *Animal Welfare and the International Trade Environment*. Workshop on Safeguarding Animal Health in Global Trade Hannover.
- Bayvel ACD 2004. 'Science-based animal-welfare standards; the international role of the Office International des Epizooties' *Animal Welfare* 13 Supplement: 163-169.
- Blokhuis H, Ekkel E, Korte S, Hopster H and van Reenen C October 2000. Farm Animal Welfare Research in Interaction with Society. *The Veterinary Quarterly* 22 (4).
- Bowles D Summer 2000. Is the World Trade Organisation a Friend or Foe to High Animal Welfare Standards? *AWSELVA Newsletter* 4(1), Summer 2000.
- Broom DM. Animal Welfare Defined in Terms of Attempt to Cope with the Environment. *Agriculture Scandinavica. Section A, Animal Science, Supplementation* 27, 22-28.
- Delgado C 1999. *Livestock to 2020 - The Next Food Revolution*. The International Food Policy Research Institute: Washington DC, USA.
- Farm Animal Welfare Council 2001. *Interim Report on the Animal Welfare Implications of Farm Assurance Schemes*. Farm Animal Welfare Council: UK.

Fraser D 1999. Animal Ethics and Animal Welfare Science: Bridging the Two Cultures. *Applied Animal Behaviour Science* 65: 171-189.

Fraser D 2001(a). The Culture and Agriculture of Animal Production. *The Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART) News*, March 2001 No 1, pp 1-2.

Fraser D 2001(b). The "New Perception" of Animal Agriculture and a Need for Genuine Analysis. *J. Animal Science* 79: 634-641.

Harper G November 1998. *Consumer Concerns about Animal Welfare and the Impact on Food Choice*. Comparative Literature Review, University of Reading.

Hemsworth PH, Barnett JL and Coleman GJ 1993. The Human-Animal Relationship in Agriculture and its Consequences for the Animal: *Animal Welfare* 2: 33-51.

Jago J, Fisher A and Le Neindre P 2000. Animal Welfare and Product Quality. In: *Biological Resource Management. Connecting Science and Policy 2000* pp.163-171.

Kellert X 1988. Human-Animal Interaction: A Review of American Attitudes To wild and domestic animals in the twentieth century. In: *Animals and People Sharing the World* pp 137-175.

McInerney JP 1998. The Economics of Welfare. In: *Ethics, Welfare, Law and Market Forces: The Veterinary Interface, Proceedings of a RCVS/UFPAW Symposium*, pp 115-134.

Mellor DJ and Stafford KJ 2001. Integrating Practical, Regulatory and Ethical Strategies for Enhancing Farm

Animal Welfare. *Australian Veterinary Journal* 79: 762-768.

Ministry of Agriculture, Food and Fisheries 2001. *Ethics and Animal Welfare 2001 - Relationships Between Humans and Animals*: Sweden.

Moss R 1994. Animal Welfare and Veterinary Services. *OIE Scientific and Technical Review* 13 (1).

RSPCA 1998(a). *Agenda 2000: The Future for Farm Animal Welfare in the European Union?*

RSPCA, Eurogroup for Animal Welfare, and The Humane Society of the United States 1998(b). *Conflict or Concord: Animal Welfare and the World Trade Organisation*.

RSPCA and Eurogroup for Animal Welfare 1999. *Food for Thought: Farm Animal Welfare and the WTO*.

RSPCA 2000. *Impact of World Trade Organisation on Farm Animal Welfare, Conference Proceedings*.

Review

OIE Scientific and Technical Review Plurithematic Issue Vol. 23(3), December 2004

Volume 23 (3) of the Scientific and Technical Review contains 31 articles submitted by experts from all parts of the world, brought together under the following headings: Epidemiology and veterinary economics, organisation of veterinary services and service delivery, reports, and communications.

The articles describe ex-ante economic analysis of animal disease surveillance, methods for assessing the impact of animal diseases on global trade, and discuss the epidemiology of several diseases in different parts of the world (for example, the peste des petits ruminants in India, Newcastle disease in Chad, and animal and human brucellosis in Jordan). They present models for the organisation of veterinary public health, discuss the use of databases on the internet for carrying out complex animal health studies, propose disease control strategies and describe quality management in reference tests.

The review also constitutes a unique vehicle for the publication of reports on the situation of various animal diseases in the world, in particular in countries whose animal health situations receives little or no publicity otherwise (sheep pox and schistosomiasis in India, anthrax and tuberculosis in Ethiopia). Last but not least, readers of this issue of the review will find articles by internationally renowned researchers on diagnostic methods (brucellosis, FMD) as well as articles on diverse subjects, such as ostrich farming in Zimbabwe or problems encountered when translating the OIE Manual of diagnostic tests and vaccines for terrestrial animals into Spanish.

UAM Australia: An Interesting Story

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Abstract

In animal owning societies, the animals have a major impact on community quality of life, environmental sustainability and economic security. This is the triple bottom line of all that government in this country is elected to do, to promote and to protect.

The net outcome of including animals as a part of our lives depends on how these animals are managed. Good local government, these days, includes good UAM and good UAM can lift the triple bottom line performance of all such authorities.

In many ways, UAM is a serious challenge for those whose duty it is to manage our shires, towns and cities. As each year goes by, it is becoming more and more evident however, that animal management programs can be successful and can be popular.

It is also more and more evident that to be successful, these programs have to be properly planned and competently executed or they will end up wasting precious public resources and failing the communities they are intended to serve.

Introduction

The Urban Animal Management (UAM) Reference Group (UAM RG) of the Australian Veterinary Association has convened a national UAM conference each year in Australia since 1992. UAM is a national enterprise that strives to improve the balance of community pet benefit through the effective minimisation of public pet problems. The UAM RG has achieved much over this time thanks to the active participation of its dedicated representatives from the veterinary profession, local government and the animal welfare and care industry in Australia. Over the last 14 years, through its unbroken series of annual conferences and by a process of consultation and analysis, the UAM RG has striven to define and then promote best practices of UAM in Australia.

In the beginning

In the beginning there was Jenny Brennan. When I first met JB, she was the animal control officer in the western Queensland mining city of Mt Isa. It might seem an unlikely place for the genesis of such the mighty enterprise that UAM in Australia

is today, but there it is and that's a fact. UAM back then was new to everyone and I believe her UAM story is a significant one for a number of reasons.

- a. JB was passionate and certain about the merit of UAM long before anyone else had even grasped the concept. It was she who stepped me through my initiation into the mystery and magic of what was then called animal control.
- b. JB was always scrupulously fair in the execution of her animal control duties. She seemed to fear nothing and she took some bumps as a result. But she never quit because she knew with certainty that what she was doing with animal control was correct and important and very much in the interest of the community in which she lived and worked.
- c. Bobby Moore¹ (the deputy mayor of the Mt Isa city council at that time), was equally convinced that Jenny's ideas were good ones. He understood that his community actually did want the kind of better and fairer methods of animal control that JB was so enthused about. Bobby confidently went to every local government election he chose to contest on an animal control platform that never failed to see him re-elected.
- d. Just as important as everything already mentioned here above, was the fact that Bobby Moore was always prepared to unconditionally back up JB when things got tricky. Neither JB nor Bobby were physically big people but neither would fail to step up if the situation required. No one ever ran over the top of those two ... they were inspirational.

In a paper presented to the first UAM conference in Brisbane (1992)(1), JB discussed the necessity of achieving full current and correct registration for the city's dog population. She explained with refreshingly straight forward reasoning (as follows) why full registration, though perhaps difficult to achieve, is such an important foundation in animal management.

1. Registration: a good and simple test of owner commitment - if they can't see their way clear to pay a modest annual registration fee, do they really

¹ Author's note: Bobby Moore spoke with such a broad Scottish accent that only one in two or perhaps three words he said could be understood. The thing with Bobby was that you didn't have to know what he was saying, to know (unequivocally) what he meant. It worked.

want the dog?

2. Registration: a good test of council commitment - if the council is not serious about full registration, why should anybody else be?
3. Registration: creating a database for management - how can you manage that which you don't measure?

It is important to recognise JB's contribution to UAM. All the most necessary qualities of UAM methodology, purpose and ethics were there including particularly; the use of strategic process & planning, having the necessary confidence and occupational commitment to see the job done, employing only the most open and even handed execution of the required duties. It is remarkable to reflect today, that there still seems to be a good many large government agencies "running" UAM programs that have yet to catch up with where Jenny Brennan and Bobby Moore were in the small outback Queensland town of Mt Isa four decades ago.

Animals are us

It is a prerequisite requirement when grappling with the intricacies of UAM that one should understand clearly the nature of the relationship between people and their associated animals. At the Canberra UAM Conference in 1994, David Paxton delivered an elegant and thoroughly researched paper on the subject of the evolutionary relationship between people and their dogs (2). It is unlikely that a better reference on this general subject can be found in current literature. If David's paper can be summarised into one line, it would be that animals should be considered an integral part of the *normal* (genetically pre-programmed) us.

Having said that, it is also important to point out that the effects of humans living with animals are not universally beneficial - there can be negatives in this relationship of association and they can be significant. Human society would, however, have abandoned the keeping of animals long since, if it weren't for the great preponderance of advantages over disadvantages in the overall equation. Getting the best balance of advantages over disadvantages in living with animals requires management. The better the management, the better the outcomes and (of course) vice versa.... and *this* is what UAM is *all* about.

Transitions

1. Twenty years ago and before that, UAM was called animal control. The first major transitional step in UAM philosophy involved dropping of the word "control" out of the term "animal control" and replacing it with the word "management". There is a world of difference

between the meanings of these two words and that difference, twenty years on, is *still* particularly relevant today. While the word control lays heavy emphasis on enforcement, management is more about working *with* people. While management does necessarily involve an element of enforcement, it is more in the context of being just a part of a bigger and more comprehensive cooperative endeavour.

2. The next transition was more gradual. It was the early 90s that took UAM philosophy in Australia through its next leap forward that today may just seem like just a self evident progression. During this period, it became clear that UAM was more about "people management" than it was about "animal management". Once again, the feeling was that the previous label had been only part right. While "*animal* management" was seen as being obviously very important in UAM, *animal* management was still not the right description. The emphasis had shifted from one that was entirely about *animal* behaviour to a different parcel that placed an equal emphasis on *human* behaviour.
3. There has more recently been yet another philosophical shift occurring. This involves a shift towards emphasis on the word "community" in UAM. While UAM is still about animal management and its recently added component of people management, there is now a critical realisation that *community* is at the real heart of this whole matter. This is because *both* the animals *and* the people involved in UAM are always integral parts of the *same* composition. While perhaps not all of the people in any given community will have animal companions, they are all nevertheless affected by them.

While UAM programs appear at first glance to be about controlling animals, (with luck) the author has managed to explain how the animals are just the foreground of the picture. The complete composition of this much more complex work must of necessity include the people that are making up all of the very detailed background. Some of these people keep animals, others don't... but they are all affected. The more animal intensive a community is, the more this is so.

Summary

- A. UAM is about animal behaviour
- B. That animal behaviour is a consequence of owner behaviour
- C. The behaviour of these people is a consequence of community values
- D. *Animal* management is really about *community* management

Silver bullets

Various initiatives such as charitable neuter schemes, concessional registration policies, subsidised animal care plans, etc etc, might seem at first glance to be useful options. But in reality they are generally each just some kind of "discount" deal that attempts to make the basic aspects animal care and management obligations of owners seem more publicly attractive.



Those who seek easy yards in UAM can reliably be expected to opt for one of these many traditionally popular "symptomatic" UAM remedies simply because they always seem so politically tempting. Silver bullet remedies in UAM are something of a standard package. They are always the same ones, that have been trotted out time and time again in different places and at different times without ever delivering lasting gains for anybody.

Silver bullet remedies in UAM would be harmless enough if they did not waste the precious resources that get consumed by them. Perhaps the silver bullet remedies persist in part because their shortcomings can be relatively easily papered over by those who have been guilty of wasting those resources before moving on.

Any initiative that seems anything less than a *directly* and *obviously* part of a properly planned UAM program, should *not* be included until it has earned its place by proven test and trial at first hand. It can be argued that unproven innovative measures can be very harmful when and if they fail to make the kind of difference that was promised. Innovation is good, but it is also risky when resources available for UAM are always so scarce. So, why is it that the search for those elusive silver UAM bullets never seems to lose its momentum?

The Depriving Face

Brendan Bartlett addressed the issue of what he called "*the depriving face of control*" with particular reference to the business of *animal control* at the Brisbane UAM conference in 1992. He explained how even simple official constraint, eg. a council officer requiring that somebody should keep their dog from barking excessively, is going to

Consider these questions

- Is it true that people are unlikely to care properly for things that they do not value?
- Is it true that animals acquired or kept casually are likely to have little value and therefore receive little care?
- Is it possible that any amount of charity assistance is unlikely to alter this state of neglect?
- Can it be argued that charity creates more *dependence* than it does *independence* for the recipient?
- Is it fair to say that people who are unable to provide the essential (baseline) level of management and care, should not have the pets in the first place?

be a deprivation for that person if he/she would prefer the freedom of leaving the dog to bark as it wishes.

Bartlett clearly explained in that paper how regulation (control), by its very nature, deprives people of freedoms. He also explained how regulation does so in the interest of the common good. He then went on to also show that people will happily surrender freedoms when they can see that to do otherwise would be stupidly irresponsible. Agreeing to surrender a freedom like this is largely about understanding why the deprivation is necessary eg "don't walk on the weir wall in flood times - otherwise you will probably be drowned". But it is also very much about having an interest in common good eg "don't drive your car when you have been drinking - or you will probably kill someone else who might be on the same road".

Bartlett referred to what he called "an awful chain of negatives" in UAM that perhaps best captures the effect of the depriving face in this context. The following brief extract from the paper he gave at that conference describes why it is so:

"I think Animal Control Officers should know that deprivation will always elicit a non-accepting or negatively-adaptive behaviour from the one deprived. A sense that the deprivation is just, and therefore acceptable, may come with time, if that time allows for appropriate changes in what is known, understood and can be handled.

Education strengthens the possibility of change. But it does not ensure it. Nor, does it make it happen immediately. Unfortunately, we cannot wait for a better educated public with an anticipation that any one of its members will become more pleasant on an initial contact.

Animal Control Officers will always find the person confronted by the depriving function of their work, initially reactive. And, the depriving function is an unavoidable and

major part of their work. Our officers must understand this and build-in some useable coping mechanisms.

Just as their own reactions in the face of real or perceived withdrawal or withholding of support for them in the field from bosses, allied services and community, exemplify this phenomenon, so too the "normal" reactions of people informed of a complaint, or issued with a warning, or otherwise visited by a depriving officer, will be negative (3)."

The keeping of dogs as pet or assistant animals is an activity that has a well earned reputation for being a passionately personal business. Ethical perceptions about the ownership of these animals can vary greatly and extreme attitudes to these things are commonly encountered. There are direct social, cultural and sometimes even spiritual implications bound up in the business of keeping pet animals. This deep complexity of association is the rule, not the exception, even sometimes where the animals themselves seem to be badly neglected and poorly cared for.

AMOs always seems to draw a *very* vocal chorus of complaint from some sections of the community, whatever they are trying to do - even when, for example, trying to secure a straying dog from a busy thoroughfare. Because of this, with animal control and its proven face of deprivation, many municipal managers are prone to just go through the motions with "nothing" initiatives that have the principal quality of just having a good chance of being popular. Many municipal managers give little more than lip service to the real regulatory imperatives of UAM and often fail to support the very people who they appoint to do the work that is involved.

It has always been something of a mystery why animal management is so difficult to push over the line from theory into practice - and why silly initiatives seem always to be preferred by government over the more rational and more necessary ones that should have priority. Looking back to Brendan Bartlett's paper from right back at the beginning of UAM in 1992, it seems we may have been sitting on a good part of the explanation all along. More than anything else, it is perhaps a failure to understand, appreciate and properly manage the "depriving face" that makes animal management so risky for government.

As a matter of simple respect for the subject, any agency undertaking any kind of animal management program should (if for no other reason than its own self preservation) firstly establish what main UAM objectives they seek are (what regulation /deprivation is required).

Secondly, it should then try to explain *why* these regulations are necessary so the public can think it through and decide whether or not they agree.

Thirdly, it should strive to *reliably* ascertain if there is general support for these measures... and if there isn't, then endeavour to determine where the fault lies



Fourthly, it needs to understand that in the face of the above negative outcome, until such time as the regulatory measures deemed necessary *are* well understood by the public and *are* well accepted by a majority, then the whole job is reliably going to be *all* depriving and *all* up hill... until and unless public attitudes can be shifted more favourably.

In Summary on the Depriving Face of UAM

- Adequate compliance *can* be expected provided dog owners *understand* what is being proposed *and* agree with the necessity (4,5).
- Education and regulation are *both* essential, are interdependent and are mutually supportive (6).
- The public respond positively to an *effective regulatory presence* when they are supportive of the program in the first instance - if laws are deemed necessary, they should be enforced... and they should be *seen* to be so (7).

The Significance of Community

Community expectations are important in animal management for deeper reasons than the reasons just explained above. Hugh Mackay in his book "Reinventing Australia" (8) discussed the functional meaning of the term "community". Understanding the following sequence in the context of this paper important.

1. Ethics is a sense that has its foundation in taking the rights, the needs and the welfare of others into account - (author's comment: *perhaps this includes the rights, needs and welfare of attendant animals as well*).

If a community majority does not accept the needs or the methods proposed, then it is probably best to change tack or wait until public attitudes change in favour. Both options are realistic.

2. Social values are the outcomes of our sense of ethics. They are what we learn from living in community with others. They are about understanding the difference between right and wrong
3. Morality is an overall sense of our combined community values. When community is compromised, morality is compromised also and as a consequence of this insecurity and uncertainty results
4. When this happens, there is an urgent wish by society to regain control and more regulation often seems the best way to patch over the cracks
5. With a pro-regulatory approach, however, there is most likely to *further* compromise individual "connectivity" (the essence of community) because with pro-regulation, obligations and duty are seen to be more anchored in the *impersonal* dictates of state than in their *personal* constraints of morality and community.

