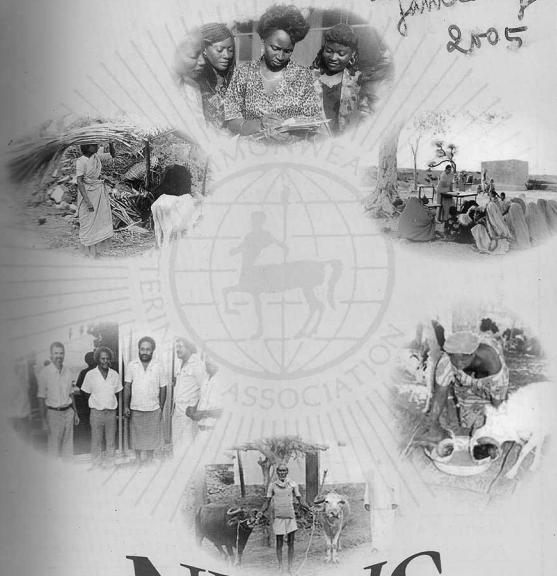


COMMONWEALTH VETERINARY ASSOCIATION

*January
2005*



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President's Column



The second half of 2004 will be one of the busiest periods ever for the CVA, with three Regional Conferences to be staged - in Lusaka, Zambia for ECS Africa from 4th to 6th August, in Lae, Papua New Guinea for Australasia/Oceania from 28th October to 1st November and in Port of Spain, Trinidad and Tobago from 8th to 11th November. Three CVA Regional Conferences have never before been held so close together. These meetings will of course mean considerable work and effort by the respective RRs, organising committees and associates. They will also impact heavily on our 2004-5 budget and, in the process, on our hard-working Treasurer.

These conferences are a key element of our work programme for several reasons. Firstly, they provide a wonderful opportunity for veterinarians, some of whom will be attending their inaugural CVA conference, to engage on a scientific programme designed within the region to address issues of current and emerging relevance, with special reference to their area. The updating and capacity-building which this facilitates is extremely beneficial. Secondly, the chance to network informally with professional colleagues and to develop both new friendships and perspectives is a major bonus. Thirdly, regional conferences enable Councillors to meet as a regional council, an event that occurs only once every three years, to review work-plan progress and discuss priorities as well as possible future activities.

The Executive Committee will be meeting in Cape Town in late July, immediately prior to the annual conference of the South African Veterinary Association. Key agenda items include the 2004-5 budget, the CVA constitution and new project proposals. By kind invitation, the Executive Committee will then attend the SAVA Conference. This will constitute an excellent opportunity for CVA awareness-building and for exposure as well as networking for the members of the Executive Committee. The CVA President and Treasurer, together with the Regional Representative, will then go on to Lusaka to attend the ECS Africa Regional Conference.

The recent Australian Veterinary Conference in Canberra, May 2004, was a milestone in that it featured a CVA session in the scientific programme. Veterinarians from three Pacific Islands delivered papers and the session greatly increased awareness within the AVA membership of the special veterinary issues and needs of the vast Oceania sub-region. The CVA is most grateful for the generous accommodation by the AVA which enabled this participation in their conference and hopes this new initiative will continue.

The CVA functions through the committed voluntary efforts of numerous people and this collective contribution is fundamental to our mission. I wish therefore to recognize the continuing valuable work undertaken so willingly by many. There is much that this form of voluntary endeavour can achieve and I look forward to exchanging views and ideas with many of you in the months ahead on how we can build on this for the future. The CVA also believes that it is most important for our developed member countries to be better informed about the range of activities which are undertaken.

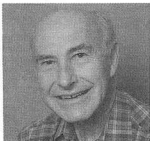
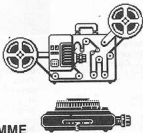
May I also extend good wishes to the organizers of each of the forthcoming Regional Conferences for excellent meetings with successful outcomes.

July, 2004

Robin Yarrow
President

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JOURNALS, BOOK AND AUDIO-VISUAL PROGRAMME

Contact: Dr. J.B. Derbyshire, Coordinator, CVA Book Programme, Department of Pathobiology
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Wodonga, Victoria 3689, Australia
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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 2003-2004, 18 shipments, comprising 307 books, were sent from Guelph to 8 Commonwealth countries as follows: Nigeria (3 shipments; 135 books), Pakistan (7 shipments; 100 books), Sri Lanka (2 shipments; 48 books), Fiji

(2 shipments; 10 books), Barbados (1 shipment; 5 books), India (1 shipment; 5 books), Kenya (1 shipment; 2 books) and Zambia (1 shipment; 1 book). Eleven of the shipments were to institutions, and 7 were to individual practicing veterinarians. The number of shipments was almost double that in 2002-2003, and almost three times as many books were shipped. The increased demand for books came mainly from Nigeria, following that country's readmission to the CVA, and from Pakistan and Sri Lanka. In addition, books and surgical instruments were shipped from the Australian depot to Fiji.

The current inventory at Guelph comprises just over 500 titles and close to 1,000 volumes, while the Australian depot holds over 200 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 & 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. Most of the books were published during the last 20 years; older editions are discarded each year.

June, 2004

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. 2004. RRs to submit their recommendations before 30th Nov. 2004 to the Secretary, CVA.

Asia

Sri Lanka

News from Sri Lanka

A. CVA Book Programme



The Dean of Veterinary Faculty and Animal Science Dr. H. Abeysunawardena (right) receiving the Books from Dr. Herath

Faculty of Veterinary Medicine and Animal Science and the Department of Animal Production and Health, University of Peradeniya received a set of valuable books presented under the



The Director General of Animal Production and Health Department Dr. S.K. Amarasekara acknowledging a set of books from CVA Book Programme

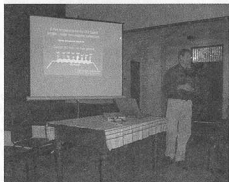
Commonwealth Veterinary Association Book Programme through the CVA Councillor Dr. H.M.S.P. Herath.

Veterinarians and the Veterinary undergraduates in Sri Lanka thank the CVA, especially Dr. J.B. Derbyshire, Coordinator, CVA Book & Journal Programme, for his help in sending the books to Sri Lanka.

B. Research

The Veterinary Research Institute, the research division of Department of Animal Production and Health held the Annual Review 2003 at the Plant Genetic Resource Centre at Gannorwa, Sri Lanka on 10th of February 2004. Findings of the research done in the past on Animal breeding, Animal Nutrition, Bacteriology, Parasitology, Pathology, Virology, Pasture and Fodder and Farming systems were presented.

C. SLVA Scientific Programme



Dr. Sylvain Comte elaborating the characteristics of Classical Infectious Bursal Disease

Sri Lanka Veterinary Association gave priority to Infectious Bursal Disease (Gamboro) in January 2004. Series of seminars were conducted. Dr. Sylvain Comte, Technical Manager/CEVA Animal Health Limited who came to Sri Lanka on an invitation of Hemas Company presented a paper on "Advanced Immunological Studies in Domestic Chicken with Special Reference to Infectious Bursal Disease".

• Research is what Im doing when I don't know what Im doing

~ Wernher Von Braun (1912-1977)

Annual Convention and Scientific Sessions of Sri Lanka Veterinary Association

The 56th Annual Convention and the Scientific Sessions of the Sri Lanka Veterinary Association was held at the Plant Genetic Resources Centre, Gannoruwa, Peradeniya on May 14th and 15th, 2004. 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 2004/2005 was appointed.



Ceremonial opening of the 56th Annual Convention of SLVA

The opening ceremony was on May 14th with the Minister of Agriculture, Irrigation and Livestock Mr. Anura Kumara Dissanayake as the Chief Guest. High Commissioner for India in Sri Lanka Mr. Nirupam Sen was the Guest of Honour along with the Deputy Minister of Livestock Mr. Bimal Ratnayake and the Asst. Commissioner of India Mr. R. Malhotra.



*At the Opening Ceremony
L-R: Dr. AVP Dharmawardena, Dr. Herath,
Hon. Anura Kumara Dissanayake, Hon. Bimal Ratnayake
and Dr. H.R. Premasiri, President SLVA*

The Minister of Agriculture, Irrigation and Livestock Anura Kumara Dissanayake stressed in his address at the inaugural sessions that the steps will be taken to boost local production and encourage dairy farming and livestock breeding.



*Indian High Commissioner Mr. Nirupam Sen, Dr. Herath,
Dr. Wijaya Jayathilaka and Dr. SLA Daniel*

The Indian High Commissioner in his address mentioned that both India and Sri Lanka have a lot of things in common and practically share the same interests. He said that India would extend its fullest support for Sri Lanka to improve its Agriculture and milk production, as India has experienced a "White Revolution" in milk production. India will also help in setting up of milk collecting centres. India has already supplied vaccines and snake venom to save the lives of many who die of snake bite in the villages.

President of the Sri Lanka Veterinary Association, Mrs. Herath in her presidential address said that friendship with India was a long standing one. India had helped Sri Lanka in the agriculture sector. She said that livestock from India had been imported and had received expert advice from experts in India. She said that "Our professionals have got several opportunities to get acquainted with the world famous Anand Dairy Cooperative System, and have received help from the Kerala Livestock Development Board and Indian Veterinary Research Institute. The Indo-Sri Lanka trade agreement helps to further strengthen our economic ties", she said.

Dr. Herath said the Sri Lanka Veterinary Association then Ceylon Veterinary Association was established in 1940 with its centre of activity in Colombo. Dr. R.T. Little, a British veterinarian was the first President of the association and Dr. Hector C. Perera was the first secretary whose name is still remembered as a doyen of the profession. She said that the association obtained membership of Commonwealth Veterinary Association in 1970/71 and since then the members have been



Dr. Siloshini Gnanandurajah receiving the award for the best presentation on Animal Production from the Vice Chancellor Prof. Kapila Gunawardena



*At the Prof. S.T. Fernando Memorial Oration
L-R: Dr. D.H.A. Subasinghe, Dr. J.A. de S. Siriwardena
Dr. Herath, Prof. Kapila Gunasekera and Prof. D.J. Weirama*



Dr. Herath presenting the 50th Volume of SLVJ to the Prof. Kapila Gunasekera



Dr. Herath presenting the All Island Veterinarians Guide to Hon. Minister of Agriculture

enjoying the benefits under the CVA Study Fund and CVA Book Programme. The association has initiated programmes to improve the relationship between the profession and the public and has conducted seminars and campaigns on many zoonotic diseases including Rabies, Avian Influenza (Bird Flu) etc.

Dr. Herath gave a detailed account of the problems facing the veterinary profession as well as the farmers due to constraints in the implementation of proper livestock policies. She stressed the need to exploit opportunities for livestock development and poverty alleviation through promotion of safe and efficient production, processing and marketing of livestock products.

Greetings from the President, Secretary and the Treasurer of Commonwealth Veterinary Association were conveyed to the veterinary professionals by Dr. Herath.