Following the Hugh MacKay philosophy about the merit of community "connectivity", it is probably fair to say that people who feel they do *not* belong to the community in which they live are unlikely to be responsive to the needs and welfare of those around them. In situations where there seem to be epidemiological clusters of irresponsible behaviour in dog ownership, it might be useful to investigate the socio-economic characteristics of the people involved to

Consider these questions

- Is it correct to say that attitudes about the rights, needs and welfare of animals, are social values? - ie related to community perceptions about the difference between right and wrong.
- Is it true that people in our society who keep animals only do so by choice? - ie. no person is forced to keep animals.
- Is it true, as a general rule, to say that that these animals (pet, performance and production animals) are generally kept (to some degree) in a state of captivity? - ie in a cage, behind a fence, in a yard, stable, paddock etc.
- Is it true to say that these animals are also dependant to some extent on the person who chooses to keep them? ie feeding, housing, health care & welfare.
- Can it be said that people who keep animals have a moral (social value) duty to care properly for those animals?
- Do people who keep animals also have a moral duty to ensure they don't cause nuisance to their neighbours (others in their community)?

see if some kind of causal linkage pattern can be established.

The Wagon Wheel

The wagon wheel is a UAM metaphor.

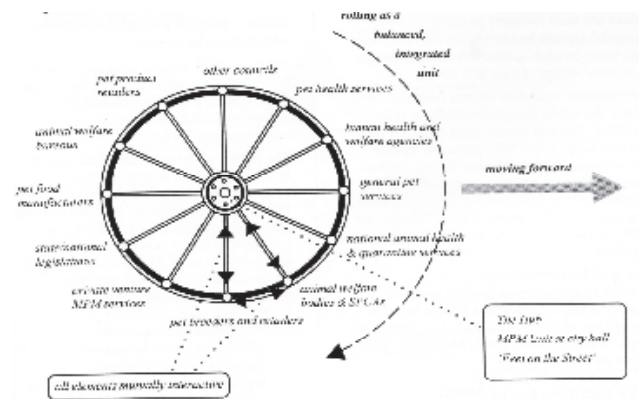
The Wagon Wheel shows how UAM is a Community Endeavour - Lock, Stock and Barrel

Each of the rim components is a main community element and they together empower the hub of the wheel.

The hub, in turn is where animal management services are sourced in local government and the hub part drives the wheel.



In other words, the health and welfare of the whole community is dependent on having good local government animal management services... and, at the same time, the



whole community has a big role to play in the delivery of those services.

The big wheel incorporates many influential and associated rim elements which have been listed in the four groups above. Every part of the rim depends on every other part... and all parts depend on the hub.

When everybody on the rim and everybody at the hub realises where they fit and how they can contribute, the wheel can roll along quickly and smoothly towards its goal.

- It encourages AMOs to see themselves at the hub of a great animal management wheel rolling towards better pet access for their community

- It beckons to AMOs and encourages them to walk away from the 'bad guy' dogcatcher scene that spells isolation and aggravation. A hub itself can go nowhere on its own
- It invites AMOs to link out for support to other people on the rim of the wheel who understands what animal management is all about
- It emphasises the critical role of animal management in local government as the coordinators of a more general type of cooperative community animal management activity.
- It encourages the interest groups (rim elements) to all support each other and the activities of local government in a balanced way; otherwise, the wheel will lose its speed and direction

Management or Deprivation? - Depends on how it's done

At the Caloundra UAM conference (2003) (9), Stephen Cutter discussed a rabies control program that he had been involved with on Flores in the Greater Sunda Group of islands in Indonesia. Two very important take home messages relevant to community and deprivation came from that excellent paper.

- a. Central to the social culture of the people of Flores is a tradition of eating dogs. Special wedding occasions on Flores involve the giving of dogs for feasting and celebration purposes. Many conference delegates were horrified by this revelation which reflected a difference of cultural belief between our society and that of the people of Flores. They shouldn't have been.

In western society, issues pertaining to animal welfare, animal rights and animal ethics have a high public profile. These are seen as a big part of the west's framework of cultural values. That it is "right" to eat pigs, chickens, sheep etc. but not dogs, is a cultural value of ours. Though not particularly rational, there it is. This belief on our part, however deeply felt, does not preclude others from having different though still legitimate points of view. We do not have the right to tell others they are wrong because their social values are different to ours.

- b. In the same paper, Steve Cutter explained how that particular rabies control program had not in the end helped the people of Flores feel safer and better. Despite its very best efforts to bring a great social benefit, the project ended up causing social distress. While the people there always have been terrified by rabies, the links between rabies and the dogs were not

well understood. All the general populace saw in that rabies program was the depriving face of that regulatory process killing their dogs by the thousand.

On a similar theme, at the same conference, Phil Donahoe spoke of the distress that had been caused by dog control measures in a Northern Territory aboriginal community he had been involved with. The same two messages came out, loud and clear.

- a. The dog control measures (including the euthanasia of "unhealthy looking strays") had been put in place by authorities for community health and animal welfare reasons. However, the aboriginal people there did not believe their own health could be effected by how the dogs were. As far as they could see, the dogs were just the way they always had been since forever. The authorities failed to appreciate that these dogs were not considered "strays" by the aboriginal people and so all the aboriginal people saw were all the dogs were being taken away and killed. The regulating authority had also inadvertently cut deeply into important community spiritual beliefs and caused profound grief. Once again, there was the depriving face of regulation at its worst.
- b. Since the 1970s, a conscious effort has been made by the Australian government to move away from the old "dependency" methodology in delivering aboriginal community health and welfare services. The paternalistic approach, marked by the notion that "authorities" know best and aboriginals needed to be treated like dependent children considered unable to make "correct" decisions for themselves, has proven unsatisfactory. The "lost generation" story is perhaps the best commonly known example of this. Paternalism is now being replaced by a new vision that emphasises self determination and self management (10). There is no reason to expect that animal control should be approached any differently. It is arrogant to think that when the beliefs of other cultures are different to ours, that they are the ones with the wrong slant on things or that they won't be able to understand and change their minds when a coherent explanation is provided.

When dealing with intimate social matters like dog control, it is not just "other" kinds of people that the interesting examples of regulatory ignorance and deprivation come. These truths are universal in UAM. Perhaps we need to remember that Hugh Mackay's values can not necessarily be assumed or taken for granted. It is always going to be difficult to justify the imposition of "correct" cultural beliefs about animal care ethics and ownership obligations on other people who traditionally might have seen things differently.

Conclusion

So, after all that, what is UAM really all about? Well, I think it goes like this:

- Firstly, there is Animal Welfare. This is all about how the people who choose to keep animals should be obliged to care for them. This is about the ethical obligation that animal owners have to be considerate of the comfort of their animals.
- Secondly, there is Animal Control. This is the regulatory processes that are intended to prevent pet animals from becoming public nuisances. This is about the social obligation animal owners have to be considerate of the comfort of their neighbours.

UAM is both care and control, together. (UAM = urban animal welfare plus urban animal control).

These components are interdependent. Care, control and consideration go hand in hand with each other. Well managed and properly cared for animals cope better and also behave better. Both animal welfare and animal control depend on the same principal driver which is the existence of a strong sense of community and the strong social values that go with that. UAM, in the end, is really all about morality.

In many ways, as Hugh MacKay asserts, our contemporary society is struggling with the symptoms of a fading sense of community. With UAM, of necessity we are depending more and more on regulation and that approach has some real problems. If this presently seems the only way, then that's where we have to be, but perhaps we should at the same time be putting more emphasis than we have in the past into the restoration of the right kinds of community values.... Perhaps the next progressive stage of UAM is beckoning.

Strategic Approach for Stray Dog Management by Pacific Island Nations

The basic dog control package that seems to be delivering for Australian urban communities includes the following components operating under an overarching process of good public awareness with an active regulatory presence in the field:

1. 2 dogs per household
2. Leashed when exercised in public places
3. Fenced in while at home
4. All tagged, registered /recorded
5. Noise management (excessive barking)
6. Litter management (dog faeces)

The Australian communities that are enjoying better

standards of UAM today, simply don't have stray dog problems. But then we are 20 years down this track now and there was a stage (about five years after the UAM AG started in 1992) when we nearly gave up because our advances were so few and progress was proving so hard to win. On looking back there is little doubt that we would have been much better served had we started out with the kind of strategic approach described here below.... Benefit of hindsight.

As a matter of pragmatic reality (and as has been said already) it is necessary to accept, from the start, that stray dog control is always a difficult undertaking and it is a long term condition. This reality never fails to be a surprise for those who set out to try to do it. If stray dog control needs doing, then of course it should be done... but, before all else, no matter what,... animal management programs must be planned strategically – for the long term – and from the beginning.

Lae Conference Dog Management Template Workshop

All delegates attending the 2004 Lae conference of the Commonwealth Veterinary Association were invited to participate in creating a generic strategy template for the management of stray dogs in Pacific Island Nations. It was intended that this strategic plan should be seen and used as an orderly structure for the purpose of process review in situations where dog control programs might be under consideration. This template was not intended to be a prescriptive universal dog control strategy in itself.

None of this strategic outline is set in stone. All the suggestions that have been included here may not be relevant to all situations. Also, it is quite possible that some other good ideas may not have been included at all simply because they did not come to mind on the day. Other unforeseen circumstances or innovative concepts may have been omitted simply because they are perhaps yet to arise.

- a. **Create a project title:** Eg Dog population management in country A or region B
- b. **Definitive key terms:** eg
 1. Dog = a dog that has a relationship with the community (owned and unowned)
 2. Management = sum total of all husbandry factors
 3. Community = precisely which (what) community is to be involved in this plan - what are its boundaries - what is it called?
 4. Other...
- c. **Make a list of benefits of having dogs in this**

community: eg Describe what community dog ownership benefits can be identified. These should each be evaluated and then ranked in order of priority from greatest to least



1. Food source - significance eg very important eg score 9
2. To assist hunters- eg high eg score 7
3. Security/protection of people and their assets -eg moderately high eg score 6
4. Dog dreaming (spiritual) - significance etc
5. Companionship - significance etc
6. Rodent & cat control - significance etc
7. Negotiable assets - breeding for sale - significance eg not great eg score 3
8. Status of owner - significance etc
9. Entertainment - significance eg actual but minimal - eg score 1-2
10. Other....

d. **List the community liabilities presently associated with dog ownership:** eg Describe what current community dog problems can be identified. These should each be evaluated (score of 10) and then ranked in order of significance from greatest to least

1. Tourist industry downside caused by the common spectacle of debilitated, miserable, unsightly, nuisance dogs at large - eg score 8-10 (this may be very difficult to quantify - it might be a very localised effect - perhaps just in and around the confines of principal tourist venues)
2. Zoonoses - Public health and hygiene costs associated with illness that can be transferred from debilitated dogs to people - eg score 6-8
3. Cost of management can be a drag on the economy of a district if human and material resources have to be employed to achieve change - eg score 7
4. Noise pollution causing compromised quality of life for the general public eg score 6
5. Nuisance / loss of livelihood / compromised public amenity caused by livestock predation
6. Breeding of unwanted /unowned / straying / starving dog packs eg score 3
7. Vet costs associated with proper professional dog

management and care eg score 7

8. Wildlife threat especially associated with heritage species and other animals of cultural significance eg score 4
9. Other...

e. **Summarise the balance of overall effect** eg.

- The benefits outweigh the liabilities
- The benefits are individual while the liabilities are communal
- The liabilities in general arise from lack of husbandry knowledge
- Liabilities can be managed and thereby minimised

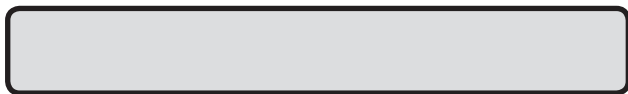
f. **Summary of your goals:** eg: List what goals you would like to see being achieved from this dog control program in the context of the definitions agreed to above. List now which assets can expect to be maximised and which liabilities might be minimised. Rank the relative significance (prioritise) of each of these stray dog control program benefits that have been identified. Finally endeavour to place a dollar value on what can be saved by running this program (eg savings or benefits per annum)

1. Improve public health & safety eg from bites and zoonoses (estimate annual \$\$ value)
2. Improve public safety eg from vehicle accidents and aircraft accidents caused by straying dogs (\$?? One plane crash once in 10 years)
3. Decrease predation of wildlife and livestock (\$?? per annum)
4. Reduce crime by having better (dog powered) security routines (\$\$?? commercial business / private saving per annum)
5. Improve tourism (eg X 2 times more tourists \$\$\$ per annum)
6. Improve community relationships and community quality of life (hard to put a dollar value to, but helps to do so for the final balance statement of cost v benefit)
7. Improve animal welfare & animal disease standards (ditto)
8. Decrease noise nuisance (ditto)
9. Improve economics (calculated \$\$\$ estimate)
10. Improve appreciation of the value of dog ownership (\$\$\$ value???)
11. Other....

g. **Determine best delivery method:** eg It is now time to describe clearly what specific (regional/ local) methods

of approach are proposed for the roll out of this program. These methods might include some of the following (in sequence):

- Study this community's sociological/demographic characteristics with a view to using best methods (advertising/word of mouth/whatever) to create awareness of issues being considered for dog control in this district by the management authority at this time.
- Analyse and review management components that are available for this task from the list of options described above and begin to draw up a *draft* strategy framework.
- Endeavour to contact *all* associated public (government/authority) sectors (health, education, tourism, agriculture, conservation/environment,



labour) to provide what ever advantages can be obtained by having good inter-departmental linkages.

- Extend consultation to also include interested parts of the private sector (media, business, church, sporting groups, rotary, women's groups, vets, paravets, animal welfare organisations (NGOs) to ensure that there are no loose cannons at work and that any useful available assistance is being constructively linked in with the overall plan.
- Make contact with the local authority of the community in question. This might be head man, tribal elders, elected councillors, regional administrator's office etc etc - perhaps a combination of some of these. Find the innovators, the chain of command, the leading people and confer with them about what is being planned
- Ascertain that this local authority is supportive of a dog management program and then discuss with them exactly what measures are available in the draft plan and explain how these might benefit the community - explain features vs benefits
- Reassess options and priorities with this local authority on the basis of feedback from this initial community contact. Redraft the plan if changes are appropriate at this stage to accommodate feedback and input thus far
- Firm up a statement of tasks & goals - time

bounded, location, cost factors etc

- Complete a community survey (if the local authority deems that appropriate) to "fine tune" local (community) perceptions of initial assets and liabilities equation and to see if the remedial measures so far planned are in keeping with this
- Review the whole strategic plan as it stands at this stage... From the top right down to bottom where the methods (treatment options) are listed as follows:

The more simple the program, the easier it is to explain and the less expensive it is to run. The less the complexity, the better it will go. Modest but gettable goals are better than those more grand and less attainable. Smaller, more affordable steps will still get you closer to your goals so long as the direction is right.

It might be that one single critical strategic initiative can reasonably be expected to deliver some tangible cost effective improvements. One at a time is said to be good fishing - and so it is with dog control strategies... One treatment option at a time is quite enough if that is all that can be managed. In fact, it can be argued that too much at one time risks just spinning the wheels and going nowhere.

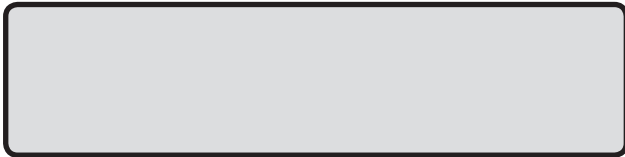
Above all else, at this stage, do not be reluctant to shift and shape these suggestions to meet the needs of special circumstances. Things to be considered for merit as separate program initiatives are here listed:

- *Consider* some form of dog tagging to differentiate owned from stray ... decide what to tag with?... eg conventional collars & tags, microchip e-tag, large numbered & coloured cattle ear tags... perhaps on an un-removable neck chain etc. This is a critical initiative because it also obliges people who wish to have dogs to make a formal commitment of ownership.
- *Consider* creating reliable dog /owner registers eg by village or locality or region - there is no point in having tags if you don't have the registry that links the tagged animal to its owner.

Important to determine how this register might be managed & decide who will be authorised to be the registrar eg a local SPCA or other authorised agency operating under the auspices of an appropriate local community/local government organisation. It is important also to determine whether or not some kind of registration fee should be applied to cover the cost of maintaining a current and accurate register. It might be that this could be a self funding

project and that the job of maintaining the register could be contracted out as a paying business.

- Consider providing encouragement and assistance for those dog owners who comply and assist by voluntarily registering their dogs. May be able encourage this by assisting with the cost of caring for tagged (duly registered) dogs through certain



schemes eg sponsored neutering and health care projects. Perhaps un-tagged (un-sponsored) "stray" dogs will have a higher than usual natural attrition rate through neglect and therefore be usefully "self culling" to some extent.

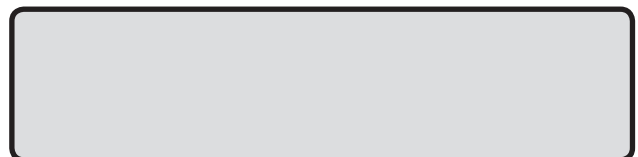
- Consider limiting dog numbers per household eg 2 dogs per residence. Perhaps in urban areas only ... and be aware of cultural practices that might make this difficult to achieve. It might also be worth considering the merit of incentive schemes here for people who not only do the right thing and register their dogs, but also agree to only keep two at a time. Consider who does the limiting - who supervises and checks compliance.



- Consider fence and leash control/restraint laws to prevent nuisance being caused by dogs in environmentally sensitive or built up (urbanised residential areas). This might be separate to or as an add on to a more general protocol that does not require this level of dog restraint
- Consider the licensing of security dogs that are kept expressly for this commercial purpose. Could be a source of revenue as these dogs at least do have a dollar value as a kind of business tool. Could also be a way of keeping track of what are in effect intended to be "dangerous" dogs.
- Consider options for culling "unowned/stray" dogs through humane destruction. Most dog management programs inevitably require this

service in some form or other - it generally can't be avoided. Education and awareness programmes ideally should be undertaken prior to this method of culling. Consider actively encouraging the breeding of more placid, minimal impact dogs / import programme. Careful consideration should also be given to banning the importation of dogs which have a reputation for being typically dangerous types.