The formal opening ceremony was followed by a theme seminar "Veterinary Profession and the National Economy" which addressed the contribution of veterinary professionals in the National Economy. The speakers included a panel of eminent scientists Dr. T. Abeysekera from the World Bank, Dr. Vijaya Jayatilake from the Faculty of Agriculture and Dr. S.L.A. Daniel from the Ministry of Community Development, Estate Infrastructure. They dealt with the role of livestock sector in Sri Lanka, agriculture development, rôle of professionals in socioeconomic development and the Role of Veterinary professionals in National Economic Development. Dr. Daniel in his speech on "Role of Veterinary Professionals in Developing Economy of Sri Lanka" stressed the importance of three sectors of the Sri Lankan economy, namely the agriculture, tourism and international trade.

The evening programme on May 14th included the Association Dinner, the Prof. S.T. Fernando Memorial Oration, felicitation of senior professionals Drs. J.A. De S. Siriwardena and D.H.A. Subhasinghe for their outstanding services rendered to the profession. Prof. S.S.E. Ranawana and Prof. M.U. Jayasekera read the citation for Dr. Siriwardena and Dr. Subhasinghe respectively. It was a very special day for the veterinary professionals as the Convention coincided with the presentation of 50th volume of the Sri Lanka Veterinary Journal. The services of the editor of SLVJ, Prof. R. Sivakanesan were also appreciated. New President for 2004/2005 Dr. H.P. Premasiri was inducted ceremonially at the Fellowship dinner.

The Oration took place at the Hotel Tourmaline in Bahirawakande, Kandy and was delivered by Prof. D.J. Welgama. Merit Professor of Parasitology, Faculty of Medicine of the University of Peradeniya. The title of the presentation was "Fifty years of Veterinary Parasitology in Sri Lanka and Noteworthy Achievements". The Vice Chancellor of the University of Peradeniya Prof. Kapila Gunasekera was the Guest of Honour. The awards for the best performance of Veterinary Public Health at the 3rd BVSc Examination, the best publication in SLVJ 49th issue and the best oral presentations made at the several sessions of 55th Annual Scientific Sessions were presented by the Vice Chancellor.

The second day started with Clinical presentations followed by the presentations on Wild Life, Livestock Production, Animal Health and Poultry Production. There were also poster presentations.

The following were the elected as office bearers for the year 2004-2005.

President:	Dr H.P. Premasiri
President Elect:	Prof R. Sivakanesan
Vice Presidents:	Dr A.R. Mohamed Dr U.S. Bandara
Secretary:	Dr Tissa Jayathilaka
Treasurer:	Dr B.A.D.A.S Jayathilake

Committee Members

Dr (Ms) NWKP Wijewantha
Dr CP Ihalagedera
Dr SR Jayasinghe
Dr M M Hanifa
Dr J Amarakone
Dr MDN Jayaweera

Ex-Officio

Dr (Mrs) HMSP Herath
Dr Vipula Dharmawardana
Dr (Ms) KACHA Kothalawala

Editor

Prof R. Sivakanesan

Company Secretary

Ms. Sharma Nathanielsz

– Dr (Mrs) HMSP Herath
Regional Representative



President/SLVA presenting the 50th Volume of SLVJ to Prof. D.J. Welgama who presented the Prof. S.T. Fernando Memorial Oration
L-R: Prof. Kapila Gunasekera, Prof. R. Sivakanesan, Dr. Herath and Prof. D.J. Welgama



Prof. Kapila Gunawardena, Vice Chancellor presenting a token of appreciation to Dr. DHA Subhasinghe and Dr. JA de S. Siriwardena (seated)

Indian Veterinary Association News

Elections of office bearers of Indian Veterinary Association are still pending as the matter is in court. The High Court of Tamil Nadu has appointed a senior advocate to conduct the elections. Meanwhile, the editor of the Indian Veterinary Journal Dr. V.D. Padmanabhan has resigned and Dr. K.R. Parthasarathy has been nominated as the new editor of the journal.

Pakistan

CVA Study Fund Report

Report by Dr Isma Amir, Pakistan

It was my privilege to receive the 2003-2004 CVA Study Fund Award to visit Bangalore, India from March 29 to April 8, 2004. The purpose of my visit was to compare the field and laboratory working conditions with reference to various livestock diseases with special emphasis on parasitic diseases. This was my first visit to India and no doubt that it was very interesting and knowledgeable. During my stay, I had the opportunity to visit different Livestock institutions, belonging to Government and private sector in and around Bangalore.

My visit started with the Veterinary University, Hebbal, Bangalore where, I got training about the "Different Approaches in the Diagnosis and Control of Parasitic Diseases of Domestic Animals". It included

- a. The Collection of Samples and their Shipment
- b. Macroscopic Examination
- c. Microscopic Examination
- d. Immunological Techniques
- e. Interpretation of Results
- f. Treatment
- g. Control and Prophylaxis



Dr Isma with Prof. Muniyappa in the Microbiology Department

I was provided facilities to run immunological tests for various parasitic diseases. These tests included Dot Elisa, Protein Estimation, Western Blotting, Latex Agglutination and Counter current Immuno-

electrophoresis. Not only I got the opportunity to run various tests but was also emphasized and trained for the interpretation of results.



Dr Isma (left) with Dr Patalakshmanma (centre) and Dr Girija Prem (right), Staff of the Department of Parasitology

I was also briefed about various strategies for the use of anthelmintics and to overcome anthelmintic resistance. I treated many cases of Schistosomiasis in Pakistan but mostly there was a relapse and if the dose increased the animal died. When I discussed my problem I was told that it was the same here. However, Praziquantal preparations were safe and 100% effective. I will try it in the same manner now in my country. This is just an example of many tips which I got for treatment and control of parasites.

In the University, I was able to practically execute various tests which has boosted my confidence. Now I am not only in a position to use them in my laboratory in Pakistan, but also able to train my other colleagues in the department.

Regarding the epidemiology I was explained that there are 154 parameters, which are useful for the forecasting of various diseases or almost all. I was also informed that computer modelling for macroparasites is of two types i.e. Density model and Prevalence model. These two models can further statistically be analysed by three analytical methods i.e. empirical model analysis, explanatory model analysis and time series model analysis, for final conclusion.

While visiting the various Departments of the University, I found that India and Pakistan have similarities in the pattern of diseases and the way these are tackled.

During my visit to Department of Poultry Science, I had the opportunity to see Giriraja and Girirani birds. These are the strains bred to resemble local fowls. Sturdy and resistant, they can easily acclimatize themselves to any region and weather. They can survive like any native stock, except for the routine Ranikhet (New Castle Disease), no other vaccination is required.

I visited the Karnataka Milk Federation (KMF) Mega Dairy Project. The whole dairy unit is computerized. Not a single drop of milk is wasted here and is hygienically packed.

During my visit to the Turf Club, Bangalore, I was able to see the recent sophisticated equipments for the treatment of sick and injured horses and the underground stables which was very unique.



At the Equine Clinic

I also visited Bannerghatta National Park and Zoo. There I observed animals in their natural environment and studied the feeding and treatment of wild animals.

At the end I would like to pay tribute to the CVA for sponsoring this visit, through which I had the opportunity to compare different working environments. This has also resulted in my learning/refreshing various techniques, which will be quite useful in my future, and I will be able to use them for the benefit of Livestock holders in Pakistan.

Pleasant weather, beautiful city and loving and hard working people who are very fond of cricket are and will always be fresh in my memory.

Poultry Industry of Pakistan Devastated by Rumours of Bird Flu

Sensational covering of Bird Flu scare by the major national news papers of Pakistan caused a major set back to poultry industry as the general public stopped eating poultry meat and eggs. This resulted in a sharp decline in prices, well below cost of production and even in some areas farmers had to dispose their flocks free of cost. This price crisis carried on for 6 weeks and as a result many poultry farms were closed as farmers stopped buying day old chicks. Poultry breeding Companies in Pakistan were forced to drown the chicks live or destroy their hatches and at the end breeder flocks were force moulted. Billions of rupees were drained. Pakistan Poultry Association struggled very hard to nullify the impression created by the press, held rallies, press conferences and other promotional measures in all the major cities of Pakistan. Due to

premature culling and moulting of breeder flocks has resulted in severe shortage of day old chicks, thus price of poultry meat has reached new peaks.

Nutrition Conference

Nutritionist Association of Pakistan is holding a two days Conference at Pearl Continental Hotel Lahore, Pakistan from 1st to 2nd December 2004. Many speakers from Pakistan and abroad will present latest advances in nutritional sciences during this conference. Governor of Punjab will inaugurate the conference. At the occasion an exhibition will also be held where various national and international companies will display their products. More than 500 delegates are expected to attend this Conference.

PVMA Annual Conference

Pakistan Veterinary Medical Association Punjab will hold its annual conference during first week of October this year in Lahore. A committee has been formed to finalize the details of the conference, Chief Minister of Punjab is expected to inaugurate the conference where more than 600 veterinarians from all over Punjab will attend the conference.

CVA Asian Regional Conference in Pakistan

The CVA Asian Regional Conference will be held at Lahore, Pakistan during the 1st week of September 2005.

Dr. Muhammad Aslam, a prominent poultry industrialist and veterinarian has agreed to be the Chairman of the Conference.

— Dr. AA Ramzee
CVA Councillor, Pakistan

Commonwealth revokes Pakistan suspension

The Commonwealth on Saturday, 22 May 2004 revoked the suspension of Pakistan from the grouping, welcoming the progress made by the country in restoration of democracy. A decision in this regard was taken at the two-day meeting of the Commonwealth Ministerial Action Group (CMAG). The CMAG noted the adoption by the Pakistan Parliament of the Legal Framework Order (LFO), thus bringing it into the country's Constitution.

Deccan Herald, May 24, 2004


 India

Rabies Survey in India – Joint WHO/APCRI/CVA Project

The WHO Steering Committee for Rabies Control in Asia, at its meeting in June 2002, recommended a reassessment of the public health burden of rabies in India, since the estimated figure of 30,000 deaths per year, needed to be reviewed. At the end of 2002, the WHO Regional Office for South East Asia, in consultation with WHO India office, proposed Association for Prevention and Control of Rabies in India (APCRI) as a suitable agency to conduct the study. APCRI in turn approached CVA through its Secretary Dr. S. Abdul Rahman who is also a member of the Steering Committee to conduct the veterinary aspect of the project.

APCRI and CVA prepared a draft protocol of the study, with the main objective to assess the rabies mortality estimate for India. The study also aimed at providing additional information on rabies, such as animal bite rate per 100,000 population, post exposure treatment, availability and costs and some information on animal rabies. A protocol was prepared jointly by APCRI and CVA for WHO evaluation. An agreement was reached on the methodology of a multicentric survey involving 20 Medical Colleges and as many Veterinary colleges, distributed all over India. A meeting of the Principal Investigators (PIs) was organized during the first quarter of 2003 by APCRI at Bangalore, with WHO participation from HQ, Regional and India offices and a WHO expert on rabies from The Philippines.

The results of the survey put the annual human rabies deaths in India at 18,000-20,000 deaths, a figure which is less than the previously estimated one, but the incidence of animal bites in the surveyed population is very high. The findings of the survey were reviewed by a core group of experts from NICD and WHO.

CONCLUSIONS

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

Majority of human rabies deaths occurred within six months of dog bite. The limbs and hands were the most common sites of bite. About half of the human rabies cases sought hospitalization and about one-third died in the hospital. The indigenous treatment was a popularly sought after remedy. The diagnosis of human rabies was mostly on clinico-epidemiological basis and hence were mostly

"probable cases" and none had laboratory confirmation of diagnosis.

2. The incidence of animal bite is high and is due to a high dog: man ratio. The majority of animal bite victims belonged to lower economic class and the use of anti-rabies vaccines was low.

The presence and menace of stray dogs was high. The pet dog care and management practices were not satisfactory. The municipal licensing of pet dogs was inadequate. Overall the situation was slightly better in urban areas as compared to rural areas.
3. The most common animal reservoirs of rabies based on laboratory evidence were dogs, cattle, goats, cats and pigs and among the wild animals were 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 NTV and phase in cost-effective intradermal 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 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 to be 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 islands of Andamans and Lakshadweep at the airports and seaports and to ensure a proper surveillance of rabies in animals.

For initiating all the above measures and for a concerted and coordinated action a "National Rabies Elimination Programme" must be launched involving medical, veterinary and other related departments.

– Assessing Burden of Rabies in India

Bangladesh

Scientific Seminar and Annual General Meeting of Bangladesh Veterinary Association

The Bangladesh Veterinary Association held its Annual General Meeting and Scientific Seminar at Dhaka on 4th May 2004. Dr Syed Abdul Khader, President, BVA presided over the session. 900 veterinarians from different ministries and organisations attended the seminar. Mr. Barkatullah Bhulu, Advisor for the Ministry of Commerce, Government of Bangladesh was the Chief Guest. Mr. Iqbaluddin Ahmed Chodhury, Secretary of the Ministry of Fisheries and Livestock and Dr Salehuddin Mahmud, Director General, Department of Livestock Services were the Special Guests.



Mr. Barkatullah delivering his speech at the inauguration



At the Technical Session

L-R: Priya Mohandas, Nazir Ahmed, Sultan Mohiuddin and Md. Ahsanuzzaman

The theme of the Scientific Seminar was "Role of Veterinary Services in Poverty Reduction and Employment Generation through Livestock Production". The keynote address was presented by Prof. Priya Mohandas of Mymensingh Agricultural University. The other speakers included Dr Nazir Ahmed, Retd. Director General, Dept. of Livestock Services and Mr. Md. Ahsanuzzaman, General Manager of Aftab Multipurpose Farms.

Dr. Sultan Mohiuddin, CVA Councillor Bangladesh was the seminar Convenor. Various eminent veterinarians and experts participated in the seminar.

New Minister appointed



Abdulla-AL Noman (centre) being felicitated by BVA

Mr. Abdullah-AL Noman was appointed as the Minister of Fisheries and Livestock of the Government of Bangladesh on May 8th, 2004. Mr. Abdullah has been associated earlier with the Ministry and was chiefly responsible for the starting of two new government veterinary colleges in Sylhet and Chittagong.

National Seminar and Workshop on Veterinary Education and Research, 4-6 September 2003

A workshop on "Veterinary Education in Bangladesh" was organised on 4th September 2003 by the Bangladesh Veterinary Council.

Dr. N.C. Debnath, President of Bangladesh Veterinary Council and Dean of Chittagong Veterinary College presided over the session. Mr. U.A.S. Bhuiyan, Minister of State for Fisheries and Livestock was the Chief Guest and Mr. Muhammad Abdul Haque, Secretary, Ministry Fisheries and Livestock was the Special Guest. A report of the Permanent Committee on Veterinary Education in Bangladesh was presented by Prof. Dr. Md. Zahurul Karim of Bangladesh Agricultural University.

A committee to formulate a uniform course curriculum on veterinary education was constituted with the following members.

Dr. Nazir Ahmed Ex-Director-General of DLS	Chairman
Prof. Jalaluddin Ahmed Dept. Surgery & Obstetrics, BAU	Member
Prof. Md Zahurul Karim Dept. of Parasitology, BAU	-- "
Dr. Mohd. Sultan Mohiuddin Director, DLS	-- "
Prof. Md. Nazrul Islam Sylhet Govt. Veterinary College	-- "
Dr. Paritosh Kumar Biswas Chittagong Govt. Veterinary College	-- "
Coln. Dr. Md. Amminul Haque Asst. Director, RV&F, AHQ, Dacca Cant	-- "

On 6th September 2003, a Midterm Workshop of the Bangladesh Society for Veterinary Education and Research was held at Sylhet Government Veterinary College, Sylhet. The theme of the workshop was "Preventive Veterinary Services".

Hon'ble Minister of State for Fisheries and Livestock Mr. U.A.S. Bhuiyan inaugurated the workshop. The keynote address was presented by Dr. Abul Kalam Azad, Joint Secretary, BSVER. Prof. Mosleh Uddin Ahmed, Vice Chancellor, Shahjalal



L-R: Drs NC Debnath, Sultan Mohiuddin, Nuruddin Ahmed, Inayet Hussain and Manoj Mohan Sen

Science and Technology University, Sylhet was the Chief Guest and Prof Manoj Mohan Sen, President of the Society presided over the inaugural session. A technical session was also held which was chaired by



Address by Mr. U.A.S. Bhuiyan

Dr Sultan Mohiuddin, Director, Department of Livestock Services and CVA Councillor, Bangladesh. The other participants in the technical session included Prof. Nuruddin Ahmed and Dr Inayet Hussain.

- *It is dangerous to be sincere unless you are also stupid*

~ George Bernard Shaw (1856-1950)

Australasia/Oceania

Papua New Guinea

Papua New Guinea Revisited

Jeff Cave

*CVA Councillor, Australia
Department of Primary Industries
1, McKoy Street, Wodonga, Victoria 3689
Australia*

With the Australasia/Oceania Regional CVA Conference being scheduled in Papua New Guinea in October and the often adverse perceptions and misconceptions of the country I felt readers may be interested in a travelogue of my return last year to "the land of the unexpected".



Jeff Cave with the villagers

including Tumolbil which is built on a spur at the end of a valley. I remembered it from before as being one of the more "exciting" airstrips to land on in PNG.

Telefomin is about 5000 feet above sea level making the temperature much more pleasant than the coast for bushwalking. The next few days were the



A villager selling her wares

For me it was my first time back in PNG having lived near Vanimo on the North West coast for two years from 1993 to 1995. Vanimo is a picturesque, friendly location with a small country town feel. In Vanimo everybody seems to know each other. I spent the first few days in accommodation made out of bush materials built next to the beach. For me being in Vanimo was a chance to catch up with a lot of old friends.

After a few days around Vanimo I then flew to Telefomin in the Sandaun Highlands in a Missionary Aviation Fellowship (MAF) twin otter for a weeks bushwalking and staying in villages. On the way I landed on a couple of PNG's infamous airstrips

most memorable of the trip. The walking was hard with a lot of up and down slippery tracks with narrow logs crossing rivers. I have never sweated so much. The reward was the brilliant scenery and staying in traditional villages with people who rarely meet outsiders. As I came into each village everybody would want to shake my hand and say "Apinun". At night we'd sit around an indoor fire and tell stories and eat an enormous meal of rice, tinned meat, sweet potato,

noodles and greens - I supplied the trade store goods and the villagers provided the vegetables. The languages spoken were a mixture of the local dialect, tok pidgin and English.

After a week in the Telefomin district it was time to return to Vanimo. This included a six hour wait at Telefomin airstrip for a plane that had been delayed due to a flat tyre. This was just another part of the PNG experience.

I finished my trip in Port Moresby and met my former work colleague and now CVA councillor for PNG, Dr Ilagi Puana. Port Moresby has a bad reputation for problems associated with law and order but I have never had any trouble there nor in any other part of the country.

Readers should seriously consider attending this year's Australasia / Oceania regional CVA conference in PNG. During their stay they should also see some of this friendly, diverse, scenic and often misunderstood country.

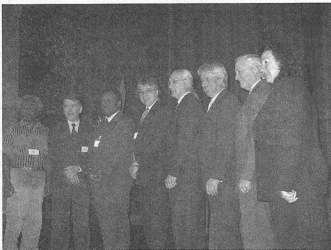
Australia

CVA contributes to AVA Conference

In a bid to ensure that CVA members in developed countries are better informed about CVA programmes worldwide, it was decided that a CVA segment be included in the annual conference programme of the Australian Veterinary Association. This was held in Canberra, the national capital from 2nd - 7th May, 2004. AVA management arranged for this segment to be included in the special interest programme of the Veterinary Public Health group.

Accordingly speakers were selected to address both the special issue of cultural factors effecting livestock production in the Pacific Islands and the special situation of the use of dolphins in the Solomon Island communities.

The latter had been the subject of recent televised programmes seen in the Australasian region and CVA was anxious that a correctly informed presentation provide balance to these programmes. CVA was aware that Pacific islanders who used dolphins in a variety of ways or treated the animals as sacred did not take kindly to westerners in their air-conditioned offices far away attempting to pressure them to change their cultural practices which were often part of their survival.



At the AVA Conference at Canberra, Australia

L-R: Dr. Gibasa Asiba, CVO, PNG; Dr. Robin Yarrow (Fiji), President CVA; Dr. Baddley Anito, CVA Councillor, Solomon Island; Dr. Norm Blackman, President, AVA; Dr. Duane Landals, President Canadian Veterinary Medical Association; Dr. Tim Greet, President, BVA; Dr. Jack Walther, President, AVMA; and Dr. Jo Sillince, Immediate Past President AVA

The papers are published as follows and CVA News would welcome reaction from its readers to any aspect of these important topics. One of the speakers was Dr Robin Yarrow, CVA President, from Fiji who also participated in discussions with the Australian and international leaders of the veterinary profession gathered for the conference.

- Dr WJ Pryor
Treasurer, CVA

University of Melbourne Awards Roger Clarke

Dr Roger Edward Clarke received the prestigious Degree of Doctor of Veterinary Science (*honoris causa*) at The University of Melbourne graduation ceremony.



Dr Roger E. Clarke

A former AVA President (1997-1998), he joins a distinguished list of veterinarians to receive this award. The first recipient in 1909 were James Anderson Gilruth and William Tyson Kendall.

Dr Clarke was honoured for his leadership throughout the veterinary profession after distinguishing himself across a wide variety of key industry organisations. He received a meritorious service award of the Australian Veterinary Association (AVA) in 1985, was the Australian Small Animal Veterinary Association (ASAVA) practitioner of the year in 1998, and was made a fellow of the AVA in 1995.

Australian Veterinary Journal, Volume 82, No. 4

New President of AVA

At the Australian Veterinary Association (AVA) Conference held in Canberra, on 2-7 May, Dr Norm Blackman assumed office as the new President of AVA.



11th Australasia/Oceania CVA Regional Meeting and Workshop

The 11th Australasia/Oceania CVA Regional Meeting and Workshop will be held from 28th October to 1st November 2004 at Lae, Papua New Guinea. The theme of the Workshop is "Sustainable Livestock Production and Food Security – The Role of Women and the Threats of Emerging Diseases". The Meeting and Workshop is jointly organised by Papua New Guinea Veterinary Association and the Commonwealth Veterinary Association.

Donation of Books to Australasia/Oceania Region

President of CVA Dr Robin Yarrow, received a donation of 22 books [The Compendium of Animal Reproduction] from Intervet Ltd., of Auckland, the NZ subsidiary of Intervet International, for distribution to Pacific Island veterinarians. This is a very useful compact reference for the veterinarians of the region. The CVA is very grateful to Dr. Vivienne Lintott, Intervet's Companion Animal Business Manager, who made this donation possible, as well as to Dr. Helen Beban, NZ CVA Councillor for her role.