- Consider setting target levels of animal health care eg rabies / parasitism etc. This could include attempting to estimate prevalence and incidence rates of dog bites and zoonoses eg from records at human hospitals and diseases recorded by vets/para-vets. Information to be collated into 1 database for reference and benchmarking purposes.
- Consider arranging a methodology for population census. This does not need to be annually, but does need to be done frequently enough to effectively keep track of the population parameters that are deemed necessary for management purposes. Some form of sampling might be relatively inexpensive and still satisfactory. Various data categories that could be useful include total numbers, breed/type/size and sex breakdown, age distribution, health status and so on whatever could be useful and as much as can be afforded.
- Consider the employment of trained and qualified regulators and educators. Decide what is needed. Decide what the community will accept and



where these officers should be placed (locally, regionally, capital city?) Decide where these animal management personnel might be trained. Decide what specific skilling they may need.

- Consider the need for written laws, rules, codes, legislation/regulations etc - various sources of model legislation available. Important to ensure that this underpins the desired strategy rather than be seen to be an alternative for it.
- Consider undertaking measures intended to maintain desired dog population eg. desexing (focus on females for population control and males for dog bites) and/or breeding techniques.

Importance of education can't be overstated. Injectable sterilisation is a relatively recent innovation - Might not always be the most reliable and cost effective method for population control but it is early days yet.

- *Consider* the merit of community/ school based education programmes.

h. **Identify resources:** eg Even modest programs for dog control need resources to run them. It is obviously necessary before any program plan is settled for launch, that sufficient resources are available to sustain it - at least until such time as some measure of effectiveness can be obtained. The following check list provides a good framework in which to consider what the costs are likely to be:

- What program management training is available and where from? Training facilities available - pressure on universities
- What will be necessary to continuously maintain the program you have planned to ensure continued government and community support?
- Where can strategic plans be shared in the overall (regional vs. district or local) delivery process?
- Having looked at resources available, now go back to the top and reassess each stage in terms of its realistic credibility. Bear in mind that this strategy should aim to become locally "owned" and self sufficient so that self determination is not unacceptably compromised by outside interference.
- What finance, material, knowledge, expertise etc is available. The fees generated by the programme should be linked directly to the expense of programme delivery. Every effort needs to be made to ensure absolute transparency and openness of financial process in animal management. Public confidence and support for this kind of animal management program depends greatly on there being a clear funding pathway from source to destination. Financial assistance from benefactor institutions also depends on there being clear disclosure of funding amounts, the sources of revenue and expenditure dissections wherever it is consumed.
 1. *Consider* a tourism levy for animal management (survey of tourists)
 2. *Consider* organisations/benefactors such as animal welfare associations - this should

always be managed and tailored to local needs - care needs be taken to avoid having this kind of "assistance" running separate to and perhaps also contrary to the overall management strategy

3. *Consider* linking ethics of animal welfare/ management with childhood school curriculae eg PepPet in Australia
4. *Consider* the concept of "User Pays" animal management - perhaps only to be considered in urban areas
5. *Consider* making the animal management program a routine government funded project on the grounds that it is about public health, public welfare, public safety... as well as about tourism, primary industries and livestock production
6. *Consider* savings that might be achieved by establishing pilot projects to prove concepts before committing to the expense of more complete projects
7. *Consider* the merit of securing the services of a local "champion" eg football player, pop star, local celeb to market the ethical merit of community involvement in animal management and responsible ownership
8. *Consider* sharing regional ideas and initiatives to save expense by picking up best practice ideas from neighbouring places

i. **Formalise your chosen strategy:** eg

1. Tighten up this "option list" into protocols for regulation, self regulation and education and write it up. Defined step by step processes
2. Describe how progress towards achieving the listed benefit goals can be measured/quantified and then benchmarked between regions, localities and separate communities. Measurement depends upon the tasks.
3. Define the (general/broad) time frames that are considered acceptable in reaching agreed outcome stages.
4. Describe the procedures/factors/inputs/resources that have been calculated to be necessary to maintain the programme

About the author

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Dick is a veterinarian who practices in Townsville, North Queensland. He graduated from UQ in '73 and has been heavily involved with the Urban Animal Management (UAM) movement in Australia for much of the time since then. His MSc (JCU) was on the subject of urban animal management and his membership of the Australian College of Veterinary Scientists is as part of the Animal Behaviour Chapter of that organisation.

Dick was awarded the Gilruth Prize by the Australian Veterinary Association and the Medal of the Order of Australia in 2004 for service to the veterinary profession and the community, largely to do with his work with the UAM Advisory Group of the Australian Veterinary Association.

Bibliography

- 1 Brennan J. (1992) Dog Identification for Urban Animal Management: Microchip or Tag? In: *The Proceedings of the 1st National Conference on Urban Animal Management in Australia*, published by Chiron Media, Mackay, ISBN 0 646 11694 0.
- 2 Paxton DW. (1994) Community Involvement and Urban Dogs. In: *The Proceedings of the 3rd National Urban Animal Management Conference* (DW Paxton ed), published by the Australian Veterinary Association Ltd. ISBN 0 646 16339 X.
- 3 Bartlett B. (1992) The Depriving Face of Control. In: *The Proceedings of the First National Conference on Urban Animal Management in Australia*, published by Chiron Media, Mackay, ISBN 0 646 11694 0.
- 4 Hammond G. (2003) Animal Management Priorities by Survey and Animal Management Marketing Strategies. In: *The Proceedings of the 12th National Urban Animal Management Conference*, published by the Australian Veterinary Association Ltd ABN 008 522 852.
- 5 Hammond G. (2004) The Townsville Plan - An Update. In: *The Proceedings of the 13th National Urban Animal Management Conference*, published by the Australian Veterinary Association Ltd. ABN 008 552 852.
- 6 Jackson V. and Henderson I. (2004) How to Improve Companion Animals By Managing People Better. In: *The Proceedings of the 13th National Urban Animal Management Conference*, published by the Australian Veterinary Association Ltd. ABN 008 552 852.
- 7 Van de Kuyt N. (2004) Turning Research into Reality: How Councils Can Use Findings From a Survey to Help Manage Pets. In: *The Community in the Proceedings of the 13th National Urban Animal Management Conference*, published by the Australian Veterinary Association Ltd. ABN 008 552 852.
- 8 Mackay, Hugh. (1993). *Reinventing Australia: The mind and mood of Australia in the 90s*. ISBN 0 207 183147 Published by Angus and Robertson Publications.
- 9 Hutabarat T, Geong M, Newsome A, & Cutter S. (1993). Rabies and dog ecology in Flores. Edited by Steve Cutter. In: *The Proceedings of the 13th National Urban Animal Management Conference*, published by the Australian Veterinary Association Ltd. ABN 008 552 852.
- 10 Burger, Julian. (1990). *The Gaia atlas of first peoples: A future for the indigenous world*. ISBN 0 14 013053 5 Penguin Books.

Microbial Quality Of Table Eggs Sold In Selected Markets In Accra

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Introduction

Ghana's economy is agriculture-based. In this sector, animal rearing especially commercial poultry farming plays an important role in the creation of jobs and generating income. It also provides food in the form of meat and eggs. In Ghana, animal protein constitutes about 5% of average daily diet (1), and its consumption per person/day is 13.7g compared with world average of 24.5g (2). The use of eggs in human diet includes pastries, stews and beverages. Eggs are also used as hair conditioner and treatment of skin diseases in the cosmetic industries (3, 4).

Increased demand for eggs especially among the urban population has had a positive effect on production especially in the Greater Accra Region. Table egg production in Accra increased from 46,021,972 in 1999 to 94,559,625 in the year 2000 (5).

Though eggs are considered as complete food for growth and sustenance, all microbiological work done indicates that micro-organisms often contaminate eggs. Numerous factors have been implicated in egg contamination. Among these are bird faeces, litter materials, egg crates, packing and storage. Others are clothes and hands of poultry workers, dust, environment, weather conditions, transportation and marketing (6, 3, 7, 8 & 9). Among the common contaminants pathogenic to humans, are *Salmonella spp.*, *Staphylococcus aureus*, and *Bacillus cereus*, *Mucor*, *Penicillium* and *Aspergillus* (10, 11, 9 & 12).

In Ghana, the warm, humid climatic conditions combined with the poor hygiene that characterizes poultry/egg production favours the survival and proliferation of micro-organisms. Similar poor conditions found among distributors and the increased consumption of table eggs in urban areas demand investigation into egg contamination. This work is to assess the microbial quality and identify contaminants of table eggs sold on Accra markets.

Materials and Methods

Four major markets in the Accra Metropolis namely Mallam Atta, Kaneshie, Agbogboshie and Makola were selected for the study. Three hundred and sixty (360) table

eggs were randomly and aseptically collected from six (6) retailers in each market, fifteen (15) eggs from each of them.

Sample eggs were collected between May and October 2003. The mean temperature and humidity values during the study period were 26.1°C and 75% respectively.

Methodology

Preparation of Sample: Twelve (12) eggs were grouped as one batch of sample. From each group, swabs were taken from each batch on shells using sterile cotton swab soaked in 0.1% peptone and dipped into a sterile McCartney bottle containing 10 ml of 0.1% peptone water to form the neat. For the content and empty shell, one (1) ml of the homogenized egg content and one (1) gram of the macerated shell sample were added into separate McCartney bottles containing 9 ml of 0.1% peptone water also to form the neat (13).

Determination of Total Viable Count: For total viable count, the pour plate method was used. One (1) ml each of the neat sample from the swab, shell and content was serially diluted by ten fold into four other McCartney bottles each containing 9 ml of sterile 0.1% blank peptone water. Different pipettes were used for the various dilutions. One (1) ml of each dilution was aseptically transferred into McCartney bottles each containing 10ml of molten Plate Count Agar (PCA) kept in a water bath at 50°C 13. This was mixed by rotation and poured into sterile petri dishes to set.

Cultures: Using plate-out technique, cultures were made from the neat dilutions onto blood agar, MacConkey agar and Malt Extract Dextrose Agar (MEDA) as described by (14). Culture plates were incubated aerobically and anaerobically for 18-24 hours at 37°C for those on PCA, MacConkey agar and blood agar plates. Cultures on MEDA were incubated aerobically for 5-7 days at 26°C.

For total viable counts, PCA plates showing colonies between 30-300 were selected and counted using electronic colony counter. Impure colonies on the primary culture were sub-cultured onto fresh solid media for purification. Mix culture on MacConkey and blood agar were sub-cultured

Market	Isolates		
	Shell	Swab	Content
MALLAM ATTA	<i>Staphylococcus</i> , <i>Micrococcus</i> , <i>Bacillus</i> , <i>Rhizopus</i> , <i>Aspergillus</i> , <i>Mucor</i>	<i>Staphylococcus</i> , <i>Saccharococcus</i> , <i>Micrococcus</i> , <i>Mucor</i> , <i>Rhizopus</i> , <i>Trichoderma</i> , <i>Penicillium</i> , <i>Aspergillus</i>	<i>Salmonella</i> , <i>Aspergillus</i> , <i>Staphylococcus</i> , <i>Saccharococcus</i> , <i>Bacillus</i> , <i>Micrococcus</i> , <i>Corynebacterium</i> , <i>Mucor</i> , <i>Proteus</i> , <i>Rhizopus</i> ,
KANESHIE	<i>Saccharococcus</i> , <i>Bacillus</i> , <i>Staphylococcus</i> , <i>Penicillium</i> , <i>Escherichia</i> , <i>Salmonella</i> , <i>Escherichia</i> , <i>Rhizopus</i> , <i>Mucor</i> , <i>Trichoderma</i> , <i>Penicillium</i> , <i>Aspergillus</i>	<i>Saccharococcus</i> , <i>Staphylococcus</i> , <i>Bacillus</i> , <i>Proteus</i> , <i>Salmonella</i> , <i>Klebsiella</i> , <i>Aspergillus</i> , <i>Rhizopus</i> , <i>Penicillium</i> , <i>Mucor</i>	<i>Staphylococcus</i> , <i>Rhizopus</i> , <i>Saccharococcus</i> , <i>Escherichia</i> , <i>Salmonella</i> , <i>Proteus</i> , <i>Mucor</i> , <i>Aspergillus</i> , <i>Penicillium</i> ,
AGBOGBLOSHIE	<i>Escherichia</i> , <i>Micrococcus</i> , <i>Proteus</i> , <i>Salmonella</i> , <i>Bacillus</i> , <i>Staphylococcus</i> , <i>Mucor</i> , <i>Acetobacter</i> , <i>Saccharococcus</i> ,	<i>Micrococcus</i> , <i>Mucor</i> , <i>Saccharococcus</i> , <i>Staphylococcus</i> , <i>Salmonella</i> , <i>Aspergillus</i> , <i>Penicillium</i> ,	<i>Bacillus</i> , <i>Mucor</i> , <i>Klebsiella</i> , <i>Saccharococcus</i> , <i>Proteus</i> , <i>Salmonella</i> , <i>Escherichia</i> , <i>Acetobacter</i> ,
MAKOLA	<i>Staphylococcus</i> , <i>Bacillus</i> , <i>Corynebacterium</i> , <i>Penicillium</i> , <i>Micrococcus</i> , <i>Salmonella</i> , <i>Saccharococcus</i> , <i>Aspergillus</i> , <i>Mucor</i> , <i>Rhizopus</i> , <i>Trichoderma</i>	<i>Staphylococcus</i> , <i>Bacillus</i> , <i>Klebsiella</i> , <i>Mucor</i> , <i>Saccharococcus</i> , <i>Micrococcus</i> , <i>Trichoderma</i> , <i>Aspergillus</i> , <i>Rhizopus</i> , <i>Penicillium</i>	<i>Micrococcus</i> , <i>Staphylococcus</i> , <i>Bacillus</i> , <i>Saccharococcus</i> , <i>Klebsiella</i> , <i>Aspergillus</i> , <i>Mucor</i> , <i>Rhizopus</i>

to enhance identification.

Isolation and Identification of Organisms: After incubation, colonial morphology of organisms was studied for size, shape, outline, colour and change in medium on various media. Standard microbiological techniques including cellular morphology, staining and biochemical reactions among others were used to identify the organisms isolated. Bacteria were stained using Gram stain and examined for Gram reaction using light microscope at X100 with oil immersion. They were identified using Analytical Profile Index (API) 20E and 20NE identification system. Fungi were identified by colonial and cellular morphology using lacto phenol cotton blue staining technique.

Results

All the 30 groups of eggs sampled had microbial growth giving a total of 831 isolates. These were made up 169 bacteria and 662 fungi belonging to 14 and 5 genera of bacteria and fungi respectively. The bacteria genera included *Streptococcus*, *Staphylococcus*, *Micrococcus*, *Pasteurella*,

Escherichia, and *Proteus*. The fungi isolated were *Rhizopus*, *Mucor*, *Penicillium*, *Trichoderma* and *Aspergillus* (Table 1).

The distribution of the 169 bacteria isolated was Mallam Atta 45, Kaneshie 43, Agbogbloshie 42 and Makola 39. For the 662 fungi, the distribution was as follows: Mallam Atta 153, Kaneshie 175, Agbogbloshie 121 and Makola 113. *Staphylococcus*, *Streptococcus*, *Bacillus* and *Salmonella* were found to be common in all the markets. The genera of fungi isolated were also common to all the markets (Table 1).

The highest mean total viable count of 170x10⁵ from swabs was recorded at Makola while least count was obtained from Mallam Atta samples (Fig. 1b). Agbogbloshie had mean viable count of 38.5x10⁵ egg contents and Mallam Atta 3.67x10⁵ (Fig. 1b). Values of 118x10⁵ and 1.75x10⁵ for Kaneshie and Mallam Atta respectively were obtained from macerated eggshell (Fig. 1b).

The mean log of the total viable count ranged between 5.87 - 7.20 for swab, 4.87 - 6.13 for content and 5.01 - 6.64 for shell (Fig. 1a). Generally, Mallam Atta samples had the

least microbial count (Fig. 1b).

Discussion

The results obtained showed almost 100% microbial growth on samples. Most isolates from the eggshell were also found in the content (Table. 1) indicating that as eggs stay longer, their natural resistance reduces enabling these organisms to penetrate into the egg content¹⁵. Warm and moist litter, poor storage conditions in the farmhouses and retail outlets are causes of fungi growth and sporulation (16, 6).

The mean total viable count for swab, shell and content (Fig. 1b) were higher than 10×10^5 as recommended by the International Commission on the Microbiological Specification for Food Standards (17). Kaneshie and Makola are the largest enclosed markets in the metropolis.. The high mean total viable counts for the two sample areas (Fig. 1b) could be attributed to high humidity as a result of human activity⁶. Similarly, the high mean log of 6.13 (Fig.1a) recorded for content at Agboghloshie is above the ICMFS value of 6.00. This market is noted for its poor environmental

condition.

Enterobacteria isolation from the samples is often implicated with faecal contamination (18). Some species of Salmonella such as *S. enteritidis* and *S. thyphi* cause Salmonellosis and typhoid fever respectively in man (19). Other species of *Staphylococcus*, *Escherichia*, *Penicillium* and *Bacillus* produce enterotoxin that causes nausea, cramps, abdominal pains, fever and diarrhoea. *Mucor* is also known to cause metastatic lesions in the viscera (20). Choice of the pour plate method for total viable count technique has its own limitations. This is because it is not suitable for heat sensitive organisms and strict aerobes but gives discrete colonies for easy counting (14,13). The absence of API for fungi identification may have limited the identification of the organisms to the species level.