Malaysia

16th VAM Congress

The 11th International Conference of the Association of Institutions for Tropical Veterinary Medicine and 16th Veterinary Association Malaysia Congress will be held at Sunway Pyramid Convention Centre, Petaling Jaya, Malaysia from 23rd - 27th August 2004.

The theme, "Animal Health: A Breakpoint in Economic Development?", reflects the importance of animal health in the sustainable development of the animal industry. The focus will be on the improvement of human health and quality of life by means of increased and safe food production, achieved through the enhancement of research, training and education in veterinary medicine and livestock production. There will be a special session on Avian Influenza catering for the need to deliberate on this important disease especially after the recent outbreaks in some Asian countries, posing a potential threat of a new pandemic of the disease.

The exhibition which is to be held simultaneously will improve the opportunity to showcase the recent advances on R&D towards better health and economic development in the industry.

Timor-L'Este

Timor-L'Este Veterinary Association elects its first President

Dr Antonino do Karmo has been elected as the inaugural President of the Timor L'Este Veterinary Association. The other office bearers of the association are Dr. Acasio Amaral, Vice President and Dr. Mario Francisco Amaral, Secretary.



New Councillor of Fiji

Dr Kenneth Cokanasiga is the new Councillor of Fiji. He replaces Dr Robin Yarrow who is now the President of CVA.

Dr Kenneth graduated from Massey University, New Zealand in 1978 with a Bachelors degree in Veterinary Science. He obtained his Masters in Tropical Veterinary Medicine from Edinburgh University, Scotland in 1992

He has worked as Veterinary Officer from 1979 - 1981 and as Divisional Veterinary Officer (Western) from 1981 - 1984 and Divisional Veterinary Officer (Central/Eastern) from 1984 - 1988 in the Animal Health and Production Division of the Ministry of Agriculture, Fisheries and Forests.

Later on he became Principal Veterinary Officer (HQ) and worked until 1992, when he was appointed as Acting Director, Animal Health & Production Division (Administration / Finance). He became the Director, Animal Health and Production Division (Chief Veterinary Officer) in 1994.

In 1998, he was appointed as Deputy Permanent Secretary (Operations) and since 2002 is working as Deputy Secretary for Commerce, Business Development and Investment in the Ministry of Commerce, Business Development and Investment to date.

He is a member of many professional associations and member of many committees set up by the government and other organisations.

Long-serving Veterinarian departs Region

The Fiji Veterinary Association [FVA] staged a farewell for Dr. Peter Saville, Animal Health Adviser in the Secretariat of the Pacific Community [SPC] and past FVA President and CVA Councillor, in January. Peter, who has spent 25 years working in the Pacific Islands region, has joined the Northern Territory Department of Agriculture as Veterinary officer, based in Alice Springs.

Peter made the transition to Fiji from rural practice in UK in 1978 and started as Divisional Veterinary Officer in the Animal Health and Production Division of Fiji's Ministry of Agriculture. Over a 10 year period Peter rose through the ranks to Acting Principal Veterinary Officer.

His duties included in-service training, lecturing at the Fiji College of Agriculture, TB and Brucellosis control, supervision of the veterinary investigation laboratory and coordination of livestock farm supervision. He also chaired the Fiji Agriculture Show Committee and assisted in cyclone rehabilitation, often using his own launch! After completing a Masters degree at Edinburgh, Peter served as Chief Veterinary Officer in the neighbouring Republic of Vanuatu from 1988-91, following which he joined the SPC.

Peter's service with the SPC until 2004 saw him managing the Regional Animal Health Service of 7 staff, while based physically in Suva, Fiji. This unique and valuable service covers a vast area of the Pacific Ocean and includes some 20 island states and territories. Although he has moved to an entirely landlocked situation, Peter is maintaining close links with Fiji - this includes regular replenishment of his supply of kava!

Fiji's first private Veterinary Clinic opens

Veterinary Care (Fiji) opened its doors to the Fiji public on January the 5th of this year. The private clinic is the brain child of local veterinarian Dr. Asha Reddy. Reddy, a Melbourne University graduate says that she discovered a niche for service orientated and personalized small animal veterinary care after working in Fiji for the last three years. "There are a large number of locals and expatriates based in Suva who treat their animals like members of their family. Veterinary Care (Fiji) strives to continually improve the range of services it has available to its clients."

SPCA Veterinarians

On March 11th 2004, Dr. Ashish Narayan and Dr. Beto Yadin commenced their employment with SPCA Fiji. Both of the veterinarians have brought diverse skills with them. Skills which will no doubt help SPCA in its capacity as non-profit charitable organizations to achieve its aim of preventing cruelty to animals. Dr. Yadin has worked in countries such as Israel, Botswana, Ecuador and New Zealand in large and small animal facilities. Dr. Ashish, on the other hand, worked as a government veterinarian before joining the SPCA, practicing large and small animal medicine and assisting with pathology, disease investigation and quarantine.

Dr. Richard Philip of Edinburgh, who served as a Fiji Government veterinarian in the early 1970s and who has acquired considerable experience working in animal welfare in Bhutan, spent several weeks reviewing the SPCA's systems and procedures in March on a voluntary basis.

— Riteshni Tarak
FVA Secretary

Canada Caribbean

Canada

Hon. Life Membership of CVMA

Dr. Bert Stevenson, Past President, CVA will be conferred the Hon. Life Membership of the Canadian Veterinary Medical Association at its 56th Annual Convention which will be held from 7-10 July 2004 at Quebec City, Quebec. Details of the award will be published in the next issue of the News.



Dr. Bert Stevenson

CVMA Appoints New Continuing Education Coordinator

Dr Jeanne Lofstedt, Associate Dean of Academic Affairs at the Atlantic Veterinary College and Past President of the CVMA, assumed the position of Continuing Education (CE) Coordinator in January 2004. Dr Lofstedt will develop the CVMA's CE program in consultation with the Local Organising Committee, the Business Management Committee, the Professional Development Committee, and several veterinary speciality groups. Dr. Lofstedt's outstanding contribution to the veterinary profession includes research papers, book chapters, positions on editorial boards, and lectures to veterinarians and animal owners.



Dr. Jeanne Lofstedt

Canadian Veterinary Journal, Volume 45, No. 3

Dr Wayne Lees, CVA Councillor, Canada has resigned. A new Councillor is yet to be nominated by CVMA.

Jamaica

New CVA Councillor of Jamaica

Dr. Michael Motta was elected as CVA Councillor for Jamaica at the last Annual General Meeting of the Association.



Dr. Michael Motta

Dr Motta obtained his veterinary degree from the University of Queensland, Australia, graduating with honours in 1998. He had a previous Science degree in General Agriculture, from the University of the West Indies, graduating in 1990.

His practical experience includes the current position as veterinarian for the West Indies Alumina Company's (WINDALCO) Agriculture operations, which are based in St. Ann, St. Catherine and Manchester parishes. He is responsible for herd health of dairy and beef animals, horses and mules, and is available on a consulting basis for WINDALCO - sponsored pig, goat and poultry projects in the local community. He also has direct responsibility for the beef cattle operations in Alderton St Ann (an area of over two thousand hectares, which pastures approximately two thousand Red Poll and Brahman cattle).

In addition, he does private veterinary work, which includes small and large animal medicine and surgery.

His areas of special interest include Theriogenology, including reproductive physiology, artificial insemination and embryo transfer; surgery on large and small animals; herd health programmes; preventive veterinary practice and education/training.

New Office bearers of Jamaican Veterinary Medical Association

The following were elected as office bearers of JVMA.

President	Dr. Cedric Lazarus
Vice President	Dr. Graham Brown
Secretary	Dr. Sarah Wilkinson-Eytle
Assistant Secretary	Dr. Wintorph Marsden
Treasurer	Dr. Sophia Ramlal

Trinidad & Tobago

Caribbean Veterinary Medical Association Biennial Conference

The Trinidad and Tobago Veterinary Association (TTVA) in collaboration with the Commonwealth Veterinary Association (CVA) will host the Caribbean Veterinary Medical Association's (CbVMA) 23rd Biennial Conference from November 8th to 12th 2004 at the Crowne Plaza Hotel in Port of Spain, Trinidad and Tobago. The theme of the conference is "Emerging Trends in Veterinary Medicine". The Conference moves to a new venue every 2 years through the Caribbean. In the past the Veterinary Associations of four larger territories namely Barbados, Guyana, Jamaica and Trinidad & Tobago, have been responsible for the hosting of this Conference.

This year's theme is very exciting as there are many disease conditions, both in the animal and human world, that pose a threat to us. We see West Nile Virus, Bovine Spongiform Encephalopathy, Avian Influenza and SARS on the horizon in the Caribbean. If appropriate steps are not taken these diseases can become a serious problem.

We are in the process of putting together a comprehensive program in the areas of Food Safety and Biosecurity, Animal Welfare, Veterinary Public Health, Equine, Canine and Food Animal Medicine and Surgery, Poultry and Wildlife. The regional meeting for the Caribbean/Canada region will also be held during the conference. Details of the conference are posted on the website www.ttva.org

The TTVA boasts of being one of the first Veterinary Associations in the Caribbean. It was formed in 1934 by a handful of Veterinarians. Today, Veterinarians living in Trinidad and Tobago number over 100 and climbing. There is a School of Veterinary Medicine on the island. The school is affiliated to the University of the West Indies. It has the capacity to graduate 15 to 20 veterinarians annually.

Trinidad and Tobago is the most southern of the Caribbean chain of islands. It is the industrial capital of the Caribbean. Oil, gas and manufacturing are the mainstay of the economy of Trinidad. Tobago, however, relies on tourism. So between the 2 sister isles there is a good balance of industrialization and tourism. Both islands are noted for their ecotourism in the form of bird watching and tropical rain forest.

So if you are looking for a good balance of continuing education in the bustling Trinidad and the serenity of beautiful beaches and bird watching in Tobago this conference is a must. Plan to attend.

- Dr John Fernandes
CVA Councillor, Trinidad & Tobago

A Short History of Medicine 2000 BC - 2000 AD

- 2000 BC - Here, eat a root
- 1000 AD - That root is Heathen: Say this prayer.
- 1850 AD - That prayer is superstition: Here, drink this potion
- 1940 AD - That potion is snake oil: Here, swallow this Pill
- 1970 AD - That pill is ineffective: Here, take this antibiotic
- 1985 AD - That antibiotic is too weak: Here, take this cortisone
- 2000 AD - That cortisone is dangerous: Here, take this root

Heartbeat Clue to BSE

Researchers in Manchester have developed a reliable, non-invasive method to help diagnose the early signs of the prion disease BSE in cattle and other transmissible spongiform encephalopathies. Dr Chris Pomfrett and his colleagues at the Manchester Royal Infirmary have shown that abnormalities in heart function can be detected long before the characteristic behavioural changes seen in prion diseases.

Continued on Page 20

Corrigendum

CVA News January 2004

Page 20: Dr Collin Boyle graduated in 1991 and not in 1986 as published.