Conclusion/Recommendation

The microbial load is higher when compared with results obtained from farm gate samples in previous work. This situation could be attributed to transportation, handling by retailers, storage and environmental conditions. Since most

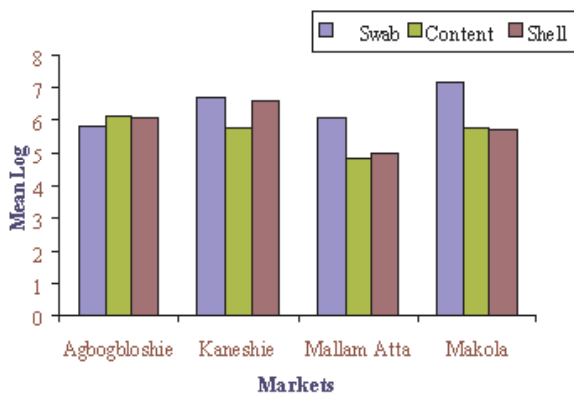


Fig 1a. Mean Log of Total Viable Counts for Microorganisms Isolated

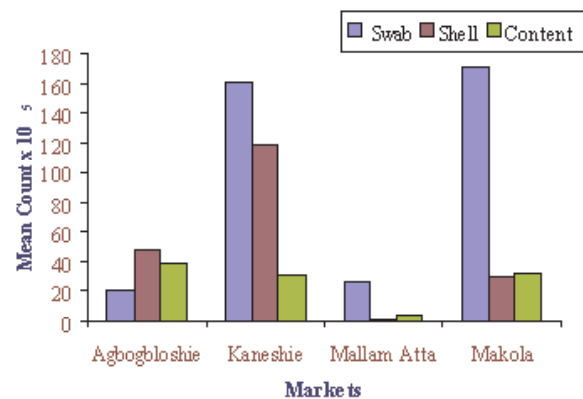


Fig 1b. Mean Total Viable Counts for Microorganisms Isolated

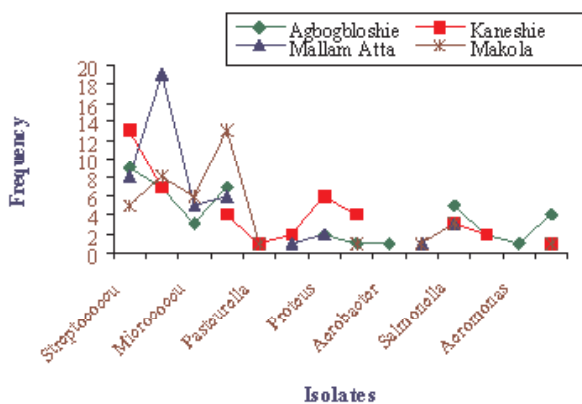


Fig 2a. Bacteria Isolated From Table Eggs Sampled

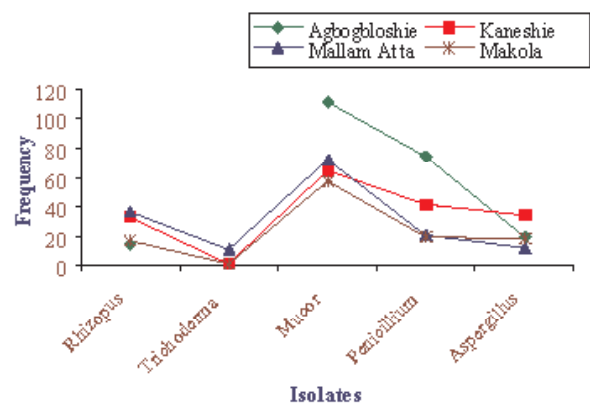


Fig 2b. Fungi Isolated From Table Eggs Sampled

of the organisms isolated are pathogenic to man, consumers are at a high risk of infection. Consumption of raw eggs should be discouraged to reduce infections in consumers. Table eggs should be stored under good hygienic condition, at cool dry places away from strong odour and dangerous gases.

References

1. Food and Agriculture Organization. *Annual Report. 1993*. Rome.
2. Food and Agriculture Organization. *Annual Report. 1998*. Rome.
3. Weiser H.H, Mountney, G J and Gould, WA. *Practical Food Microbiology and Technology*. Avi Publishing, Westport, USA.1971: 148-150, 152-159.
4. Ceserani V, Kinton R and Foskett D. *Practical Cookery*. 9th Edn. Hodder and Stoughton, London., 2000. 120, 129.
5. Greater Accra Large Scale Poultry Farmers Association. Accra, Ghana. *Annual Report, Sept. 2001*.
6. Gilbert A.B. The Egg: Its Physical and Chemical Aspect. In: *Physiology and Biochemistry of the Domestic Fowl*. London Academic Press, 1971:1379-1399.
7. Bernard G and Tosi JC "Egg poultry and *Salmonella enteritidis*". *Bulletin-de-l'Academie-Veterinaire-de-France 1990*; 63: 31, Supplement 17-31.
8. Henzler J D, Ebel E, Sanders J, Kradel D and Mason J. "*Salmonella enteritidis* in eggs from commercial chicken layer flocks implicated in human outbreaks". *Avian Diseases,1994*. 38(1): 37-43.
9. Caffer MI and Eigner T. "*Salmonella enteritidis* in Argentina". *Inter J Food Micr 1994*; 21:1:107-116,
10. Clucas IJ. 1990. Fish Handling, Preservation and Processing in the Tropics – 2. *Tropical Development and Research Institute*. 101-103.
11. Anand SK, Pandey NK, Mahapatra CM and Verma SS. *Ind J Poul Sci 1993*; 28:2, 125-129.
12. Webb FS, Whitney EN and Debruyne LK. Health Making Life Choices. *Cincinnati*. West Publishing. 1999: 411.
13. Collins CH and Lynne P. *Microbiology Techniques*. 5th Edn. 1989:138, 218-219.
14. Heritage J, Evans EGV and Killington RA. *Introductory Microbiology*. Cambridge University Press Cambridge, 1996:138, 182.
15. Etches RJ. "The Influence of Housing Aspect of Egg Quality". In: *Proceedings of 19th World's Poultry Congress*. Amsterdam, Netherlands. World's Poultry Science Association 1992; 3: 164-167. 20-24 September
16. Shewan JM and Hobbs G. "The Bacteriology of Fish Spoilage and Preservation". *Progress in Industrial Bacteriology*. 1967: 169-208.
17. International Commission on the Microbiological Specification for food Standards (1978). *Microorganisms in Food*, 2nd Edn. International Association of Microbiological Society. University of Toronto Press.
18. Arthur CT and Osei-Somuah A. Sources of Microbial Contamination in Smoked Anchovies. *Sci Tech*. 2001; 45: 29.
19. Johansson TML, Schildt R, Ali-Yrkko S, Silicones A and Majjala RL. The First *Salmonella enteritidis* phage type I. Infection of a commercial layer flock in Finland. *Acta - Veterinaria - Scandinavika*. 1996; 37:4 471-480.
20. Stewart FS and Beswick TSL. *Bacteriology, Virology and Immunity for Students of Medicine*. 10th Edn. Bailliere Tindall, London. 1971:456.

Assessing Burden Of Rabies In India From A Veterinary Perspective: Results Of A National Multi-Centric Epidemiological Survey

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Introduction

Though human rabies is endemic in India, a nation wide epidemiological study has never been done. A WHO-sponsored survey was conducted jointly by the Association for Prevention and Control of Rabies in India (APCRI), Kempegowda Institute of Medical Sciences (KIMS) and the Commonwealth Veterinary Association (CVA) to assess the burden of rabies in India. While the results of the medical survey have been published elsewhere, this paper deals with the veterinary aspects of the survey.

For animal rabies the data is very scarce. The dog population of India is estimated to be 25 million most of which are ownerless and are not immunized against rabies.

Canine or other animal rabies is believed to be distributed widely in India (1 & 2), but an analysis of data on animal rabies (mostly clinically diagnosed) for the period 1991-2000 reveals that it was reported in only 128 of the 507 districts of the country, and the number of districts reporting rabies cases was further reduced to 30 during 1998-2000. There are large geographical areas of the country where animal rabies has not been reported during the last 10 years.

Against this background, and in order to clarify the above situation of ignorance, conflict and confusion, APCRI, a registered scientific society with technical and financial assistance from World Health Organization and Commonwealth Veterinary Association undertook this multi-centric study with the following aim and objectives.

Aim

To provide comprehensive data on rabies and its related aspects in the animal populations of India.

Objectives

- To obtain a better and more realistic estimate of pet dog population and some aspects of their care.
- To recognize the common animal reservoirs of

rabies and know the time frame of the disease in animals.

- To make recommendations for future activities for rabies elimination from India.

The main objective of the present study was to survey recognised common animal reservoirs of rabies based on laboratory confirmation by collecting data for the last 10 years from the Departments of Pathology of veterinary colleges and other premier institutions of the country. The details of methods of laboratory examination were also obtained. A questionnaire was prepared and sent to all the institutions and data obtained and analysed. The results obtained showed that based on laboratory tests there was a high incidence of rabies in most of the domestic and wild animals.

Methods

Medical Survey

A national multicentric survey was conducted with the help of 21 medical schools during March-August 2003 (3). This community-based survey covered a representative population of 10.8 million people on the mainland. Hospital based data was also obtained from the 22 infectious disease hospitals. A separate survey of the islands of Andaman, Nicobar and Lakshadweep, reportedly free from rabies was also undertaken.

Veterinary Survey

To obtain data on another objective of the survey viz. recognizing common animal reservoirs of rabies based on laboratory confirmation, it was considered adequate to obtain data on a pre-tested and structured format of the animal rabies data for the last 10+ years viz. 1992-2001/2002 from the Departments of Pathology of Veterinary Colleges and some other premier institutions such as Central Research Institute (CRI), Kasauli, National Institute of Communicable Diseases (NICD), Delhi, Indian Veterinary Research Institute (IVRI), Izatnagar, National Institute of Mental Health and

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Neurosciences (NIMHANS), Bangalore, Pasteur Institute, Coonoor, and others. The details of methods of laboratory examination viz. Seller's stain, biological test, Florescent Antibody Test (FAT) was also obtained. The schedules were mailed as a postal questionnaire by the Commonwealth Veterinary Association (Dr. S. Abdul Rahman, Secretary) to veterinary and other institutions and the data was obtained by mail after 1 to 2 reminders by mail/phone. In addition personal visits were also made to some institutions by the CVA/APCRI team members of the survey.

Findings

The annual incidence of human rabies was estimated to be 17,137 (95% CI; 14,109 to 20,165). An additional 20% based on expert group advice to include paralytic/atypical forms of rabies provided an estimate of 20,565 or about 2 per 100,000 population. The majority of the victims were adult males, mostly from rural areas and unvaccinated. The main biting animal was the dog (96.2%), mostly stray dogs and the extremities were the common sites bitten. The incubation period ranged between two weeks and six months. Hydrophobia was the predominant clinical feature. Many of the victims had resorted to indigenous forms of treatment and only about half of them had sought hospital admission. About 10% of these patients had received a partial course of either Semple or a cell culture vaccine. The islands of Andaman, Nicobar and Lakshadweep were found to be free of rabies as expected

Rabies in Animals

One of the objectives of this survey was to identify the common animal reservoirs of rabies and know the time trends of the disease in animals. For this it was considered adequate to obtain data from institutions viz., Veterinary Colleges, IVRI, CRI, NICD, NIMHANS Pasteur Institute, Coonoor and others, based on their records of laboratory diagnosis of rabies in animals.

The results showed a high degree of incidence among domestic animals viz. dogs, cattle, goats, cats, horses, pigs and among wild animals the reservoirs of rabies were the mongoose, jackal and deer (Table 1). The diagnosis was based mostly on demonstration of Negri bodies by Seller's stain and about 8-10 institutions confirmed it by FAT and biological test.

Incidentally, rabies was reported very rarely in rats,

rabbits and bandicoots. But as the number of specimens was too small and other relevant information was not available no definite conclusions could be drawn (Table 2).

As dog and cat bite accounted for most of the human rabies deaths (98%) from the medical survey, the veterinary survey over the decade, 1992-2002 clearly demonstrated the

Table 1. Incidence of rabies during 1992-2002

	Clinical			Laboratory		
	Exam	Obs.	%	Exam	Obs.	%
A. Domestic Animals						
1 Dog	14949	583	3.9	9963	3954	48.4
2 Cat	71	11	15.5	886	147	16.6
3 Cattle	44338	1414	3.2	1818	838	46.1
4 Sheep and Goat	30306	70	0.2	314	153	48.7
5 Horses	371	8	2.2	118	34	28.8
6 Pigs	385	2	0.5	14	7	50.0
7 Mongoose	www	www	www	17	1	5.9
8 Birds	4	4	100.0	6	5	83.3
9 Rabbits	www	www	www	1	0	www
B. Wild Animals						
1 Mongoose	www	www	www	112	98	87.5
2 Jackal	www	www	www	14	13	92.9
3 Deer	www	www	www	18	11	61.1
4 Bear	1	0	www	4	1	25.0
5 Wolf	1	1	100.0	0	4	50.0
6 Leopard	www	www	www	4	3	75.0
7 Fox	www	www	www	4	1	25.0
8 Tiger	www	www	www	4	0	www
9 Leopard	www	www	www	3	0	www
10 Rhinoc	1	1	100.0	2	1	50.0
11 Panther	www	www	www	1	1	100.0
12 Eleph	www	www	www	1	0	www

* www of these are from wild life parks and zoos

enzooticity of rabies in these animals (Table 3).

All these show that the reservoir of rabies is predominantly in dogs and cats and other domestic animals

Table 2. Incidence of rabies among wild species of animals

Animals	Laboratory		
	Diagnosed	Confirmed	%
Rat	11	1	9.1
Rabbit	16	1	6.3
Squirrel	18	www	www
Deer	2	0	www
Bandicoot	1	1	100.0

such as cattle, goats, horses and pigs; and rarely in wild animals such as the mongoose and jackal.

ASSESSING A RABIES FREE AREA

It is common to see free roaming street dogs in the capital, Port Blair. About 80% of the dogs in Andaman and 20% in Nicobar are thought to be strays. Although rearing of pedigree dogs was limited to very few defence department officials in the past, with all the tourist influx

Table 4.1: Primary surveillance of rabies in dogs and cats

Year	Andaman						Nicobar					
	Clinical			Laboratory			Clinical			Laboratory		
	Exam.	Obs.	%	Obs.	Pos.	%	Exam.	Obs.	%	Obs.	Pos.	%
1991	29	0	0.0	915	411	44.9	0	0	0	54	21	38.9
1992	56	12	21.4	948	461	48.6	3	0	0	79	14	17.7
1993	78	9	11.5	992	393	39.6	0	0	0	76	21	27.6
1994	60	11	18.3	863	376	43.6	0	0	0	78	19	24.4
1995	93	11	11.8	757	333	42.8	4	1	25.0	01	13	24.0
1996	259	188	41.7	778	417	54.0	18	0	0	68	14	20.3
1997	4001	109	2.7	751	420	55.8	10	0	0	00	14	21.2
1998	3992	102	2.7	719	322	44.8	7	4	57.1	71	9	12.7
2000	3149	107	3.4	609	302	50.0	13	3	23.1	74	13	18.3
2001	3240	100	3.1	679	283	42.0	13	4	30.8	01	7	11.3
Total	14949	323	2.2	7703	3734	48.4	72	12	16.7	020	149	21.9

Note: Exam. - Examined; Obs. - Observed; Pos. - Positive
 Source: 1 & 2 Primary Clinics and 3 National Institutions

1. Andaman and Nicobar Islands

The union territory of the Andaman and Nicobar Islands is a group of 572 islands in the Bay of Bengal. Altogether these islands cover a geographical area of 8249 sq. kms, with 86% of tropical rain forest and a population of 0.36 million (2001 census) concentrated mainly on 38 large and small islands. The entire urban population of 100,186 (27.8%) lives in the capital town of Port Blair and its distance from the mainland is about 1200 kms. The medical and health services/status are fairly well developed.

The natural terrestrial fauna consists of the Andaman wild pig, civet, crab eating Nicobar monkey, deer, elephant (introduced), snake and centipede. The domestic animals include the cattle, buffalo, goats and dogs. There are no sheep in the islands. Estimated number of dogs in the islands is 29,568 (1997), according to the figures provided by the Directorate of Veterinary Services, Port Blair. Overall the veterinary facilities are well developed with about 82 veterinary institutions and 238 veterinary personnel. The islands are free of rabies, rinderpest, foot & mouth disease (FMD), blackquarter, anthrax and haemorrhagic septicemia (4).

Natural Fauna, Animal Health and Veterinary Services

of late, many have started keeping pet pedigree dogs imported from the mainland. All this must be viewed as a cause for concern as the area is rabies free.

Till the year 2000, stray dog control in Port Blair was based on use of strychnine laced baits; but from 2001 an Animal Birth Control (ABC) programme was introduced (Table 4).

The progress of ABC is slow and an effective canine control programme is needed. Under the ABC programme sterilized dogs are not given Anti-Rabies Vaccination (ARV), a policy which needs to be reviewed.

There is also no established surveillance for rabies in dogs/cats and no laboratory examination for rabies viz. not even the Negri body examination despite available facilities

Table 4.2: Administration of animal control programme in Port Blair

Year	Number of dogs treated
2001 (August onwards)	54
2002	142
2003 (till July)	151
Total	347

Source: Primary Hospital, Single Health Post Blair

and this needs to be reviewed.

Anti-Rabies Vaccination for animals in the Island

Anti-rabies vaccination of dogs, cats and other animals is not practised in the islands. At some time in the past, due to pressure from people migrating from the mainland, a small quantity of anti-rabies vaccine was procured by the Veterinary Services Department, but this had to be stopped later due to increasing demand. Currently, there is no practice of either pre- or post exposure rabies vaccination of animals by the Veterinary Services Department in the island. Hence, there is no stock of anti-rabies vaccine in the department. Even the veterinarians do not receive/take pre-exposure rabies vaccination, as they do not perceive any threat of rabies in their work.

Entry/Import of dogs/cats and Quarantine

It was revealed at the seaport that during January 2002 to July 2003, a total of seven dogs were brought from the mainland and entered the island without any veterinary examination or documentation. Similarly, at the airport about ten dogs (since January 2003) were brought into the island without any veterinary examination or documentation. There is no system of monitoring entry of dogs or cats into the island. Likewise there is no facility or practice of quarantining dogs or cats for rabies in the island. All these factors need immediate attention by port health authorities and corrective measures.

2. Lakshadweep Islands

The union territory of the Lakshadweep Islands is a group of 11 inhabited islands in the Arabian Sea. The inhabited area is about 32 sq. kms and the population 62,000. The capital of the islands is Kavaratti, and its distance from the mainland (viz. from Cochin) is about 400 kms. The medical and veterinary infrastructures are fairly well developed. There are about 12 medical and 17 veterinary institutions. The natural fauna are predominantly marine viz. coral and fish. The terrestrial fauna are mostly domestic animals such as the goat, cow and cat. There are no dogs.

Natural Fauna in the Lakshadweep Islands

A livestock census is currently being planned. Earlier data is included in Table 5 but does not include cats.

There are cats both pet and stray but numbers are unknown and there is currently no ABC programme for cats. There is no established surveillance for rabies in cats and currently no Laboratory examination for rabies in the Islands, all of which needs attention.

Anti-Rabies Vaccination for animals in the Island

No anti-rabies vaccination of the cats or other animals is given. The import of dogs is prohibited but there have been instances in the past where cats were imported following vaccination on the mainland.

Entry/Import of dogs/cats and Quarantine

Enquiries at the Cochin Airport with the Duty Manager and the Doctor attached to the Airport revealed that Indian

	1972	1977	1982	1987	1992	1997	Growth Rate (p.a. %) over 1992	Annual Categorized
Cattle	1311	1148	1881	1718	1317	3377	34.73	68.77
Sheep	1000	1000	1000	1000	1000	1000	0.00	0.00
Goats	3817	4338	1883	13343	18888	13311	31.73	18.11
Other Livestock	2	8	1	52	---	---	---	---
Total Livestock	5130	6078	12465	18123	19405	28920	49.03	69.80

Airlines is the only operator flying to the Lakshadweep Islands, The airline does not transport any live animal there. The Assistant Port Master at Kavaratti mentioned that there was no instance of import of dogs into the Islands but there have been instances of cats imported. No system of monitoring the entry of animals exists other than registration at the port of embarkation. As there are no dogs on the island it is believed to be rabies-free.

Burden of Rabies in India

Based on the results of this survey the following data are proposed for use in national rabies planning, assuming that the situation and related factors of dog population, bite incidence, rabies incidence, are the same in the country as in the populated areas surveyed in the study.

A. Human Rabies Deaths

- Annual Incidence: 17,137 (14,109 to 20,165 with 95% confidence). An addition of 20% to include paralytic/atypical form of rabies provides an estimate of 20,565.
- Principal Animal Reservoir: Dog (96.3% of all

animals).

- Frequency of Human Rabies Deaths: 1 per 30 minutes approx.

As the population surveyed for animal bite incidence is a part of/closely linked to the population searched for human rabies incidence, consequently, a data linkage was also done to workout some rates/indices.

B. Animal Bite Load

- pet dog : man ratio = 1 : 36
- pet/owned/household dog population: 28 million.
- annual animal bite incidence rate (per 1000 population) : 17.4.
- projected annual incidence (for 1 billion population) : 17.4 million.
- frequency of bite: 1 per 2 seconds.
- annual man-days lost due to animal bite: 38 million.
- annual medicinal (vaccines + other drugs) cost for animal bite treatment: Rs. 2 billion approx.

Conclusions

1. Human Rabies is endemic throughout the Indian mainland and only the islands of Andaman & Nicobar and Lakshadweep are rabies free. The majority of the human rabies deaths occurred in adult, males and in the poor/low income group. The principal animal responsible for rabies transmission is the dog. The use of rabies vaccination is infrequent and that of rabies immunoglobulins negligible.

The majority of human rabies deaths occurred within six months of the dog bite. The limbs and hands were the most common site of the bite. About half of the human rabies cases sought hospitalization and about one-third died in hospital. Indigenous treatment was a popularly sought-after remedy. The diagnosis of human rabies was mostly on clinico-epidemiological basis and hence was mostly "probable cases" and none had laboratory confirmation of diagnosis.

The incidence of animal bite is high and is due to a high dog: man ratio. The presence and menace of stray dogs was high. Pet dog care and management practices are not satisfactory. The municipal licensing of pet dogs is inadequate. Overall the

situation is slightly better in urban areas compared to rural areas.

2. The most common animal reservoirs of rabies, based on laboratory evidence are dogs, cattle, goats, cats and pigs and among wild animals the mongoose and jackal.

Recommendations

Based on the results of the survey and the final conclusions drawn, the following recommendations are made.

1. The coverage and usage of modern rabies vaccines and rabies immunoglobulins needs to be improved. There is an urgent need to phase out Nerve Tissue Vaccine (NTV) and phase in cost-effective intradermal Tissue Culture Vaccine (TCV) to prevent human rabies deaths.
2. A census of dogs or a scientific estimation of dog population is needed. There is an urgent need to tackle the menace of the stray dog population on a war footing. More effective municipal licensing of pet dogs and awareness campaigns for better and responsible dog care and management practices is needed.
3. Efforts are needed to improve hospital care and management of human rabies patients and a beginning made for laboratory confirmation of rabies in a few centres.
4. Similarly on the veterinary side there is a need to upgrade the facility of rabies diagnosis by FAT which is a more sensitive and specific test than Negri body examination.
5. There is an urgent need to introduce effective monitoring of entry of dogs/cats into the Andaman and Lakshadweep Islands at the airports and seaports and to ensure a proper surveillance of rabies in animals.

In order to initiate all the above measures with concerted and coordinated action a "National Rabies Elimination Programme" must be launched involving medical, veterinary and other related departments.

Acknowledgement

The authors are thankful to all the Deans of Veterinary Colleges in India who responded to our questionnaire and to the staff of the Department of Pathology, Veterinary College, Bangalore for their help in this survey. Thanks also to Dr. NSN Rao, Centre for Research in Health and Social Welfare

Management for data management and analysis. The help and guidance of Dr. F.-X. Meslin of WHO headquarters, Geneva, Switzerland and Dr. Derek Lobo from SEARO, WHO, New Delhi, are gratefully acknowledged.

References

1. Abdul Rahman, S., 1997. Rabies Prevention and Control - A Veterinary Perspective. In "Rabies Control in Asia". Third International Symposium on Rabies Control In Asia. Edt. Betty Dodel, F.X. Meslin. PP 146-152.
2. Abdul Rahman, S., 2000. Country Report on Medical and Veterinary Aspects of Rabies Prevention and Control - India from a Veterinary Perspective. S. L. Vet. J., 47.
3. Sudarshan, M.K., Abdul Rahman, S., Mahendra, B.J. and Ashwathnarayana, D.H. 2004. Assessing Burden of Rabies in India. Report of the WHO-sponsored National Multi-Centric Rabies Survey. 81 pages.

Call for resources to tackle avian influenza

'Avian flu might easily spread from Asia to other countries', Dr Bernard Vallat, Head of the World Organisation for Animal Health (OIE), warned during an international conference on avian influenza.

His comments were underlined by Dr Joseph Domenech, Chief Veterinary Officer of the Food and Agriculture Organisation (FAO): 'Recent studies have confirmed that the H5N1 virus is now enzootic in this region, and that there are many unrecognised asymptomatic carriers. This implies there is an urgent need for resources to improve the sanitary surveillance and veterinary services in the affected countries, to help prevent the risk of a pandemic spread of this virus'.

The meeting was organised jointly by the OIE and the FAO, and held at the OIE Paris Headquarters on 7 to 8 April, 2005.

Dr Samuel Jutzi, Director of Animal Production and Health Division of the FAO, described how the epidemiology of the H5N1 virus is linked to the



traditional farming system in the countries affected, "Ducks, an unusual host species for this kind of virus, seem to play an important role, and there are about 80 million ducks in Vietnam, which gives an idea of the task we are confronted with".

~ The Veterinary Record, Vol.156, No.16

Asia

India

CVA Muthanallur Project for Women Dairy Farmers

Muthanallur, a tiny village 65 kms south of the city of Bangalore in India is inhabited by 3,000 residents whose main occupation is sericulture. This village is situated in a terrain devoid of heavy water source except for a small tank which never gets filled. This village has a water scarcity and for the last three years there has been severe drought. The women of the village tend livestock made up mostly of cattle and poultry with few sheep and pigs. Most of the people are dependent entirely on livestock for their livelihood as there is not enough water for agriculture purposes.



Each farmer has only one or two cows/buffaloes each and are entirely dependent on its milk for their sustenance to the effect that their own children will not have the luxury of drinking this milk and have to survive on a beverage made up of gruel from millets and tapioca.

During the Second Pan Commonwealth Veterinary Conference held at Bangalore in February 1998, the

Commonwealth Veterinary Association adopted this village and since then has been helping the villagers, especially women in training them in better methods of livestock production. Women farmers were sent for training in dairy production to the premier dairy institute of the country, National Dairy Development Board (NDDB) at Anand, Gujarat. Livestock such as buffaloes, sheep and birds have also been donated to the farmers in the past to eke out a livelihood. Taking the cue from the CVA other agencies such as the Village Cooperative Society, Farmers' Banks and Insurance Companies have contributed subsequently and continued the programme initiated by the CVA.

In March 2005, group of 15 women actively engaged in dairy husbandry were selected by the local Women's Farmers Cooperative Society and the CVA financed them to undergo basic training in feeding, care and management of dairy animals at NDDB. This programme will help improve the management of their livestock.

Recognition for Women in Dairy Sector in India

Chief Minister Vasundhara Raje of Rajasthan State, India has recognised 55 women who have made remarkable contribution in the field of dairying at the premises of Saras Sankul.

Prizes were given to the women milk cooperatives that had collected maximum amount of milk, women who had collected milk for maximum number of days, to best elected women president and women secretary, etc.

The Chief Minister also released the book "Women Empowerment Through Women Dairy" and a poster on women empowerment on the occasion.

About a thousand women associated with dairying from all over the state participated in the function. About 150 thousand women are earning their livelihood through dairying in the state. Six projects for women dairying have been completed.

~ Dairy Planner, Volume 9, April 2005

Training Programme on Scientific Dairying between India and Sri Lanka

A six-day training programme on dairy farming concluded at the Dairy Training Centre (DTC) of the National Dairy Research Institute (NDRI), Karnal, India on 18 December 2004.

Dr Rajvir Singh, Director, NDRI, said that while interacting with dairy scientists of Sri Lanka, who came here to attend the training there was a need of more collaborative efforts between India and Sri Lanka for exchanging scientific and technological know-how in dairying. He said dairy scientists and officials of the Animal Husbandry Department of Sri Lanka need to adopt scientific methods to improve the breed of milch animals and increase the milk production.

Mr. L.P. Jayawardena, a fodder production scientist from Sri Lanka, said paddy straw along with green fodder are given to dairy animals in Sri Lanka. The ingredients for making the concentrate were costly, he said. 'Nili Ravi', 'Murah' and 'Surti' breeds of buffaloes were found in Sri Lanka, but introduction of the germplasm of 'Shaiwal' breed of cattle could significantly help boost the milk production in their country. Dr. (Mrs.) G.R.D.L. Subavickrama, a veterinary surgeon from Sri Lanka, said dairy farming was one of the main sources of income for small-scale farmers in their country. She was of the view that the technologies learnt from here could help in improving the milk production in Sri Lanka. The trainees were also shown dairy farms managed by different categories of farmers under the mixed farming system of crop and dairy husbandry.

~ Dairy Planner, Volume 6, January 2005

Scientific Quail Farming

A training programme on "Scientific Quail Farming" was conducted at Poultry Station, Nandanam, Chennai from 25.4.05 - 29.4.05 under the Department of Biotechnology



(DBT) scheme on Empowerment of Women Self Help groups through entrepreneurial training in scientific quail farming. Thirty women self help group members from the districts of Cuddalore, Karur and Theni participated in the programme. The training programme included guest lectures and hands on training. Dr. N. Balaraman, Vice Chancellor, Tamil Nadu Veterinary and Animal Sciences University distributed the inputs viz., day old chicks, feed, equipments and brooding accessories to the trainees.

TANUVAS Newsletter, Vol. 5, No. 5

Milking camels for that special glow

Real life in India may soon replicate the legend from Egypt. Camel's milk - yes the self-same liquid that went into Cleopatra's bathtub to give her face the glow that launched a thousand ships - could soon be staring you in the face in a shopping mall, daring you to take the Cleopatra way to beauty.

You may not be able to launch an armada but scientists in India's desert state say that your face may launch a few sighs. The National Research Centre for Camel (NRCC) in Bikaner has prepared a cream from camel milk and initial trials have shown that Cleopatra besides having a beautiful nose, also had keen product sense. Experiments conducted on men, women and children of different age groups showed that the camel milk cream did give a 'real glow and freshness' to the face, said NRCC Director M.S. Sahani. The cream also helped in covering small scars, he claimed. Scientists are now hoping that the cream will find favour both within and without the country. Camel milk soaps are already sold as a beauty agent in the United States,

where manufacturers claim their cake is rich in Vitamin-C and is an anti-oxidant and a shield against bacteria. Bars are sold for as much as \$7 each. The reason why scientists are spending so much time on camels and their milk had more to do saving the animal rather than doing up the face. Camels are a rapidly declining population, say scientists, explaining that mechanised farming has made the animal redundant. "We need to find more uses of the camel to save the animal", one of the scientist explained.

In India the increased use of tractors has come simultaneously with a demand for the animal for its flesh in states like West Bengal and Uttar Pradesh and countries like Bangladesh. Thousands of camels, useless in agriculture, now end up in abattoirs.

~ Dairy Planner, Volume 9, April 2005

New Veterinary University in Karnataka, India

The Karnataka Veterinary, Animal, Fisheries Sciences University was established on 1st September 2004 at Bidar, Karnataka, India. This is the fifth Veterinary University of the country. The University comprises of the Veterinary Colleges at Bidar and Bangalore, the Dairy Science College, Bangalore and the College of Fisheries at Mangalore. In addition, various research stations involved in veterinary, dairy and fishery sciences are also attached to the University.



Prof. R.N. Sreenivas Gowda, former Professor of Pathology and Director of Institute of Animal Health and Veterinary Biologicals, Bangalore has been appointed as the first Vice Chancellor of this newly formed University.

Prof. Gowda graduated in 1967 and obtained his Masters and PhD in Pathology. He worked as a teacher and researcher and has to his credit over 250 scientific and popular articles and has guided 5 PhD and 35 MVSc students in Veterinary Pathology. His expertise in Avian Pathology has earned him recognition both in India and abroad. Some of his salient contributions have been the identification of the virus causing "Hydropericardium Syndrome" in poultry.

Bangladesh

3rd Graduation Ceremony of Chittagong Veterinary College

The 3rd Graduation Ceremony of Chittagong Government Veterinary College, Bangladesh was held on 17 March 2005 at the College Auditorium. Hon'ble Minister for Fisheries and Livestock Mr. Abdullah Al Noman was the Chief Guest. Dr. S. Abdul Rahman, Secretary General, Commonwealth Veterinary Association delivered the Graduation Address. Other dignitaries included Prof. A.J.M. Nuruddin Chowdhury, Vice Chancellor, University of Chittagong and Dr. Saleh Uddin Mahmood, Director General, Department of Livestock Services, Government of Bangladesh and Dr. Sultan Mohiuddin, CVA Councillor, Bangladesh.



In 8 years since its formation, CGVC has developed as an institution of reckoning in Bangladesh with innovating changes in the veterinary curriculum. The college has been ably supported by the British Council/DFID through the HE link programme and the Danish Royal Embassy through their ASPS component.

The students of the veterinary college have been visiting the Madras Veterinary College and Bangalore Veterinary College, India for their internship programme. This has been facilitated through the British Council and the Commonwealth Veterinary Association.

CVA Study Fund

Two veterinarians from Bangladesh Dr. Azizunnesa, Lecturer, Department of Medicine and Surgery and Dr. Md. Emran Hossain, Lecturer, Department of Animal Science and Nutrition, Chittagong Government Veterinary College, Bangladesh were selected for the 2005 CVA Study Fund Award.

They visited Madras Veterinary College, Tamil Nadu Veterinary and Animal Sciences University, Chennai for two week programme in Embryo Transfer Technology and Poultry Science respectively. As part of the training they also visited Bangalore Veterinary College, Karnataka Veterinary, Animal and Fisheries Sciences University (KVAFSU), Bangalore and spent one week in the Embryo Transfer Laboratory and Department of Avian Production department of the college.



Dr. Azizunnesa



Dr. Md. Emran Hossain

Details of their training and their report will be published in the next issue of JCVA.



Azizunnesa in the Dept. of Gynaecology, Veterinary College, Chennai



At the Embryo Transfer Lab, Veterinary College, Bangalore

3rd Annual Scientific Conference of CGVC

The 3rd Annual Scientific Conference of Chittagong Government Veterinary College was held at the College campus from 14-16 March, 2005. The theme of the conference was "**Livestock for Rural Development**".

The conference was inaugurated by Mr. Iqbal Uddin Ahmed Choudhary, Secretary, Ministry of Fisheries and Livestock Services, Govt. of Bangladesh and the special guests were Mr. Michael Anderson, Counsellor, Royal Danish Embassy, Bangladesh and Dr. June Rollinson, Director, the British Council, Bangladesh. Earlier Dr. N.C. Debnath, Principal, CGVC welcomed the delegates. The concluding remarks were presented by Dr. Salah Uddin Mohamood, Director General, Dept. of Livestock Services.

The conference was divided into two sessions one on

Veterinary Health and another on Curriculum Development.

The second day of the conference was a symposium on "**Livestock for Rural Development**".

Do You Know ?

- It is physically impossible for pigs to look up into the sky.
- If you sneeze too hard, you can fracture a rib. If you try to suppress a sneeze, you can rupture a blood vessel in your head or neck and die.
- What do bullet proof vests, fire escapes, windshield wipers and laser printers all have in common? Ans. *All invented by women.*

Chittagong Government Veterinary College/CVA/British Council Technical Programme

The Chittagong Government Veterinary College, Bangladesh is being supported by British Council to train the final year students in their internship programme at



Madras Veterinary College, Chennai, India for the last four years. The Commonwealth Veterinary Association through the Secretary has been facilitating this programme

and it has been a great success. To give more impetus to this programme, the Chittagong Government Veterinary College has decided to extend the internship programme to two months of which one month would be at Bangalore Veterinary College, Karnataka Veterinary, Animal and Fisheries Sciences University, Bangalore. The first batch of the students have had their internship programme from 1st



to 25th June, 2005.