- Editor

East, Central and Southern Africa

Kenya

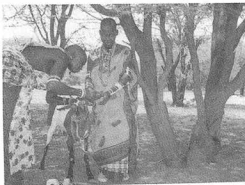
Kenya Women Veterinary Association Project

The CVA has approved a project on "Training of Pastoral Women in Magadi Division of Kenya on Livestock Management" submitted by the Kenya Women Veterinary Association. This project will help to develop the capacity of pastoral women groups in Nguruman area and improve their skills on livestock management, transfer technology on livestock management and health to women. Also to form women groups in Nguruman area for the purpose of training and to develop training materials that can be utilised by trainers to train women groups in ASAL areas on livestock management skills.

The KWVA members are actively engaged in helping the maasai women in the region.



KWVA member appraising livestock disease at community level



Maasai women administering paraffin in the ear of a goat that had heartwater disease



KWVA member with maasai girls interested in veterinary profession

Heartbeat Clue to BSE cont'd from Page 19

They say a test based on measuring variations in the intervals between heartbeats could provide a simpler and more efficient method than the only current tests for use in the live patient. These are based on cutting out samples of lymphatic system tissue and looking for evidence of the abnormal proteins that cause TSEs (transmissible spongiform encephalopathies).

– BVA Press Release

Zambia

Zambia Goat Project

A project sponsored by CVA on "Establishment of Goat Production Unit at Women's Group in the Village of Chikwanji" has been in operation in Choma district of Zambia to help the women farmers in improving their economic status.



Village women with their goats



Women receiving goats provided by CVA



A goat shed

CVA-ECS Africa Regional Meeting

The Commonwealth Veterinary Association Regional Conference for Eastern, Central and Southern Africa will be held jointly with the Annual General meeting of the Veterinary Association of Zambia (VAZ) in Lusaka, Zambia from 4th - 6th August 2004. The theme for the meeting is "Towards Sustainable Livestock Production and Food Safety, The Global Challenge".

A training session on the use of the FAMACHA diagnostic technique will also be held.

Delegates will also have an opportunity to see Victoria Falls and a visit to the Women's Goat Project at Batoka in Choma district. A demonstration on the use of FAMACHA diagnostic technique will also be held at the Goat project site.

General Information

- Airport departure tax of US\$ 20 has to be paid by all departing visitors in foreign currency.
- Malaria is prevalent in all areas of Zambia and participants are advised to seek medical advice.
- Registration fee US\$ 100. Payment must be made by cheque or international money order to the Veterinary Association of Zambia and sent to

Dr. Gregory Mululuma
The Treasurer
Veterinary Association of Zambia
P.O. Box 32117
Lusaka, Zambia
Cell: 260 95 842801

The Organising Committee has arranged for accommodation at the conference hotel, the Holiday Inn.

Dr. Martin C. Simunza
Acting President, VAZ

Mauritius

New Executive Committee of Mauritius Veterinary Association

A new Executive Committee of MVA has been constituted on 27th May 2004 with the following members.

Dr. Jaumally, M.R.	Acting-President
Dr. Goodoyal, V.B	Secretary
Dr. Meenowa, D	Treasurer
Dr. Narainapouille, K.	Member
Dr. Ramchurn R.	Member

Dr. U. Meenowa has been appointed as CVA Councillor for Mauritius replacing Dr Jursut who has resigned.

- V.B. Goodoyal
Secretary

Tanzania

Donation of Books from Australia

Eleven current textbooks worth about \$US 2000 [based on their stated selling prices] by Elsevier Australia, handbooks worth about \$US 400 by the Postgraduate Committee of Veterinary Science of Sydney University and 20 used textbooks by the Staff of Faculty of Veterinary Science at Sydney University have been donated to Sokoine University, Morogoro, Tanzania through the CVA Book Programme in Australia (Jeff Cave).



Dr. David Watson

Dr Steve Ettinger, a leading veterinarian in California, is also sending directly to Tanzania a large number of recent veterinary journals and texts.

- Dr David Watson
CVA Guest Lecturer
Faculty of Veterinary Medicine
Sokoine University, Tanzania

Uganda

VSO Volunteer Peter Gray's Report from Uganda

I am working for Voluntary Service Overseas (VSO) as a Veterinary Officer for Local Government in Kibaale district, Western Uganda. Farming is typically subsistence only with households having few animals. The indigenous Banyoro tribe are not traditional cattle keepers and lack basic knowledge on nutrition, deworming and acaricide usage. Most production losses come from the tick borne diseases - East coast fever mostly with also Babesiosis and Anaplasmosis as well as Trypanosomiasis. Improved genetics have become available with the local long horned Ankole cattle being crossed with Friesian. Crossbreeds are much more susceptible to the above tick borne diseases and only the better farmers can keep them successfully.

Following the successful Rinderpest vaccination program (PARC- Pan African Rinderpest Campaign) the next disease on the list of control and eradication is Contagious Bovine Pleuropneumonia (CBPP). The threat in the District is great as we share our border with the Democratic Republic of Congo (DRC) and with the ongoing conflict in that region many displaced persons are seeking refuge elsewhere bringing with them their animals.

It is a difficult exercise to vaccinate with the farms being so small and scattered. Mobilisation is through the local community radio station as telephone network is very poor, farmers are advised to work together to build a communal crush in a central location eg. near a school so that all surrounding animals can be vaccinated on the same day. The strength and design of the crush is often very poor, using local materials such as bamboo tied together with banana leaves and being too wide allowing animals to turn can make the job frustrating. With up to 5% of animals suffering necrosis of the tail at the injection site poor owner compliance has also been a problem. The program is compulsory and has given me a good opportunity to meet farmers and discuss other problem areas such as nutrition, worm and tick control.

Recent outbreaks of African Swine Fever have reduced levels of swine in the District. With pigs being the most affordable source of animal protein, strategies to control and prevent further outbreaks are important. This is difficult however with the open, free roaming system of keeping pigs here.

Milk production is still very low and with no means of storage, marketing is difficult. The local people have not been educated on the importance of animal protein in the diet, which locally consists of the staple foods matooke (steamed banana), maize meal and beans.

The Government has launched a donor funded program to privatize the Agricultural sector. The 25 year program called National Agricultural Advisory Services (NAADS) aims to modernize Agriculture by empowering subsistence farmers to access privately delivered agricultural advice. This will effectively force extension workers including Agriculture, Veterinary and Fisheries to shift to the private sector.

The district faces a severe shortage of qualified personnel in many departments including Veterinary. Most new graduates are choosing to stay in the capital city Kampala and work in pharmaceutical shops or continue on with further education.

Although being employed by the Government most of the work that I do is as a private practitioner. I have a motorcycle on which I carry a box of essential drugs and spend most of the day providing direct treatment services to those farmers that contact me. I also offer artificial insemination services, carrying a small flask of liquid Nitrogen in a rucksack on my back. I give a weekly program on the radio about livestock issues. This gives me a good chance to comment about areas that I feel need to be improved as well as routine advice for farmers.

The local Runyoro-Rutoro language has proved difficult to learn. I have had a list of basic questions translated - things like how long has the cow been sick? Is it eating? Have you given medicine for worms? The aim is to get a yes/no response however as Africans love to talk I find that the response is often very lengthy much of which I cannot understand.

I am now approaching the end of my 2 year VSO placement. I have really established myself within the local community now, most days there is a queue of farmers waiting at my door in the morning - many having ridden bicycles or walked long distances for assistance. I am able to plan my day according to where people are located and how urgent the problem is. My motor biking skills have gone from zero to one hundred percent. As well as riding every road and track in Kibaale District I have also toured Uganda and Rwanda - all on a 125cc Suzuki!

Much of the work I have been doing has been basic treatment of sick animals. While on farm I try and give advice on basic livestock practices - deworming of young stock, adequate feeding and castration to aid fattening and prevent inbreeding. Farmers all over the world can be slow to pay their vet fees but here in Africa where most people lead a subsistence "hand to mouth" lifestyle it can be months before people have hard cash to settle outstanding treatments. Sometimes it is better to ask for a chicken or vegetables which you know they have and can easily hand over.

Kibaale is fortunate to have a community radio station KKCR (Kibaale Kagadi Community radio). The NGO responsible for the programming and running gives the Veterinary Department a free 30 min slot each week.

We use this to discuss issues of importance or to advise farmers on routine treatments and disease prevention. With recent outbreaks of FMD and ASF we have been able to sensitize farmers on disease control and management as well as enforcing quarantine regulations which in the case of FMD seems to have been successful following a six month restriction on animal movements. I very much enjoy taking a turn on this, often discussing things which I have seen that week. I also describe what farming is like in developed countries which is often beyond most peoples imagination.

I have been doing some work for the Central Government Ministry of Agriculture Animal Industries and Fisheries (MAIIF). For Uganda to be declared free of Rinderpest by the OIE it is necessary to undertake serosurveillance blood sampling of randomly selected Parishes in each district of the country. Last year I took the required samples in Kibaale which was a difficult and time consuming process as the random Parishes all happened to be in the most remote parts of the District many of which required that I park the motorcycle and continue on foot. A follow up round of new Parishes will take place next month. Hopefully in the future the country can be declared free of Rinderpest (and perhaps other diseases to follow) which will greatly help the development of an export market in animals and animal products.

One of the final activities I will be involved in is the training of community based animal health assistants. It is a scheme that has been tried in a few other African countries despite resistance from some of the Professional Veterinary bodies. The idea is to train capable school leavers in basic animal husbandry and diagnosis and treatment of the more common problems. They are only trained in those areas where attracting qualified Veterinary personnel has been difficult or impossible (geographically remote, insecure, poor infrastructure etc). For an area like Kibaale it will be a step forward as recruiting vets has been so difficult. The assistants will get their training from the existing Veterinary staff and work under some supervision. They are given training, a bicycle and a basic start up kit of essential drugs. So much of my placement has been a direct provision of treatment services that the opportunity to do some capacity building in such a way as this is satisfying.

During the past couple of months I have been receiving a lot of thanks from the community for the work I have done. Most people realize that I will be leaving soon and there may not be another VSO replacing me. I have certainly lifted farmers expectations about what the duty and performance of a vet should be so now they can demand an improved service from whoever happens to work here in future.

The CVA and BVA are cosponsoring my 2 year placement with VSO.

- Peter Gray
Veterinary Officer, VSO

West Africa

Ghana

Obituary

**Professor ENW Opong: A distinguished
Veterinarian, Scientist and Teacher**

In a tribute to Professor Opong, Alex Morrow, Department for Environment, Food and Rural Affairs (Defra) writes:



Professor ENW Opong

Professor Emmanuel Nana Waddie (Kwame) Opong who died in December 2002 had a distinguished career which extended well beyond his native Ghana.

One of the earliest batch of Ghanaian veterinarians, Kwame Opong graduated from Mathura in India in 1959 with a degree in Veterinary Science and Animal Husbandry having previously trained as a Veterinary Assistant in Vom, Nigeria. He then studied at Cambridge University where he took the exams for his membership of the Royal College of Veterinary Surgeons. While at Cambridge he also met his wife Christine. Returning to Ghana in 1961 he was posted to Tamale where he headed the veterinary laboratory producing rinderpest and other vaccines and in 1963 he joined the staff of the Animal Science Department of the University of Ghana. He was awarded the Diploma in Tropical Veterinary Medicine from the University of Edinburgh in 1967 and a PhD from Trinity College, Dublin University in 1970. He was appointed an Associated Professor in 1974, a full professor in 1978 and an Emeritus Professor in 2000. He was Head of Department of Animal Science from 1972 - 1982 and Dean of the Faculty of Agriculture from 1975 - 1978.