In addition, two staff members Dr. Gautam Kumar Debnath, Associate Professor, Department of Dairy and Poultry Science and Dr. Bhajan Chandra Das, Assistant Professor, Department of Medicine and Surgery, Chittagong Government Veterinary College, Bangladesh have been facilitated by the Commonwealth Veterinary Association to undertake extensive practical training in the departments of dairy

Pakistan

14th Asian Regional Commonwealth Veterinary Association Conference

The 14th Asian Regional Commonwealth Veterinary Association Conference on "**Sustainable Livestock and Poultry Production in South Asian Region: Challenges of the Future**" will be held from 21-23 September, 2005 at Hotel Pearl Continental, Lahore, Pakistan. The objective of the conference is to focus on the most important issues which face the South Asian countries such as Pakistan, Sri Lanka, Bangladesh, Nepal and India regarding sustainable livestock and poultry production. With vagaries of monsoon and drought, farmers of the region are becoming dependent more on livestock and poultry for their sustenance. To meet these challenges, the scientific community of the region has an important role to play.

Highly eminent speakers from the Asian region have been invited to participate in this meeting. An exhibition is also being organised on this occasion. Those interested in reaching out to foreign importers/exporters could benefit from exhibiting their products. For further details contact:

Conference Secretariat

786, Sharjah Centre
3rd Floor, 62-Shadman Market
Lahore, PAKISTAN
Tel. 92-42-7566937-38/7566978
Fax. 92-42-7568972
Email. ramzee@brain.net.pk
ummalik786@hotmail.com

Sri Lanka

57th Annual Convention and Scientific Session of Sri Lanka Veterinary Association

The 57th Annual Convention and the Scientific Session of the Sri Lanka Veterinary Association was held at the Taj Samudra, Colombo, on May 13th and 14th, 2005. The Annual General Meeting of the Association was also held on the first day at the same venue and the new committee for the year 2005/2006 was appointed.



His Excellency Dr Greg French, High Commissioner of Australia to Sri Lanka was the Chief Guest. Dr. S. Abdul Rahman, Secretary and Editor, Commonwealth Veterinary Association and Mr. C.F.H. de Saram, Former Chairman, NLDB and Secretary General, MASL, Sri Lanka were the guests of honour.



His Excellency Dr Greg French inaugurated the Convention by lighting the traditional lamp. In his speech, he stressed that Australia and Sri Lanka share excellent bilateral relations, built on the shared history of migration, education, sporting links and cooperation and development including the agricultural sector. He said that, the recent tsunami tragedy had brought the two nations together in

which the Sri Lankans selflessly helped the Australian tourist tsunami victims and that Australians had committed more than 100 million dollars in public and private funds to help Sri Lanka in meeting the challenges of the tsunami.

Australia, he said, is a leading global exporter of high quality foods and agricultural products, including meat, wool and dairy products and supermarket shelves all over the world, including Sri Lanka provide evidence of the quality and competitiveness of Australia's food and agricultural products. He said that the global agricultural exports of Australia in 2004 had exceeded 27 billion dollars.

He also stressed that an integral element of Australia's competitive strength in agriculture is the high quality veterinary science programmes operating in Australia.

His Excellency concluded his speech by wishing the SLVA Convention every success.

Dr. H.P. Premasiri, President, SLVA, Dr. S. Abdul Rahman, Secretary, CVA and Mr. C.F.H. de Saram also



spoke on the occasion.

The most moving ceremony of the morning was the presentation of the CVA-Tsunami Cheque to the widow of Dr. Anura Edirisooriya Jayaweera, a veterinarian who was killed in the tsunami disaster. Dr. S. Abdul Rahman presented the cheque to the widow who was accompanied by her

surviving daughter.

Dr. Tissa Jayatileka, Secretary, SLVA, proposed a vote



of thanks.

The inauguration was followed by a Scientific session the theme of which was "**Food Hygiene Veterinarians**". Various speakers presented their papers.

SLVA Dinner

The association dinner was held on the 13th May 2005 at the Hotel Taj Samudra which was well attended. The fifth Prof. S.T. Fernando Memorial Orations, the awards presentation and the induction of the new President were the special events that took place after the dinner.

5th Prof. S.T. Fernando Memorial Oration

Dr. Oswin Pereira delivered the fifth Professor S.T. Fernando Memorial Oration.

Presentation of Awards

Special Awards were presented to Drs. Emil Wijewantha, Malcolm De Alwis and Jagath Peiris for outstanding services rendered to the veterinary profession. Dr. S. Abdul Rahman, Secretary, CVA presented the awards.



L-R: Drs. Jagath Peiris, S.A. Rahman, Emil Wijewantha and Malcolm De Alwis

Induction of New President of SLVA

The outgoing President of SLVA Dr. H.P. Premasiri thanked the members of the Association and the EC for their co-operation during his tenure of office and ceremonially inducted Prof. R. Sivakanesan as President of SLVA for 2005/2006. Dr Sivakanesan thanked the members for the honour conferred on him.

58th Executive Committee of the SLVA

The following were elected as officebearers for the year 2005-06.

President	Prof. R. Sivakanesan
President Elect	Dr. S.D. Eleperuma
Vice Presidents	Dr. I.V.P. Dharmawardene
	Dr. M.D. Najith
Premalal	
Secretary	Dr. G.V.S.K.
Senanayake	
Treasurer	Dr. C.P. Ihalagedera
Committee	Dr. (Mrs.) H.M.S.P.
Herath	
	Dr. Ushan E.
Pallegama	
	Dr. (Mrs.) C.
Thevathasan	
	Dr. R.C. Sikka

New CVA Councillor of Sri Lanka

Prof. Ramiah Sivakanesan, President, SLVA will be the CVA Councillor of Sri Lanka. He graduated in 1972 from University of Ceylon and obtained his PhD from University of Hull, UK in 1979. He was first appointed as Assistant Lecturer in Veterinary Surgery in 1973 and later on became Associate Professor of Biochemistry.

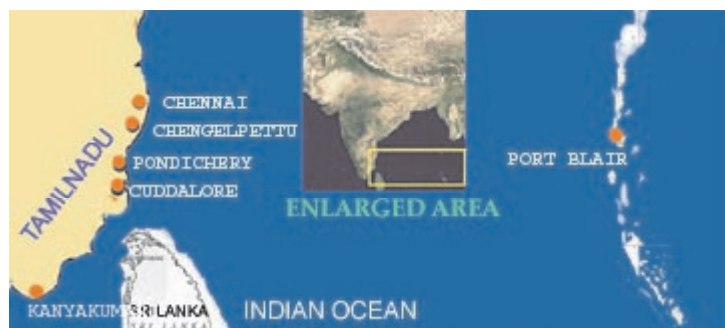


He has had several awards and honours to his credit and his research interest include nutritional anaemia. He also has vast teaching and research experience and has served the veterinary profession in various capacities in different organisations both in Sri Lanka and abroad.

He has published more than 80 scientific articles in various journals and has written one book and contributed chapters in three other books.

Commonwealth Veterinary Association and the Tsunami Disaster

When the Indian Ocean tsunami struck Asia on 26 December 2004, it affected India and Sri Lanka with devastating force. Hundreds of thousands of people in these countries were affected. Infrastructure damage in Sri Lanka alone is estimated at one billion dollars.



It is fortunate that in India, there have been relatively few deaths of domestic animals and wild life in the affected areas. This is not to say that there has not been a large amount of destruction to turtles and sea life washed ashore by the tsunami.

Immediate damage due to the tsunami to domestic animals has been far below what could have been expected from a major calamity like this. The main task regarding animals was in alleviating the suffering of the surviving



animals.

Immediately after the disaster, importance was given and rightly so, for human life and sufferings. However, animal welfare organisations and governmental agencies were on the spot to save many tethered animals by cutting them free. Several rat snakes and a cobra rescued from the

flood waters were handed over to the Government Forest Department at Snake Park. Many pups and injured dogs were removed to the animal shelters. Volunteers from animal welfare organisations especially Blue Cross of India started feeding of dogs on the city beaches from day one.

The Department of Animal Husbandry, Government of Tamil Nadu had started operating animal camps in various areas.

The Commonwealth Veterinary Association responded immediately with the visit of the Secretary to Chennai, Tamil Nadu for a meeting with Dr. S. Chinnay Krishna, Chairman, Blue Cross of India on 7th January 2005. Dr. K.S. Palaniswamy, Former Professor and Head, Dept. of Epidemiology and Microbiology and Director of Research, Madras Veterinary College, Tamil Nadu University of Veterinary and Animal Sciences (TANUVAS), attended the meeting on the invitation of the CVA.

A detailed review was done on the effects of tsunami disaster which had taken a heavy toll in the coastal districts of Chennai, Kancheepuram, Thiruvallur, Cuddalore, Villupuram, Nagapattinam, Kanniyakumari, Pudukottai, Thanjavur, Tiruvarur, Ramnathapuram, Thoothukudi and



Tirunelveli districts. Nagapattinam was the worst affected district in Tamil Nadu.

The casualties were in the form of

- a. animal and owners being displaced
- b. animals being abandoned as the owners were in relief camps
- c. animals were orphaned as the owners had perished
- d. large grazing areas had been destroyed
- e. large quantity of waste such as plastic and non-

consumable items had been washed ashore and had become a source of danger to the hungry animals when they ate it.



- f. sources of drinking water had either been contaminated or had been rendered salty due to inundation of sea water.

The review indicated that the relief measures being undertaken were on an urgent need basis to alleviate the suffering of animals rather than a cohesive organised and coordinated effect. Different Animal Welfare Organisations some of them from outside Tamil Nadu were also working in the areas without the knowledge of local organisations such as Blue Cross, the main body which was spearheading the relief efforts.



There seemed to be no unified central command made up of different organisations such as the Government, Civic Authorities, the Department of Veterinary Services, NGOs, etc.

Priority being given to human suffering, the already overburdened Civic Authorities were not too sympathetic to take any action or help the animal welfare programmes.

In view of the above it was decided that international

veterinary organisations such as CVA take the lead and constitute a central body -**Tsunami Animal Relief Task Force** with its headquarters at Chennai. This Task Force was headed by Chairman, Blue Cross of India, Dr. S. Chinny Krishna and the Secretary of CVA, Dr. S. Abdul Rahman was one of its members. Under this



Task Force, other allied organisations such as TANUVAS, Animal Welfare Board of India, Department of Veterinary Services, Government of Tamil Nadu and other NGOs such as Friendicoes and Wildlife S.O.S who were already in the field were inducted as members.

Following the constitution of the Task Force, the following measures were undertaken.

1. Short-term and Immediate Measures

- a. Provision of urgently needed pure drinking water for animals was made available through tankers
- b. Fodder in the form of grass, hay, etc. and concentrates was provided on a regular basis to the surviving animals sheltered in temporary shelters.



- c. Urgently needed medicines and surgical accessories in the form of antibiotics, antiseptics, disinfectants, anthelmintics, analgesics, surgical bandages, gauze, disposable syringes, gloves, etc. were sought from donor agencies and distributed to veterinarians working in the area.

- d. The field force had been requested to obtain data of affected animals from the villages which was being covered. This was needed to ascertain the potential of possible future disease outbreaks and



to counteract them.

- e. Recruitment of retired veterinary livestock inspectors/veterinarians from the respective areas for relief work in the area on payment of an honorarium was undertaken.
- f. Local and International aid was sought by way of funds, medicines, vaccines and equipment. The CVA coordinated this effort.
- g. All financial transactions were routed through Blue Cross of India with its account in Chennai.



2. Long-term Measures

- a. Anticipating disease outbreaks, large stocks of vaccines of important diseases such as Haemorrhagic septicaemia, Anthrax, Botulism and Blue Tongue was stored.
- b. A long-term project on rehabilitation of displaced farmers and fishermen would be undertaken with a joint collaboration of TANUVAS and CVA.

- c. A similar project on the effects of this tsunami disaster on ecological misbalance in the area would also be undertaken.



A day-to-day summary of work which was being done was reviewed everyday for six weeks by the Task Force.

Periodic meetings were held to oversee the implementations of the above and to broaden the scope of the Task Force on a need basis.

The Commonwealth Veterinary Association also helped India and Sri Lanka through the national veterinary associations with financial aid.

SRI LANKA

The Sri Lanka Veterinary Association supported by the CVA was in the forefront in saving thousands of surviving animals and feeding and vaccinating them. Other international agencies such as World Society for the Protection of Animals (WSPA) also helped in these efforts.

Tsunami Victim

Dr. Anura Edirisooriya Jayaweera was born on 1st December 1960 and graduated in 1990 with a Bachelor of Veterinary Science from University of Peradeniya, Sri Lanka and joined the Department of Animal Production and Health as Class II Grade II Officer of the Animal Production and Health Service on 4th December 1995. He was appointed as a Government Veterinary Surgeon in Uva Province of Sri Lanka.

On the morning of 26th December 2004, he and his family with a group of twenty, other relatives and friends, had left to Arungambe, Pothuvil in the eastern coast on an excursion. While they were enjoying on the sea shore, the tsunami struck and the waves washed away eleven members of the group including Dr. Jayaweera (44), his daughter Thathsarani (7) and son Awiska (2). His wife and his eldest daughter Achila (10) survived.

SLVA and CVA offer their condolences to the members of the bereaved family.

Australasia/Oceania

Australia

New CVA Councillor for Australia

The new CVA Councillor for Australia is **Dr Colin Cargill**, BVSc, MS, PhD from Adelaide, South Australia. He succeeds Dr Jeff Cave who at the Regional Meeting in Papua New Guinea was recently elected as the new Regional Representative for Australasia/Oceania.



Dr Cargill is a Principal Veterinary Research Consultant with the South Australian Research and Development Institute (SARDI) and also works privately as a Veterinary Consultant to the pig industry. He was the Chief Veterinary Microbiologist at the Central Veterinary Laboratory (VETLAB) in Adelaide from 1980 to 1986, before moving to Tonga as a volunteer in 1987 to establish a Paraveterinary Training Programme. He returned to VETLAB in 1990 and in 1992 he joined the Pig and Poultry Production Institute (PPPI), a joint venture between SARDI and the University of Adelaide, situated on the Roseworthy Campus of the University. From 1997 until 2000, he was the Research Leader and Principal Research Veterinarian of the PPPI, when he became Chief Scientist of SARDI Livestock Systems Strategic Research Area, and the Livestock Systems Alliance, also a joint venture between SARDI and the University of Adelaide. He resigned as Chief Scientist in 2002.

He has worked on development and research projects in several countries in the Asia-Pacific Region, including Tonga, Indonesia and Vietnam. He is currently the project leader of an ACIAR funded project titled Poverty alleviation and food security through improving sweet potato-pig systems in Indonesia and Vietnam centred in the Baliem Valley in the Papuan Province of Indonesia with links being formed with PNG.

He is the senior author of 39 peer-reviewed papers and numerous conference papers, as well as contributing a chapter on External Parasites in Diseases of Swine. He is also co-author of the Good Health Manual for Pigs published by the Australian Pork Industry, and a series of books on the

Husbandry and Health of Pigs, Horses, Cattle and Goats in the Kingdom of Tonga, which are used as teaching material in High Schools and Colleges throughout the Kingdom. He was secretary of the International Pig Veterinary Society and co-edited the proceedings of the congress held in Melbourne in 2000.

Colin is married to Margaret and has two adult children. His favourite recreations are hiking and music.

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New President of AVA

Dr Matt Makin was elected as the President of the Australian Veterinary Association (AVA) at the meeting held from 16-19 May 2005 at Gold Coast Convention Centre, Australia.

~ **Aust Vet J**, July 2005



AVA Members making a difference

Responding to the graphic images of tsunami destruction that have filled our media for the past four months, AVA veterinarians Drs Charles Foster, John Skuja, Tonia Stokes and Elaine Ong recently delivered mobile foreign aid to Sri Lanka's east coast.

Spending three weeks in challenging field conditions, the veterinarians systematically visited a series of refugee camps throughout the island's devastated coastal Tamil fishing villages.

The Humane Society International (HSI) was on the ground assessing the situation one week after Sri Lanka's tsunami tragedy, where huge waves had travelled up to five kilometres inland destroying homes, tourism resorts and killing many domestic animals and wildlife.

Responding to local government concerns over dog population and displacement, and particularly the rabies risk to the human refugee population, HSI's multinational project has united veterinary colleagues from NZ, UK, Bali, Malaysia, India, US and Sri Lanka.

Since the disaster, Australian veterinarians have desexed around 1600 dogs (mainly) and cats. These animals were tattooed and collared to assist with future identification.

According to Dr Charles Foster there are roughly 150 human deaths from rabies in Sri Lanka each year with dogs accounting for 80% of the vector followed by mongooses.

"Following the tidal wave there were a lot of displaced dogs that the locals call 'jungle dogs' and a higher rate of human bites occurring from scared and hungry animals," Dr Foster said.

"Stopping the dogs and cats from breeding was the priority. We tried to get a population effect and desex 80% of the dogs in the refuge camps. We setup like a mobile MASH unit in tents averaging about 35-40 and sometimes 50 dogs per day".

For the visiting AVA veterinarians, duties included desexing dogs, rabies vaccinating, providing parasite control and delivering general veterinary services as required.

Based in Thrukovil, Pottuvil and Komari, all areas badly hit by the tsunami, the veterinarians first gained permission from the military to talk to the refugees. They then piled their tents, equipment and medicines into mini buses or tuk tuks and distributed leaflets to the villagers to help explain the work they would be conducting.

"We then established makeshift surgical tents staying for 2-4 days depending on the numbers of animals and operated on about 30-50 dogs/cats per day assisted by 2-4 vets and 2-3 dogcatchers," said Dr Elaine Ong.

The AVA veterinarians mainly visited areas where there were no other vets such as Sri Lanka's East so as not to overlap with other relief efforts.

"The dog population seemed in quite good condition but the cat population was significantly hit with locals estimating

up to 50% losses," Dr Foster said.

The Humane Society mobile clinics were extremely well received by the local Tamil population who offered a lot of co-operation to the project.