Professor Opong made a very significant contribution to the control of animal diseases through his research and teaching and in an advisory capacity to both national and international agencies. As Professor and Head of the Department of Animal

Science at the University of Ghana. He had a particular interest in skin diseases of livestock, the subject of his PhD and many of his papers. He was employed by the Food and Agriculture Organisation of the United Nations (FAO) and the United Nations Conference on Trade and Development (UNCTAD) as a consultant on a number of livestock disease projects across Africa. He joined FAO in 1984 as a Technical Adviser/Chief Technical Adviser on a joint Nigerian Government/United Nations Development Programme-funded project concerned with the settlement of semi-nomadic pastoralists in designated grazing areas in Nigeria. This posting also allowed him to renew his interests in streptothricosis (dermatophilosis). On his advice the Government of Nigeria established the Streptothricosis Research Centre at Vom. Returning to Ghana in 1988 he re-established his links with the Animal Sciences Department of the University of Ghana advising and supervising postgraduate students.

He served on numerous national and international boards and committees including the Board of Directors of the International Laboratory for Research in Animal Disease, Nairobi, Kenya where he served as chairman of the teaching committee for several years. He was a founding member of the Association for the Advancement of Agricultural Science in Africa, an external examiner at several of the Nigerian veterinary colleges, the University of Nairobi in Kenya, the University of Guelph in Canada and the University of Edinburgh. He was elected a Fellow of the Ghana Academy of Arts and Sciences in 1976. He was awarded the Sir Alexander Robertson medal by the University of Edinburgh in 1997 in recognition of his contribution to the advancement of scientific research and veterinary education in Africa.

A radical by nature he never escaped from the idealism he embraced as a schoolboy during the pre-independence period and the early years of Nkrumah's rule. He remained ever loyal to his Ashanti roots and proud of his cultural heritage as he has documented in his memoirs of his early years that are soon to be published. He actively promoted the interests of the Veterinary profession wherever he worked and was concerned in recent years by the erosion of its influence in some African countries under externally imposed structural adjustment programmes.

He is survived by his wife, a son and two daughters and four grandchildren.

Emmanuel Nana Waddi (Kwame) Opong was born on April 2 1927. He died on December 12, 2002 aged 75 years.

- Dr Alex Morrow
Department for Environment, Food & Rural Affairs
U.K.

Nigeria

Appreciations

Dear Commonwealth Veterinary Association (CVA),

GREETINGS

I write to show my appreciation for the CVA's donation of books through the book programme in Canada, to our small developing community. I am a recent veterinary student graduate. Our graduation from the Veterinary Faculty was just recent, following our project defence. I worked on Sero-prevalence of Brucellosis in Horses in Sokoto Metropolis, and had some beautiful results using RBPT & SAT.

As part of our professional training, the veterinary medical students, under the auspices of the International Veterinary Students' Association (IVSA, Local Chapter), undertake varied extension services. Last year, with me as the President, our local chapter was registered with the International Veterinary Students' Association (IVSA). In the recent past, we had embarked on public enlightenment campaign against prevailing zoonoses within the Sokoto metropolis; free anti-rabies vaccination using tissue culture vaccine, and PPR; developing our small community's education, research, and learning by sourcing complimentary educational materials from some international veterinary associations, organisations, and few individuals, through the IVSA, a step ahead to raise the overall standard of veterinary education in our disadvantaged community; renovation of the Vet.Watch with it's logo, and establishing a Secretariat and Library (Prof. D.I.K. Osori's House); organising local seminars and symposia, outreach tours to Nomadic "Fulani" community. The Fulani pastoralists who own most of the cattle practice the traditional nomadic system. Much of the milk from local Fulani cows is hawked freely in the cities and communities in the raw fresh form or in traditionally fermented "nono".

With my best personal regards.

Sincerely Yours

Dr. Aminu Shittu
Faculty of Veterinary Medicine
Usmanu Danfodio University
PMB 2254
Sokoto, Nigeria

U.K. Mediterranean

United Kingdom

Women veterinary surgeons set to lead the profession in 2005

Next year should see two women veterinary surgeons leading the veterinary profession in the UK. At a meeting of the BVA's Council on March 19, Dr Freda Scott-Park, currently President of the British Small Animal Veterinary Association (BSAVA), was nominated as President-Elect of the BVA. Her name will be taken forward for approval at the BVA's AGM, to be held in London in October. Dr Scott-Park will become only the second female President of the BVA, the first being Miss Mary Brancker in 1967/68. Meanwhile, earlier this month, the Council of the Royal College



Dr Freda Scott-Park



Mrs Lynne Hill

of Veterinary Surgeons (RCVS) elected Mrs Lynne Hill - who was President of the BSAVA in 1994/95 - for nomination as junior Vice-President of the RCVS. Again, the post is subject to confirmation at the RCVS's AGM in July, but assuming that both are successful, the veterinary profession will, for the first time, have women occupying its two key Presidential roles simultaneously.

The Veterinary Record, March 27, 2004

Award for Retiring CVO

Mr Jim Scudamore, the outgoing Chief Veterinary Officer (CVO) recently received the Meat Hygiene Service (MHS) Merit Award for 2003/04. Mr Scudamore (left) was presented with the award by Mr Chris Lawson, Chief Executive of the MHS, on March 22, the day before he retired as CVO, after seven years in the post.

The award is one of the four made annually by the MHS; however, the MHS Merit Award, unlike the other three awards, is reserved for someone who is not an employee of the MHS but who has made a significant contribution to



Mr Scudamore (left) with the award by Mr Chris Lawson, Chief Executive, MHS

meat hygiene. According to the MHS, Mr Scudamore has done this over a number of years, not least as a member of the Food Standards Agency's (FSA's) Meat Hygiene Advisory Committee, which advises the FSA Board on Meat Hygiene matters.

The new CVO, Dr Debby Reynolds, took up her post on March 24, having previously been Veterinary Director of the FSA.

The Veterinary Record, April 3, 2004

Veterinary Surgeons Honoured

The BVA immediate Past President, Mr Peter Jinman, was one of number of veterinary surgeons to be included in the Queen's Birthday Honours this year. Mr Jinman, who serves on the Government's Spongiform Encephalopathy Advisory Committee, was rewarded with an OBE for services to the veterinary profession.



Mr Peter Jinman

Dr Judy MacArthur Clark, chair of the Farm Animal Welfare Council and a Past President of the Royal College of Veterinary Surgeons, was awarded a CBE for services to animal welfare. Professor John Wilesmith, head of the Epidemiology Department at the Veterinary Laboratories Agency, was also appointed a CBE.

Mr Andrew Hayward, Divisional Veterinary Manager, State Veterinary Service, Carlisle, received an OBE, as did Professor A M 'Mac' Johnston of the Royal Veterinary College and a member of the Advisory Committee on the Microbiological Safety of Food, for services to food safety. An OBE also goes to Dr Desmond Rice for services to the agri-food industry in Northern Ireland.

Major Jane Rose of the Royal Army Veterinary Corps was awarded an MBE.

- Media (BVA)

Falkland Islands

News from Falkland Islands

The latest news from here is that we are currently in the midst of a large sheep AI/ET programme. It started last Monday (24th May) and is due to finish on Thursday 3rd June. During that time we will inseminate by laparoscopic AI approximately 2000 ewes; we will also implant approx. 400 embryos. All the genetic material has been imported from Australia and New Zealand and consists of various breeds - South African Mutton Merino (SAMM), Dohne Merino, Polworth, Cormo and SRS (soft rolling skin) Merino.

The idea behind the programme is to improve the wool quality of the Falklands flock (i.e., decrease the wool fibre diameter) but, at the same time, produce an animal with a good carcass for slaughter in our EU approved export abattoir. This is the second year of a programme that will continue for some years to come. We are fortunate this year to be able to call on the expertise of Dr Adrian Veitch of Allstock (WA) Pty Ltd. who runs his own business specialising in reproductive technology in Narrogin, W. Australia.

- Stephen Pointing
CVA Councillor, Falkland Islands, May 2004

Fowl Play

Lightweight plastic footballs are proving a draw for a new breed of chicken, the Devonshire white. West Country meat and poultry producer Lloyd Maunder is rearing its newly developed breed under the RSPCA Freedom Food labelling scheme. The scheme requires animals to be kept under higher welfare standards, which, for chickens, include providing more room for the birds within their open-plan houses to allow them to flap their wings and move around more freely, and enriching their environment through the provision of bales and perches for them to jump up on to and explore, and various 'attractions' to catch their attention.



- The Veterinary Record, May 15, 2004

Abstracts

Role of essential trace elements in embryonic and fetal development

This article reviews the evidence for the links between trace elements nutrition and reproductive success. An adequate supply of certain trace minerals is essential for many metabolic-pathways involved in the development of the conceptus during pregnancy, and for early growth. Zinc, copper and manganese are among the elements that have the greatest impact on reproduction, and they are present in several times higher concentrations in the conceptus than in other reproductive tissues. Furthermore, recent work has suggested that the dietary availability of these elements can be increased by attaching them to short peptide chains in the form of proteinated trace mineral; for example, feeding sows with these minerals increases the concentrations of the elements in their conceptuses compared with sows fed inorganic mineral salts, and improves the sows' reproductive performance.

HOSTETLER, C.E., KINCAID, R.L. AND MIRANDO, M. (2003). The role of essential trace elements in embryonic and fetal development in livestock. *Veterinary Journal*, 166: 125-139.

Changes of coat colour in bitches treated with cabergoline

Forty bitches were treated with 5 µg/kg cabergoline daily, 10 of them for seven days for the management of pseudo-pregnancy and 30 of them for 14 to 45 days to induce oestrus. Seven of the dogs treated for more than 14 days developed changes in coat colour which lasted until the next coat shedding. Fawn-coloured bitches developed a yellowish coat, and Argentine boar hounds became black spotted, mainly on their extremities. It is suggested that the changes could be mediated through the inhalation of the secretion of melanocyte-stimulating hormone by the administration of the dopaminergic agonist cabergoline.

GOBELLO, C., CASTEX, G., BROGLIA, G. AND CORRADA, Y. (2003). Coat colour changes associated with cabergoline administration in bitches. *Journal of Small Animal Practice*, 44: 352-354.

Apoptosis of articular chondrocyte in horses with osteoarthritis

Apoptosis of chondrocytes has been implicated as a major change in the lesions of osteoarthritis in people and experimental animals but there have been no studies in horses. Articular cartilage was collected from five horses with osteoarthritis and three normal horses. The histopathological changes were scored by a modified Mankin grading system, the extent of apoptosis of chondrocytes was assessed by a terminal deoxynucleotidyl transferase-mediated dUTP nickend labelling assay, and the production of nitric oxide (NO) from chondrocytes was evaluated indirectly by immuno-chemistry with polyclonal antibody to nitrotyrosine. There was a significant positive correlation between the histopathological grades and the percentage of chondrocyte apoptosis. In the osteoarthritic cartilage the distribution of chondrocyte apoptosis, the degeneration of cartilage matrix and the production of NO overlapped, suggesting that these pathological processes were closely interrelated.