AVA veterinarians had many willing dog catchers and capable nursing assistants who used the net program to great effect to catch many animals. Indian and Sri Lankan vets were sent by neighbouring universities to gain knowledge of surgical protocols.

These veterinarians were on weekly rotation which made for some great skill sharing and cultural exchange with AVA vets training several Sri Lankan vets and dogcatchers to continue this valuable work.

"One thing I really like about this program is how technically good it is," said Dr Foster. "I was very impressed with the protocol and procedures of the clinics. The Humane Society philosophy of using only local supplies means the work you do is sustainable for the local people once you have gone."

Dr Ong echoed these sentiments. "For a field operation it was definitely impressive and the dogs received IV fluids, parasite treatment, rabies vaccination, antibiotics, intradermal sutures and a shot of multi vitamins as standard issue."

According to Dr Foster each day was full of surprises like a dog gored by a wild boar, several cases of transmissible venereal tumour and brucellosis.

Not to mention tackling the huge varieties of curries for breakfast, lunch and tea.

A trust is being established to help continue and develop this mobile clinic work with local vets, nurses and assistants.

Donations can be made directly by bank cheque in any foreign currency to The Tsunami Memorial Animal Welfare Trust, 48B Skelton Road, Colombo 5, Sri Lanka. The website is www.tsunami-animal.org

~ Australia Vet J, May 2005



Fiji

Visit to Fiji by Dr. Robert McCracken, President, BVA

Dr Robert McCracken, the President of the British Veterinary Association, visited Fiji at the invitation of the President of the Commonwealth Veterinary Association, Dr. Robin Yarrow, from 23 May 2005 for a week on a familiarization visit, during which he met a wide range of stakeholders from the livestock sector.

On Monday 23 May the President and his wife, accompanied by Robin Yarrow, visited Yaqara Pastoral Company (YPC) on the North coast of Viti Levu. YPC is Fiji's largest beef operation. Here, he and Mrs. McCracken were afforded a traditional Fijian welcome ceremony and were given a briefing by the CEO of YPC, Mr. Sele Tagivuni. They then visited the famous natural bottled water ("Fiji Water") site, as well as the picturesque Nakorowaiwai Valley and the rest of the Yaqara cattle ranch sites.



The next day was spent in Suva, where Dr. McCracken spent time at the national Veterinary Laboratory located in Koronivia, just out of Suva. He was received by Dr Joeli Vakabua, the Director of the Animal Health and Production Division of the Ministry of Agriculture. He then toured the Fiji Meat Industry Board (FMIB)-run abattoir and tannery where he was hosted by Mr. Philip Alifereti, the General Manger of FMIB.

The evening was spent at a function hosted by Dr Ken Cokanasiga, the President of the Fiji Veterinary Association (FVA) and Acting CEO for the Ministry of Commerce, Business Development and Investment. A wide range of stakeholders in the livestock industry, including local veterinarians, officials from the Ministries of Agriculture and Health, farmers, industry figures and the press, were invited to attend the talk that was given by Dr. McCracken.

In introducing Dr. McCracken, the FVA President welcomed his visit, which he said was an important and timely one. Dr Cokanasiga added that Dr McCracken would gain a first hand impression of Fiji's progress and potential in the livestock sector and discuss key issues. He said that it is not widely recognized that Fiji has the highest cattle numbers of any Pacific Island country and the livestock sector is second in size only to that of PNG, which has a much greater size and human population. Despite the availability of significant areas of grazing land, Fiji is importing increasing quantities of meat and dairy products, both for a growing population and for the expanding tourism industry. This expanding market presents a number of opportunities for livestock producers,

both large and small, in Fiji. Dr Cokanasiga stated that the visit would enable views to be exchanged on the problems and challenges facing the livestock sector, including the necessity to continue to protect Fiji's relative freedom from many serious diseases of animals, such as Foot and Mouth Disease and Avian Influenza.

Dr. McCracken talked on a range of topical issues including the modern veterinary profession, the BVA, Animal Health and the Global Village, lessons on the UK FMD outbreak, BSE, and future challenges. His talk stimulated a lot of interest and discussion, particularly amongst non-veterinarians, who welcomed the rare opportunity to interact with someone with Dr. McCracken's experience.

The following day Dr. McCracken, accompanied by Dr. Cokanasiga, called on the CEO for Agriculture, Sugar and Land Resettlement, Mr. Luke Ratuvuki for a briefing on the current status of agriculture, in particular the livestock sector, in Fiji.

He then visited the Senior Deputy Director General of the Secretariat of the Pacific Community (SPC), Dr. Jimmie Rodgers. He also had meetings with the Director of the Land Resources Divisions of the SPC, Mr. Aleki Sisifa, and his staff.

Dr McCracken proceeded to visit several small holder farms in the livestock areas in Serea and Viria in Naitasiri Province, Central Viti Levu. He saw the diversity in livestock farming in Fiji, and the impact of livestock sectoral policies on the lack of progress in livestock production in Fiji.

Despite his busy schedule, Dr McCracken took time to visit one of the two private veterinary clinics in Fiji, which is run by the SPCA. He met the resident veterinarian, Dr. Asish Narayan and his staff as well as the President of the SPCA committee, Mr. Deepak Rathod

The rest of the visit was spent on a bit of R&R, which included a boating trip up the Navua River, a visit to a traditional Fijian village and tasting traditional Fijian food, as well as a tour of Fiji's only wildlife park, Kula Ecopark, located on the coral coast of Viti Levu.

~ Raana Asgar
Secretary, Fiji Veterinary Association

New Zealand

New NAWAC Chair

Veterinarian **Dr Peter O'Hara** will replace Prof. David Mellor who is retiring as Chair of the National Animal Welfare Advisory Committee (NAWAC) after a six-year term. Dr O'Hara graduated in 1958 with a first class honours degree from Queensland University and completed his PhD in Veterinary Pathology at Texas A&M University. A diplomat of the American College of Veterinary Pathologists, with approximately 60 scientific papers to his name, he is a past Director and Chief Veterinary Officer of the Animal Health Division, MAF and, more recently was Deputy Director-General MAF from 1994 to 1998, during which time he oversaw the development of the Animal Welfare Act, and NAWAC itself. Dr O'Hara will take up his position on 1 November.



~ VetScript, June 2005

New President of NZVA

Dr Mandy Nutting has been elected as the President of the New Zealand Veterinary Association (NZVA) for the year 2005-06.



~ VetScript, June 2005

Do You Know ?

- If a statue of a person in the park on a horse has both front legs in the air, the person died in battle.
- If the horse has one front leg in the air, the person died as a result of wounds received in battle.
- If the horse has all four legs on the ground, the person died of natural causes.
- The "*sixth sick sheik's sixth sheep's sick*" is said to be the toughest tongue twister in the English language.

Canada/Caribbean

Canada

Former AVC Dean receives Award

Dr Lawrence Heider, former dean of the Atlantic Veterinary College (AVC) at the University of Prince Edward Island, has received the Alumni Professional Achievement Award for Career Achievement from the Ohio State University.



The award is given annually to those who have made substantial contributions to their professions and achieved outstanding career accomplishments.

Dr Heider was dean of the AVC from 1991 to 1998, implementing several programs that continue to thrive at the College, including the founding of the animal welfare unit, the Canadian Aquaculture Institute and the PhD program.

57th Canadian Veterinary Medical Association Convention

The 57th Convention of the Canadian Veterinary Medical Association (CVMA) was held from 13-16 July 2005 at the Convention Centre of Fairmont Empress Hotel, Victoria, British Columbia.

The Convention opened with speciality workshops, lectures and wet labs. The convention has also had its education portion opened to veterinarians, animal health technologists, veterinary technicians, managers, office staff and hospital managers. The topics at the convention ranged from the Successful Practice of Veterinary Medicine through Small Animal Dentistry, Dermatology and Emergency Medicine to Equine Reproduction, Bovine Infectious Diseases, Swine and Exotic welfare just to name a few. The Chairman of the local organising committee Dr Alan Hoey did an excellent job in making the convention a success.

The Annual General Meeting of the CVMA and an Open

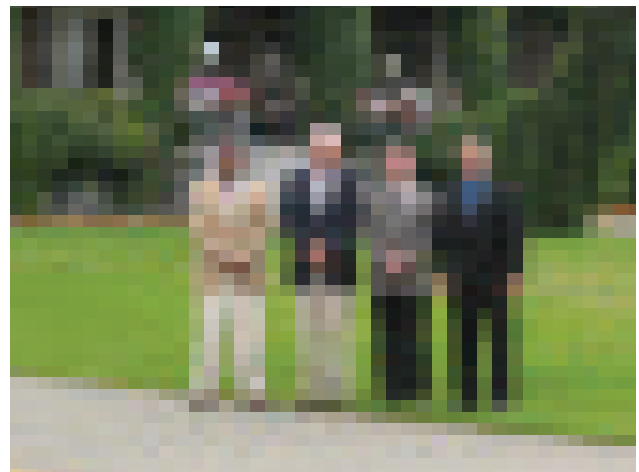


Dr Bert Stevenson addressing the CVMA Council



At the Meeting

L-R: CVMA Executive Director Mr Jost am Rhyn, CVA President Dr Robin Yarrow (centre) and President CVMA Dr Rob Ashburner



Members of the CVA Executive at CVMA Meeting

L-R: Drs Collin Boyle, Bert Stevenson, Robin Yarrow and S. Abdul Rahman

Veterinary Summit was also held during the convention.

Joint Meeting of CVA/CVMA

A joint meeting of the Commonwealth Veterinary Association and CVMA was held on 11 & 12 July 2005 with the participation of the President of CVA Dr Robin Yarrow, Past President Dr Bert Stevenson, Secretary Dr S. Abdul Rahman and RR Canada/Caribbean Dr Collin Boyle.

The Executive of the CVMA included President Dr Rob Ashburner (British Columbia), President Elect Dr Paul Boutet (New Brunswick), Vice President Dr John Drake (Prince Edward Island), Sr. Exec. Member Dr Diane Frank (Facultie de Medicine Veterinaire), Past President Dr Keith Campbell (Manitoba), Executive

Director/Ex Officio Mr Jost am Rhyn and Treasurer/Ex Officio Dr Conrad L'Ecuyer.

The activities of the CVA were explained by the CVA delegation to the Executive as well as the Council Members of the CVMA. Long term cooperation of CVMA in various projects and programmes of the CVA were discussed.

The CVMA Convention was also attended by the presidents of national associations of Australia Dr Matt Makin; New Zealand Dr Amenda Nutting, BVA Dr Bob MaCracken; South Africa Prof. Banie Penzhorn. Mr Murray C Gibb, Chief Executive Officer of NZVA was also present.

Kenya

Report on the Kenya Women Veterinary Association (KWVA) Magadi Project

Sponsored by Commonwealth Veterinary Association (CVA)

Introduction

The project work in Magadi basically started in October 2004, though the initial program was intended to have started in July 2004.

Activities accomplished as per the project programme

1. October 2004

- a. A meeting with government officials in veterinary services, Agriculture, Social services, Administration and Opinion leaders (i.e., The group ranch leaders and women group leaders) was held in Magadi divisional offices. The project's objectives and goals were explained to them and the reception was good.
- b. Standard and semi-structured questionnaires to use in collection of baseline data were prepared.

2. November 2004

The questionnaires were administered and a two-stage procedure for data collection was adopted.

- a. Participatory Rural Appraisal (PRA) with both farmer focus groups and key informants was done and discussions using the semi-structured questionnaires were held.
- b. Individual Household interviews using the standard questionnaire was done.

3. Late November to Early January 2005

Analysis of the data collected and preparation of the Baseline study report.

- * From the survey undertaken, relevant information on Livestock production systems practiced by the community living in Magadi area and the factors

constraining livestock production was gathered. Some of the major constraints identified were:

- Livestock diseases
- Drought
- Lack of information on livestock health issues resulting in wrong diagnosis and misuse of veterinary drugs.
- Lack of readily available market for their livestock and livestock products.

4. February 2005

A one day pilot trainings were planned in two shopping centers in Magadi division. A total of 250 farmers were in attendance. The women in both centers were 115, and this was a very encouraging gesture to KWVA to continue with the intended project. The baseline survey clearly indicated the cultural barriers that prevent women and men sitting under one roof for trainings, KWVA organized separate parallel trainings in both sites. The results were very good because all participants were actively involved without inhibition and some very critical information was gathered.

- The Masai are still a polygamous community and any effective trainings should target the household not just the women. The men are the major decision makers on all family matters and hence they should be incorporated in the training program.
- The best time to carry out the trainings is after the onset of rains (April to May) because during the dry season, many households migrate with their livestock to the hills in search of pasture, and return to the lowlands after the rains. The hills are inaccessible by road and there are no training facilities.
- The Masai like other Pastoralist community in Kenya have been treating their animals for many

years but there has been gross wrong-diagnosis of diseases, misuse of antibiotics and other veterinary drugs.

- Though Magadi Division has had many organizations undertaking projects there, none has addressed the issue of animal health and animal management.

Way Forward

- Workshop to prepare training manuals to be held in 2005.
- Training sessions will be conducted concurrently to cater for the interests of the women and the men.
- Field trainings to be held in July and August and continue till end of project.
- A component on use of veterinary drugs to be incorporated (Drugs residues and resistance).
- KWVA will lobby with the Masai community and the veterinary department and ensure that by the end of the project, the area has several locals trained in Animal health certificates in the government training institutes to be assisting the livestock farmers in the area.

~ Dr. Esther Ngethe
Coordinator, KWVA Magadi Project
Kenya

Kenya Veterinary Association

Kenya Veterinary Association National Office held a very successful Annual General Meeting and Scientific Conference organised by the KVA Nairobi Branch at Nairobi.

The following were elected to the KVA National Executive Committee for the year 2005-06.

Dr. Mugachia J.C.	Hon. Chairman
Dr. Wahome R.G.	Senior Vice Chairman
Dr. Matete G.	Junior Vice Chairman
Dr. Mbaaria	Hon. Secretary
Dr. Gatome C.W.	Assistant Secretary
Dr. Shamshudin K.	Hon. Treasurer
Dr. Wambui A.N.	Committee Member
Dr. Makonen D.T.	— " —
Dr. Muchibi J.	— " —

Tanzania

Visit of Dr David James Watson to Sokoine University, Tanzania

Dr. David James Watson, Prof of Faculty of Veterinary Science, University of Sydney, Australia, visited Sokoine University of Agriculture from 16th August and 18th December, 2004 under the sponsorship of Commonwealth Veterinary Association.

During the three months stay at the University, Prof. Watson was involved in giving lectures to fourth year Bachelor Veterinary Medicine students. He participated in teaching small animal medicine both theory and practicals, and also participated in seminars presented by the students as part of teaching programme.

The Department of Veterinary Medicine and Public Health is also involved with the clinical activities. Prof. Watson was frequently consulted regarding clinical cases. He also took final year students to clinical classes and excursions.

He participated in Departmental meetings to discuss academic and administrative issues and workshops organised by the University to discuss matters related to the semester system.

The Department on behalf of the Faculty of Veterinary Medicine and the University, expresses sincere gratitude to the CVA for facilitating the visit of Prof. David Watson. Members of the Department and the students learnt a lot from his vast experience. The Department would appreciate if the CVA would in future support Prof. Watson or other scholars to the Department.

~ Prof. M.M.A. Mtambo
Dept. of Vety Medicine & Public Health
Sokoine University
Tanzania

Zambia

11th CVA ECS Africa Regional Meeting and Conference

The 11th CVA East Central Southern Africa Regional Meeting and Scientific Conference was held in Lusaka, Zambia from 1 to 6 August 2004. The theme of the conference was, "Towards Sustainable Livestock Production and Food Safety".

Zambia was chosen as a venue for this meeting on the basis of an application of the National Veterinary Association of Zambia, through the then CVA Councillor Prof. Pandey, who tabled the proposal at the CVA EC S. Africa Regional meeting held in Stellenbosch, South Africa in January 2001.

CVA Councillors from Kenya, Tanzania, Uganda, Malawi, Mauritius, Swaziland, South Africa and Botswana participated.

The Zambian Minister for Agriculture Livestock and Fisheries was invited as the chief guest. The conference was officially opened by the Director of Veterinary and Livestock Development, Dr. P. Sinyangwe. Welcome remarks were given by the Dean, Faculty of Veterinary Medicine Dr. Em Mwase and the President of VAZ Dr. M. Simuunza with a special note of welcome to UNZA by the Vice Chancellor, UNZA Prof. R. Serpel. Other dignitaries at the meeting included the President of CVA Dr Robin Yarrow, Dr WJ Pryor, Treasurer, CVA, Dr. WO Ogara, CVA Regional Representative, Dr. Dr Minyoi CVA Councillor Zambia. The keynote address was given by Dr. Robin Yarrow and that of the Minister for Agriculture and Co-operatives Hon. M. Sikatana was read on his behalf by the Director.

The Scientific Conference, which was also very interesting, were categorized into 4 thematic areas: (1) Exotic/wildlife diseases and the environment, (2) Ruminant production and medicine, (3) Poultry production and (4) the global challenges.

A total of 85 delegates from 11 countries attended the conference, out of which 18 came from abroad representing Uganda, Kenya, Tanzania, Malawi, Mauritius, Swaziland, S. Africa, Nigeria, Fiji, Botswana and Australia.

The Regional Meeting of the CVA ECS Africa region was also held during this time. The Councillors discussed various problems facing the region. Dr. Yarrow and Dr. Pryor also attended the meeting and gave valuable advice on possible ways of dealing with issues of the region.

The conference proceedings are being published in Zambia.

~ Dr William O Ogara
Regional Representative, ECS Africa

Botswana

Botswana Veterinary Association

The following were elected as the officebearers of Botswana Veterinary Association for the year 2005-06.

Michael Sento	President
George Matlho	Treasurer
Mbatshi Mazwiduma	Secretary
Mark Bing	Vice President
Neo Mapitse	CVA Councillor
Moetapele Letshwenyo	Additional Member
Mogolodi Reuben	— " —

Bird flu identified in Indonesian pigs

Indonesian scientists have found the H5N1 bird flu virus in a pig. The strain has infected poultry across east Asia, and killed at least 51 people so far.

Scientists fear pigs could act as a "mixing vessel" in which a human pandemic strain could evolve, because the animals can harbour both human and avian flu viruses. But while suspected, such hybridisation has never been proven. Furthermore, it is learnt through preliminary results from scientists in the US that suggest pigs might not be able to transmit H5N1 flu to one another.

~ www.newscientist.com

West Africa

Ghana

Grasscutters

A unique small rodent of the middle belt of Africa is making an excellent bushmeat in Ghana and Gambia. Bushmeat hunting is in peril because of the loss of forested lands to farming and environmentally unfriendly ways of hunting with fire. At the same time, bushmeat is advantageous to poorer families because of its low cost and excellent nutrition.

The CVA has initiated a project in Gambia and Ghana for training of vets to encourage families to raise Grasscutters in captivity. This allows a controlled management program for nutrition and income along with the formation of community groups that learn together in their communities.

The grasscutter, *Thomomys swinderianus* is regionally found primarily in Western Africa. It is also called the Cane Rat when living in the habitat of sugar cane and grass fields. There is some confusion with another similar creature called the Agouti, *Dasyprocta aguti* which is found in South America.

Benefits of raising grasscutters:

1. Economically, a breeding pair raised in captivity can produce about six to eight offspring annually and they will attain a weight of about 1.5 kg at 6 months of age. Several breeding pairs can provide a good quantity of excellent protein for a family using locally available material for their housing and local byproducts for feed.
2. Environmentally, raising grasscutters in captivity will cut down on the practice of burning the brush and grasslands to flush out wildlife during hunting. This often leads to damage from fires getting out of control with resulting loss of property and the loss of biomass to return to the soil.
3. Nutritionally, grasscutter meat is relatively lower in fat and higher in the proportion of protein meat in comparison to other domestic animals.

Feeding is relatively easy since they eat a very wide range of foods including many local grasses, herbaceous legumes, some roots and bark along with food grains. Housing can be made with local materials in floor or raised cages.

Care must be taken to insure that they do not chew through wood and other soft materials.

Grasscutters are not prone to any particular disease. It is reported to be hardy compared to their animals raised in confinement. Problems can result from feeding errors leading to digestive disorders. Passing them on as gifts is easy with grasscutters raised in confinement and eagerly awaited by community members.

Obituary

Dr Haroun Yousuf, President of Nigerian Veterinary Association and CVA Councillor for Nigeria passed away in July after a brief illness.

The Nigerian Veterinary Association had rejoined the Commonwealth Veterinary Association as a member and Dr Yousuf had been elected as the CVA Councillor for Nigeria.

He participated in the 3rd Pan Commonwealth Veterinary Conference held at Wellington, New Zealand in June 2004.

The CVA offers its condolences to the members of the bereaved family.

UK/Mediterranean

United

RCVS Specialist in animal welfare science, ethics and law

Dr. David Main has become the first RCVS specialist in animal welfare science, ethics and law.

Dr. Main was also the first of three BVA Animal Welfare Foundation (BVA AWF) lecturers to be appointed under an initiative to support the development of an integrated approach to the teaching of animal welfare within the national veterinary curriculum.



Dr. Main believes that achieving specialist status is important for establishing animal welfare science, ethics and law as an academic discipline. Although this area is by its nature, multidisciplinary involving animal behaviourists, welfare scientists, philosophers and lawyers, he believes that it is important for veterinary surgeons to participate in postgraduate qualifications to demonstrate their significant participation in this activity beyond normal veterinary work. He also believes that specialist status is important to demonstrate to veterinary students that animal welfare science is a legitimate area of postgraduate study.

~ **The Veterinary Record, April 2, 2005**

Bovine TB

Commenting on the publication of the UK Government's new strategic framework for bovine TB (bTB) BVA President Dr Bob McCracken said: "With the increasing incidence and spread of bTB new and improved controls are clearly required if not overdue. We shall need to study the Government's proposals closely before responding in detail but do welcome the commitment to the development of a stronger regional approach. The profession has no doubt that specific control policies need to be tailored to reflect regional variations in disease risk."

"By the very nature of our work, with our scientific and practical expertise, vets are in the front line of disease control and we welcome the Government's acknowledgement of this role in delivering effective bTB surveillance and control testing as well as in offering essential advice to farmers. However, as we have pointed out repeatedly recently, the viability of farm animal practice in many parts of the country remains perilous. As the Government itself points out in the strategy document, 'in some areas of the country, bTB testing plays a significant role in maintaining the presence of large-animal practices'. We are at something of a loss as to how this acknowledgement equates with its view that 'legal recognition of lay testers may provide a more flexible and larger pool of testing personnel' and can only hope that the proposed action plan to address our concerns about the provision of veterinary services to livestock farmers will also address night and weekend cover for those areas of the country which could soon find themselves devoid of farm animal veterinary practices."

~ **Chrissie Nicholls and Helena Cotton**
BVA Press Office

New Dean for Glasgow Veterinary School

Prof. Stuart Reid has been appointed as the new Dean of the Faculty of Veterinary Medicine at the University of Glasgow. He succeeds Professor Andrea Nolan, who had held the position since 1999, and is now vice-Principal for learning and teaching at the University.



Professor Reid graduated from Glasgow in 1987 and is an RCVS specialist in veterinary epidemiology. He was appointed to the post of professor in 1997 and held the first joint chair between Glasgow and Strathclyde Universities. He was the second person in the UK to be appointed professor of veterinary epidemiology. Professor Reid holds the diploma of the European College of Veterinary Public Health and is also a Fellow of the Royal Society of Edinburgh (RSE).

~ **The Veterinary Record, February 19, 2005**

Abstracts

Inheritance of epilepsy in English Springer spaniels

The median age of onset of the seizures in 45 English Springer spaniels with idiopathic epilepsy was three years, but nine of them were between five and six years old. Twenty-one of them had generalized seizures and the other 24 had focal seizures. The results of segregation analysis were consistent with either a partially penetrant autosomal recessive inheritance, that is, a single major locus with modifying genes, or a polygenic inheritance. Given enough families with accurate phenotypic information and available DNA it should be possible to use genetic linkage analysis to identify chromosomal segments containing the causative gene or genes.

PATTERNSON, E.E., ARMSTRONG, J., O'BRIEN, D.P., ROBERTS, M.C., JOHNSON, G.S., AND MICHELSON, J.R. (2005). Clinical description and mode of inheritance of idiopathic epilepsy in English Springer Spaniels. *Journal of American Vet Medical Association*, **226**: 54-58.

Evaluation of a closed season for the trapping of badgers

A closed season from February 1 to April 30 was introduced to try to reduce the number of breeding female badgers (*Meles meles*) killed before their litters of cubs were weaned; the season was chosen on the basis of the best evidence available about the timing of the birth and weaning of the cubs. During the months of May 1999 to 2003, 4705 adult badgers were culled and field teams failed to capture 12 unweaned litters when their mothers were culled. Thirty-one litters of almost weaned cubs were culled either when their mothers were culled or on the same day. The number of unweaned cubs missed by the culling teams was approximately nine per year, and much lower than the number estimated by a badger welfare lobby group, suggesting that the close seasons had been effective in reducing the unnecessary suffering of unweaned cubs.

WOODROFFE, R., BOURNE, F.J., CHEESEMAN, C.L., COZ., D.R., DONNELLY, C.A., GERRINBY, G., MCINERNEY, J.P. AND MORRISON, W.I. (2005). Welfare of badgers (*Meles meles*) subjected to culling: Development and evaluation of a closed season. *Animal Welfare*, **14**: 19-25.

Cytological criteria of osteosarcoma in dogs

Imprint bone smears from 25 dogs with osteosarcoma were compared with smears from 20 dogs having bone implants removed. In 23 of the dogs with osteosarcoma mitotic osteoblasts were detected, but only one of the control dogs had evidence of mitoses. Twenty-one of the dogs with osteosarcoma had mild to moderate cellular necrosis, compared with six of the controls, and in 12 of them the osteoblasts showed a slight to moderate eosinophilic cytoplasmic granulation, whereas none of the control dogs showed this change. There were other differences between the groups which suggested that cytological criteria may be useful in the diagnosis of osteosarcoma in dogs.

REIHARDT, S., STOCKHAUS, C., TESKE, E., RUDOLPH, R. AND BRUNNBERG, L. (2005). Assessment of cytological criteria for diagnosing osteosarcoma in dogs. *Journal of Small Animal Practice*, **46**: 65-70.

Efficacy of collars impregnated with acaricides for preventing experimental tick infestations in dogs

Three groups of eight dogs were fitted with collars impregnated with amitraz, three with collars impregnated with amitraz and pyriproxyfen and three with control untreated collars. Eight, 10, 13 and 18 days later each group was infested with either 150 feeding female *Rhipicephalus sanguineus*, or 150 *Ixodes ricinus* or 150 *Ixodes scapularis* ticks and the survivors were counted after intervals of a few days. The collars impregnated with amitraz alone prevented the infestations but the few ticks that survived were able to oviposit. The collars also impregnated with the molt-inhibitor pyriproxyfen also impaired the reproductive capacity of the ticks and were therefore more effective.

ESTRADA-PENA, A. AND REME, C. (2005). Efficacy of a collar impregnated with amitraz and pyriproxyfen for prevention of experimental tick infestations by *Rhipicephalus sanguineus*, *Ixodes ricinus*, and *Ixodes scapularis* in dogs. *Journal of American Vet Medical Association*, **226**: 221-224.

Secretariat of the Pacific Community

Duty Statement: Animal Health And Production Adviser (AHPA)

Background

The Secretariat of the Pacific Community (SPC) is an independent intergovernmental agency providing technical advice, assistance, training and research in the service of the 22 Pacific Island countries and territories of Melanesia, Micronesia and Polynesia. SPC currently has a staff of more than 270. The organisation is officially bilingual, with English and French as the working languages.

A major undertaking of SPC's Land Resources Division (LRD) in 2004 was the participatory development of a single Strategic Plan (2005-2008) for the Agriculture and Forestry Programmes, integrating LRD's assistance to Pacific Island countries and territories (PICTs) in areas relating to crops, animals and forests.

The goal of LRD is to improve food security, increase trade, and assist the Pacific Community in being more prosperous, healthy and in managing their agricultural and forest resources in a sustainable way. To attain this goal, LRD has the following three objectives for the period 2005-2008:

- Improved food security;
- Sustainable management of forestry and agriculture systems; and
- Improved biosecurity and trade facilitation.

A number of outputs addressing the major emerging issues (including animal health and production as well as public health) under each of the objectives are to be achieved during the Strategic Plan period.

LRD's new structure, which is anchored on nine thematic teams, each with a team chair, will begin operating in 2005. These thematic teams include: plant health; animal health; biosecurity and trade facilitation; agriculture and forestry diversification; animal production; crop production; information, communication and extension; genetic resources; and forests and trees.

The Animal Health and Production Adviser is responsible to: The Director of the Land Resources Division.

Position Description

- Play a leading role in the animal health and animal production thematic teams and, in consultation with the LRD Director, in other thematic teams, with the overriding purpose of integrating animal health and production activities with activities of other teams;
- Actively provide policy advice and assistance (including in policy implementation, monitoring and evaluation) to PICTs in areas related to animal health and production and their relation to public health;
- Act as focal point for all matters relating to animal health and production within the region as defined by the CROP Working Group on Land Resources;
- Establish and maintain close working relationships with other international animal health and production

organizations, universities and other training institutions and veterinary public health agencies for the benefit of the region;

- Provide timely and accurate advice and technical assistance to PICTs on all matters relating to the thematic areas involved in collaboration with other members of the animal health, animal production and other related thematic teams;
- Design and develop new project proposals and seek donor funding to increase regional activities that are responses to recommendations from the meetings of the Heads of Agriculture and Forestry Services (HOAFS), Regional Technical Meetings of Heads of Veterinary Services and specific country requests. This will be done in collaboration with other members of the animal health, animal production and other relevant thematic teams;
- Organize and conduct regional and sub-regional technical meetings and workshops to improve the coordination and implementation of animal health and production activities in the region. This will be done in collaboration with other members of the animal health, animal production and other relevant thematic teams;
- Ensure that reports, work plans and budgets relating to animal health, animal production and other relevant thematic teams, are prepared as required at specified intervals;
- Perform other duties as required by the Director of the Land Resources Division or SPC's Senior Deputy Director-General.

Qualifications, Experience and Skills

Essential

- A recognized veterinary degree, plus a post graduate qualification in tropical animal health, epidemiology or veterinary public health with at least 10 years post-graduate experience.
- Demonstrated capability in policy formulation, implementation, monitoring and evaluation relating to general agriculture development and/or specific animal health, animal production and public health.
- Good interpersonal skills with demonstrated capability and capacity to coordinate, motivate, lead and become an active staff member of the thematic teams.
- High level of both written and oral communication.
- High level of computer competency in word processing, spreadsheets, webpage design, PowerPoint and email. Some knowledge of graphics and desktop publishing.
- Proven ability to design and manage projects.
- English language is essential but an ability to communicate in French and other Pacific languages skills is desirable.
- Ability to work effectively among different groups within

SPC and at the regional and international levels.

- Ability to deal with senior staff in other organizations at the national, regional and international levels.

Highly Desirable

- Experience in trade facilitation and the SPS Agreement of the WTO and similar agreements.
- An ability to draft legislation and import protocols to facilitate the movement of animals and animal products.
- A broad understanding of the cultural diversity of the region.
- A knowledge of instructional techniques and experience in the design and implementation of training programmes.
- At least 5 years experience in a PICT of all aspects of animal health including animal quarantine, veterinary public health, animal production and veterinary surgery.

Salary, Terms and Conditions

Salary and Allowance

The starting salary will depend on experience and qualifications in the salary range: SDR 2,274 - 3,075 per month (which is equivalent to F\$5,756 - 7,783 per month at the prevailing reference exchange rate of F\$1.00 = SDR .3951) in Grade J of the SPC Staff Classification and Salary Plan for professional staff based in Fiji. It is expected that an offer of appointment for an initial contract would be made in the lower half of this salary range.

In addition, an Establishment Grant will be payable to non-residents of Fiji. Where appropriate, other allowances such as education allowance will be paid. SPC emoluments are not subject to income tax in Fiji at the present time. The international currency exchange rate at the time of writing is approximately USD1.00 = F\$2.00.

Tenure

The appointment will be for a period of three years in the first instance, subject to the satisfactory completion of a one-year probationary period. The contract may be renewed for a further period subject to performance and continued funding availability.

Duty Station

Suva, Fiji.

Accommodation

A housing allowance of 75% of the total rental, up to a limit of F\$1,500 per month, will be provided.

Leave

Leave will accrue at the rate of 25 working days per annum. For expatriate staff members, home leave fares are payable after 18 months of active duty service.

Sick Leave

Thirty working days per annum.

Medical Benefits

The SPC's Staff Medical Insurance will provide basic medical insurance cover for staff and dependants. Supplementary medical

insurance cover can be purchased at staff's expense with our insurer to increase the level of insurance cover for staff who wish to do this.

Provident Fund

The appointee will be eligible for membership of the SPC's Staff Provident Fund. Staff members contribute eight per cent of base salary to which SPC adds a matching contribution.

Fares and Removal Expenses

For an appointee recruited outside Fiji, air fares by the most direct/and or economic route for the appointee and recognised dependants, and reasonable removal expenses by sea of personal and household effects will be met by SPC on appointment and termination.

Computing Environment

SPC has a standardised computing environment based on Microsoft Office running under Microsoft Windows.

Smoke-Free Environment

Smoking is not permitted in the work place.

Equal Opportunities

SPC is an equal opportunities employer. Recruitment to SPC staff vacancies is based entirely on merit, but in cases where two shortlisted candidates are judged to be of equal rank by the Selection Committee, preference will be given to Pacific Island nationals.

Address

Applications should be addressed to the **Senior Deputy Director-General, Secretariat of the Pacific Community, Private Mail Bag, Suva, Fiji, to arrive by 15 February 2005**. Applicants should provide full personal details, describe their qualifications and experience, and explain how these suit them for the specific requirements of the advertised position. Relevant previous appointments, present position and salary, and the names and addresses (including telephone, fax, e-mail contacts) of three referees should also be provided. Testimonials may be provided with the application, but are not necessary and will not be considered a substitute for confidential referee's reports, which will be commissioned directly by SPC.

Applications may alternatively, or additionally, be submitted by fax (No. +679 370 021), or email to recruitsuva@spc.int, preferably in plain text or Rich Text Format (RTF).

More can be learned about SPC and its Programmes and activities through the web site <http://www.spc.int>

~ **Secretariat of the Pacific Community**

CALENDAR OF EVENTS

2005

14th World Veterinary Poultry Congress and Exhibition, Istanbul, Turkey. **22 - 26, August.**

CVA Regional Meeting of Asian Region, Lahore, Pakistan. **21 - 23, September.**

BVA Congress 2005, Royal Society of Medicine, London. **30 September - 1 October.**

20th International Conference of the World Association for the Advancement of Veterinary Parasitology (WAAVP), Christ Church, New Zealand. **16 - 20, October.**

2006

49th British Small Animal Veterinary Association Congress, Birmingham, UK. **6 - 9, April.**

Annual Conference of the Australian Veterinary Association (AVA), Tasmania. **21 - 26, May.**

83rd New Zealand Veterinary Association (NZVA) Conference in conjunction with the 14th Congress of the Federation of Asian Veterinary Associations (FAVA), Auckland, New Zealand. **26 - 28 May.**

58th Annual Canadian Veterinary Medical Association (CVMA) Convention, St. John's, Newfoundland, Canada. **5-8, July.**

31st World Small Animal Veterinary Association (WSAVA), 12th European Congress - FECAVA; 14th Czech Small Animal Veterinary Association Congress (CSAVA), Prague, Czech Republic. **11 - 14, October.**

CVA Regional Meeting of West African Region. **(Date and Venue to be announced)**

CVA Regional Meeting of UK/Mediterranean Region. **(Date and Venue to be announced)**

2007

4th Pan Commonwealth Veterinary Conference, Barbados, West Indies. **4 - 8, November.**

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