KIM, D.Y., TAYLOR, H.W., MOORE, R.M., PAULSEN, D.B. AND CHO, D.Y. (2003). Articular chondrocyte apoptosis in equine osteoarthritis. *Veterinary Journal*, 166: 52-57.

Epidural ketamine for perineal analgesia in cattle

Ketamine hydrochloride was injected into the epidural spaces of 20 cattle; they ranged in age from a few days to five years. Ten of them received 2 mg/kg bodyweight and 10 received 3 mg/kg. After either dose, at least five minutes were required before adequate analgesia for perineal surgery was obtained; it was then maintained for 45 to 60 minutes by the 2 mg/kg dose and for 55 to 70 minutes by 3 mg/kg. No significant changes were detected in the mean respiratory rates, heart rates or body temperature of the animals for up to 75 minutes after the injection. The analgesia was adequate for superficial operations but the level of muscle relaxation was inadequate for postsurgical urethrotomy or the correction of a vaginal prolapse.

KAMILOGLU, A., ATELAN, G., OZTURK, S. AND KILIC, E. (2003). Epidural injection of ketamine hydrochloride for perineal analgesia in cattle. *Irish Veterinary Journal*, 56: 514-516.

General Articles

The Livestock Sector in the Pacific Islands – Challenges and Opportunities*

Robin Yarrow

President, Commonwealth Veterinary Association
GPO Box 15411, Suva
Fiji

I. The Pacific Islands Region

The Pacific Ocean is greater in area than all the other oceans combined and hosts many thousands of individual islands now under the jurisdiction of some 22 Pacific Island Countries and Territories (PICTs). The combined land area is 570,000 square km, while the region's total sea area of over 30 million square km is often referred to as the "aquatic continent". There is great diversity between individual PICTs. Although the boundaries are not precise, the region comprises 3 separate sub-regions, namely Melanesia, Micronesia and Polynesia and has a population of 7.5 million.

Although relative isolation and fragmentation have provided some benefits, including protection from exotic diseases, the constraints of smallness, distance, proneness to natural disasters and the narrow resource bases, have generally hindered the development process. Civil insurrection and the overthrow of legitimate governments have also severely impacted on several larger PICTs. Overall, economic progress has been disappointing, despite relatively high levels of ODA on a per capita basis, in particular to the smaller PICTs. A significant loss of population through emigration, especially from Polynesia, is a matter of great concern because of skill loss. There is however, a positive aspect to out migration in the high level of foreign exchange remittances being received by several PICTs.

In spite of emigration, high population increases in several PICTs and growing urbanisation are giving rise to a number of worrying trends, including unemployment, substance abuse, communicable disease (in particular HIV/AIDS) pollution and environmental damage. In the latter regard, the pristine and yet many fragile ecosystems are at special risk. The issue of sea level rise is adding further challenges.

While there are significant differences between individual PICTs there are a high number of shared needs. This was recognized as early as 1947, when the colonial powers established the then South Pacific Commission, [SPC, but now re-designated the Secretariat of the Pacific Community] a technical development agency run by the PICTs. The SPC comprises 3 main technical divisions i.e. land, marine and social and provides a range of services, complementary to those provided by national governments, in support of sustainable development and well-being of Pacific peoples. There are now several additional inter-governmental regional organisations, including the University of the South Pacific [USP] and entities which address tourism, off-shore fisheries and the environment. This regional mode of delivery of assistance is probably more developed in the Pacific region than anywhere else. In order to ensure coordination and complementarity between these various entities and the effective use of resources, a Council of Regional Organisations of the Pacific [CROP] has been established. At the apex level, all regional development activities are overseen by the Pacific Islands Forum Secretariat which services the Forum of Pacific Island leaders (of fully independent states) and which includes both Australia and New Zealand.

The 2 most important regional organisations for the livestock sector are the SPC and the USP. The SPC possesses a long-standing agriculture programme within which there is both an animal health service as well as a biosecurity service. The SPC works closely with national contacts in providing advisory services, training, collaborative initiatives, workshops and information and also networks with a range of other entities such as FAO, OIE and ACIAR. A Conference of Heads of Agriculture and Livestock Production Services [PHALPS] approves and reviews the Work Program.

* Paper presented at the Australian Veterinary Association Annual (AVA) Conference, 2-7 May, 2004, Canberra, Australia

The USP, one of only 2 regional universities in the world, was established in 1968 in response to an expanding regional need for higher education. It has 12 member countries, which all possess outreach 'USP centres,' 3 campuses, (Fiji, Samoa and Vanuatu) and a student roll of 18,000, 50% of whom study via the distance mode. The Samoa campus hosts the School of Agriculture which provides Degrees and Diplomas in Agriculture and undertakes short term training and research.

Land is fundamental to all activities and it is important to underscore the way in which this resource is perceived within the region. In most islands, the land and people are still largely seen as being indivisible. For this reason, land alienation through sale and individual ownership are very contentious issues. There has been very limited land alienation in the region. Customary land ownership has had 2 major implications. Firstly, it tends to discourage individual smallholder development, unless this specifically involves landowners themselves. Secondly, investment in commercial agribusiness has been constrained because of issues of loan security. In addition, many landownership disputes within and between owning units can result in non-utilisation of valuable land.

On average, over 50% of the region's population still resides in the rural sector, although as noted, movement to urban centres is continuing. In the 1970s in Fiji, the term "subsistence affluence" was coined to describe the relatively comfortable village lifestyle, with ease of access to affordable food and shelter. [This term has lost much relevance as the standard of living in many villages has tended to fall] The contribution by the agricultural sector to subsistence living is still therefore significant and in the larger PICTs the total contribution by the sector is in the area of 25% to 40% of GDP and 40% of all economic opportunities. With urbanisation, there is also a larger market for domestically produced food, provided this is competitive with imports. A major downside of expanding urban settlements is an increasing housing problem. In Fiji, the most recent survey indicates that 10% of all households now live in squatter settlements.

II. The Livestock Sector

Origins and Numbers

PNG possesses the greatest diversity of native animal species, including a number of marsupials and large birds, several of which are also found in Northern Australia. Overall the region is not especially rich in animal life. Over half of the native birds are endemic, including the Birds of Paradise, of which PNG has the bulk of the world's species.

The early Pacific Islanders brought pigs, dogs and poultry with them, as well as the rats. The origins of pigs in PNG, the most prevalent livestock species, have recently been dated to as early as 4,000 BC. Ruminants and horses did not reach the islands until around the 1830s, with the arrival of the first European settlers, who also brought pigs, poultry, deer and domestic pets as well as a range of what are now considered invasive species, such as the Asian Mongoose and several birds e.g. the mynah.

It is estimated that the domestic pig population in PNG is almost 2.5 million and 65% of households have pigs. The majority of these are village pigs with only about 2% as commercial production animals. It is not possible to quantify the feral [bush] pigs but the numbers are significant. The pig population throughout the remainder of the PICTs is estimated at 1.5 million, with the highest densities in the Polynesian countries.

The number of poultry kept by households in the region is estimated to be 17 million while a further 800,000 are reared in intensive broiler and layer operations, mainly in PNG, Fiji, New Caledonia and Samoa. In rural areas, on average around 50% of all households keep chickens. The large PICTs possess hatcheries.

The region's cattle population numbers some 700,000, of which around 95% are of beef type. The British breeds originally predominated but in the last several decades zebu blood has been imported, both as pure Brahman and also as crosses in the form of Santa Gertrudis and Droughtmaster. French breeds such as Charolais and Limousine have acclimatized well in both New Caledonia and Vanuatu, with recent introductions to Fiji. Fiji has about 40% of all cattle. Dairy cattle are largely Friesian in type. There are both small and large holdings, with the latter being more prevalent in Vanuatu, New Caledonia and PNG while the former are more the norm in Fiji and the Solomon Islands. Most cattle are reared for meat but in Fiji draught use and dairying are important. Small dairy industries exist in Samoa, Vanuatu and Tonga.

There are some 25,000 sheep in the PICTs, the bulk of which are in PNG, Fiji and New Caledonia. Sheep numbers are beginning to rise again with the recent development of a tropicalised meat breed in Fiji. Goats are more numerous and exceed 231,000 in number, some 68% of which are in Fiji.

The horse population is about 75,000 and many are still used for draught, stockwork and transport purposes. Horse racing has recently commenced in Samoa and tourism is providing opportunities for trekking. Some horse meat consumption takes place,

mainly in Tonga. In addition, there are some 12,000 farmed deer in New Caledonia, plus a further 110,000 feral deer. Small populations of feral deer are also found in PNG (Gulf Province) and Fiji. Apiculture is expanding with the low level of chemical use and relative disease freedom being advantages.

The livestock densities in some of the smaller PICTs are surprisingly high. For example, on Tuvalu and Tonga the density of pigs is 500 and 175 per square km respectively, while there are 1.18 and 1.13 pigs respectively for each person. Similarly, Tuvalu has 1115 chickens per square km and 2.64 chickens per person.

Economic Role and Cultural Value

It is estimated that of some 760,000 rural households, representing a total population of 4.5 million [some 60% of the region's population] 550,000 households keep livestock. Of this total, some 438,000 households have pigs, with 300,000 households and 68,000 households owning chickens and cattle respectively. The benefits include the provision of subsistence dietary protein, manure, transport and draught power, the disposal of crop residues and weed control and cash income. Livestock and their products are also considered to be more price stable than many crops and cattle are believed to be possibly more robust during times of sudden natural disaster. The value of livestock meat may also be increasing as catches of reef fish decline as a result of fishing pressure.

Pigs have an important cultural significance, in particular in PNG, Vanuatu and the Polynesian islands. Their perceived value can in certain situations greatly exceed their real cash value. Pigs are a sign of status and are particularly valued for gifts, exchange and for a range of ceremonies, including bride/marriage, hair cutting, initiation, conflict resolution, celebration and funeral. Tusks also have considerable value in several countries. Cattle are also valued for ceremonial purposes, in particular for funerals in Melanesian and some Polynesian PICTs.

In 1998, it was estimated that some 13,557 tonnes of beef were traded formally as well as informally, with the latter share of the market considered to be 48%. The region was also estimated then to be just under 50% self sufficient in beef. Individual country self sufficiency levels varied from 100% for Vanuatu [also an exporter] to 15% for PNG. The total value of production was estimated at US\$33 million. Dairy production was assessed then to be 2,241 tonnes of milk fat equivalent, 2/3rds of which was produced in Fiji. The regional self sufficiency level was considered

to be less than 8%. Pork imports in 1994 were 1,993 tonnes while total consumption is estimated to exceed 60,000 tonnes.

Per capita consumptions of livestock products vary widely between PICTs and subsistence consumption is difficult to quantify. For example, in Tonga per capita sheep meat consumption exceeds 35 kg/year while in Vanuatu it is less than 0.05 kg per/year.

An estimate by the SPC in 2001 put the value of the region's pig industry at US\$107 million, that of cattle at US\$147 million, that of poultry to be US\$18 million with sheep and goats at US\$14 million.

Production Systems

Pigs are raised under several levels of husbandry which include free range to partially and fully enclosed. The majority of the region's production still comes from free range pigs, although with increasing urbanisation and expanding tourism industries a greater share of output is being derived from enclosed systems. The high costs of feed and management have been major constraints for small holder production efforts.

Approximately 900,000 hectares of land or only 1.6 % of the total land area in the larger PICTs is devoted to grazing. However, this represents 26% of the total arable, tree crop and pastoral area due to the mountainous terrain of most volcanic islands. Some 15% of households own ruminants and these are generally grazed in small holdings, often in association with cropping. Small holder cattle can create considerable conflict with adjacent food cropping when trespassing animals inflict crop damage. Such incidents often result in arguments and death to the cattle in question. There is considerable room to improve management, breeding efficiency and pasture. Losses of young stock have been high and theft and dog attacks have been a factor in some areas.

Indigenous smallholder grazing initiatives have recorded disappointing results in PNG, Fiji and in the Solomon Islands. The AusAID-funded Yalavou project in Fiji experienced problems from poor farmer selection, isolation from the traditional village setting, theft and 'back door' sales. Indo-Fijian farmers in Fiji have a longer tradition of livestock rearing and have successfully integrated cattle and goats into a sugar cane/mixed cropping system, using tethering with minimal fencing. Large pastoral units are present mainly in PNG, Vanuatu, New Caledonia and Fiji, in some cases under coconuts. There has been a decline in this sector in particular in Fiji, partly as a consequence of diminishing returns from copra production. There has been limited success, mainly in PNG, with feedlotting.

There is scope in both PNG and Fiji to make greater use of bi-products from the sugar industry in this area.

Poultry are being increasingly raised in intensive systems with considerable success being achieved with smallholder producers. This is more so where good contractual arrangements are entered into between the chicken processor and the growers under which day olds, feed and supervision/medication are all provided as an advance. Interestingly, free range chickens attract a premium when sold live in Fiji.

Women undertake a significant amount of work associated with the care of livestock in the rural island situation. They have a number of attributes which are well suited to managing farm animals although there are some restrictions when heavy activity is necessary. It should be noted that women tend to place emphasis on livestock which have nutritional benefits i.e. poultry while men focus on financial returns i.e. cattle and on pigs because of cultural significance. Unfortunately, there is insufficient disaggregated data and other information available on this subject. It is important to ensure that constraints which restrict women from playing a more effective role are identified and addressed through training and other responses. This would appear to be a good subject for study, drawing on examples and experience from elsewhere. It is also vital for women to have access to the proceeds of sale or to other benefits from their efforts, as a reward and a motivational mechanism.

Veterinary Services

All PICTs possess some form of veterinary or para veterinary service. However, of the approximately 110 veterinarians in the region, over 50% are located in 2 French territories and Guam and while 12 PICTs now have no resident veterinarian[s], Fiji has 10 indigenous practising veterinarians, PNG 3, Solomon Islands 2, Samoa 5 and Tonga 2. The SPC Regional Animal Health Service [AHS] possesses 3 veterinarians, and while providing support to all member countries, endeavours to assist those without veterinarians in special ways. Diagnostic veterinary services are only available in the French Territories, PNG, Fiji and Vanuatu. Although livestock extension services are generally present, these are often short-staffed and poorly funded. Livestock research receives very low priority. While veterinary services are actively involved in meat inspection, much food safety is still largely under medical control. The lack of veterinary capacity within most PICTs is also a concern in relation to the technical requirements of trade liberalisation and facilitation. This is another region-wide concern which the SPC could be well-placed to address in a cost effective manner.

Trained veterinarians are a very expensive item and it is unlikely that there will be any real increases in numbers in the independent PICTs in the mid-term. The mainly small island countries currently without veterinarians therefore should receive special assistance from the SPC AHS. The region is vulnerable to disease introduction and losses in production due to diseases as well as to diseases of public health concern carried by animals. A concurrent shortage of animal production specialists further aggravates the situation. The initiative by the SPC to develop a Regional PARAVET Training Project is in response to a real need and is a most commendable one. The Programme comprises materials development, training delivery and the establishment of institutional infrastructure to support and sustain para-veterinary training into the future. It consists of 3 phases or sub-projects and pipeline plans to develop an advanced level course, focused on more specialized areas such as aquaculture, apiculture management and on projects supporting the development of women working in the sector. The PARAVET Project is currently in Phase 2, following the development of the initial training material, application to CD-ROM format and then piloting.

Disease Situation

The region is relatively free of many serious infectious diseases of animals. This enviable position has been assisted through relative geographic isolation, backed up by well enforced animal biosecurity. However, the risks of introduction have never been higher as a result of the ease of modern travel, trade liberalization and the increased incidence of smuggling. There are no OIE List A Diseases in the region although Hog Cholera outbreaks were recorded in 1972 in FSM and Tahiti. The List B Diseases are relatively few in number for such a vast region. However, there is growing concern about the risks of introduction of the SARS complex and Avian Influenza and other similar or emerging infectious diseases, including rabies.

The region is, in some ways, a 'buffer zone' in an animal disease sense for Australia and also NZ and therefore should have an important place in disease monitoring and surveillance. It is clear that the roles of the SPC Regional Animal Health Service and the PARAVET Project are central to this overall surveillance function.

Aquaculture

Surprisingly, the production of aquatic animals by aquaculture and culture-based fisheries is rapidly increasing in the region, despite some early failures. This trend is being reinforced by declining returns from capture fisheries. While food species such as fish, seaweeds and crustaceans are being targeted, in both

fresh and salt water habitats, pearl and ornamental/aquarium species are also important. It is estimated that the current annual value of aquaculture products in the region is US\$150 million.

The major concerns relate to the introduction of diseases and invasive species. These can have deleterious effects on indigenous species and ecosystems and can therefore impact indirectly on rural livelihoods, food security and public health. At the same time, intensive aquaculture production systems are associated with a range of aquatic animal disease concerns. Networking between the SPC, OIE, ACIAR etc is assisting greatly in cooperation and information exchange. The development of policy and technical guidelines, in particular for the responsible movement of species and disease notification, are high priorities. Veterinary authorities and veterinarians have a major role to play although currently their involvement varies across the region.

Companion Animals and Animal Welfare

This is a segment of increasing significance in most PICTs and at least 3 developing countries now have indigenous private veterinarians and animal welfare societies. It is difficult to obtain figures on dog and cat ownership but in Fiji it is believed that one household in every 3 or 4 in urban areas possesses a dog. This would equate to some 15 to 20,000 dogs in urban zones alone. Dogs are important for property security and for feral pig hunting. They are now being valued more as pets, as education and standard of living rise and animal welfare gains a higher profile. However, uncontrolled breeding and increased strays is a matter of concern, from both a public health and welfare perspective. At the same time, losses of farm livestock from dog attacks have been an issue in some locations.

Awareness programmes on companion animal care are being implemented by animal welfare societies but these need greater support from other stakeholders. There is also increasing demand for desexing programmes and for more affordable veterinary services for low income earners. The wider question of the welfare of farm animals, also requires higher focus because of the impact inhumane management and handling can have on productivity and therefore on farm incomes. The SPC has been mandated to develop regional animal welfare initiatives and this includes the production of public awareness materials, provision of assistance for the establishment of national animal welfare societies and technical advice. The recent involvement by OIE in animal welfare, as part of its leadership role, is a positive development.

Environmental Impacts

Animal wastes from intensively reared species are a growing problem. The low-lying small coralline islands and atolls are a special case because the water table is the main water source and, together with soil, can be very vulnerable to contamination. Effluent from large production units on the volcanic islands is also an increasing concern for streams and lagoons, often in close proximity to residential areas and tourist hotels. A collaborative initiative between SPC, USP, ACIAR and the University of West Sydney is assessing options for using this waste for fertilizer and energy and will propose solutions to pathogens in water sources. The possible need to slaughter livestock in a disease outbreak will present special challenges in carcass disposal on all islands.

III. Possible Interventions

The PICTs, situated as they are on Australia's doorstep, face a host of challenges. Within the livestock sector, the declining levels of veterinary service provision are of great concern. A number of areas exist for outside intervention, in support of enhanced veterinary services.

There is considerable need for capacity-building of PICT veterinarians working within government, including through attachments and participation in Australian-based activities, such as emergency disease simulation exercises. Institutional strengthening of veterinary services is another priority.

There are many country-level constraints in the livestock sectors, both existing and emerging, which veterinarians are best qualified to deal with. A significant number of these are common to several if not most PICTs. There is a strong case for the SPC to play a greater role in addressing these issues, in partnership with other bodies such as ACIAR. The PARA VET Project deserves special support, given the declining number of PICTs with veterinarians. [Outside the French territories and Guam.] These 2 responses underline the need to augment the resources and capacity of the SPC Animal Health Service to enable the needs, in particular of the small PICTs, to be better addressed.

As more PICT veterinarians work outside government on companion animals and animal welfare, visits by volunteer veterinarians from Australia could play an important role through mentoring, advice and capacity-building as well as in the provision of donations of second-hand equipment. The increased involvement of the SPC

in animal welfare on a regional basis is positive and could benefit from linkages with animal welfare societies in Australia. The National Veterinary Associations of PICTs are at very early stages of development and would benefit from having key officers visit Australia to observe and participate in AVA activities.

It is in Australia's interests for PICT governments to assign higher priority to veterinary services. Australia could therefore endeavour to assist in creating greater political awareness in this regard, within the PICTs and relevant regional organisations.

Cultural Factors Affecting Animal Health And Production In Papua New Guinea*

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Abstract

The Papua New Guinea Tourism Promotion Authority advertises Papua New Guinea as "The Land of the Unexpected". This is due to the beauty, scenery, culture and topography the country can offer. There are more than 700 local language dialects and associated different cultural or social groups. Several farming systems are practiced in the country, involving both the crops and livestock. The dominant domesticated livestock species are pig, cattle, poultry (chickens and Muscovy ducks), goats and sheep. The country is free from the major viral and bacterial diseases experienced elsewhere. Production problems are associated with poor management practices and to some extent internal-parasitism.

Cultural and social factors, which contribute to the animal health and production in Papua New Guinea, are discussed. These include the cultural values of animals, land tenure issues, demands on labour, motivation, marketing, management skills and social obligations. It is concluded that cultural factors will continue to affect and constrain the development of animal production with the land tenure system being a major constraint.

Key words: Unexpected, Culture, Social factors, Farming systems, Health, Zoonoses.

The potential for increased livestock production is significant, given the current levels of imports as well as growing consumption, including from tourism. This will assist with improved utilisation of land where this is available, greater economic opportunity, enhanced food security and, in the process, will help contribute to poverty alleviation and to a better quality of life for Pacific Islanders. Veterinarians and para-veterinary staff have an important role to play, working with other professions, both in protecting the region's animal health status and in increasing productivity of the livestock sector in a manner that is environmentally-friendly and sustainable.

Introduction

According to the Papua New Guinea (PNG) Tourism Promotion Authority, "Papua New Guinea is the Land of the Unexpected". This is due to the beauty, scenery, culture and topography that the country can offer. In addition, there are more than 700 local language dialects and associated different cultural or social groups. The total population is just over 5 million.

Domestic livestock production consists primarily of beef, poultry and pork and to very limited extent sheep and goats. Pig breeding has remained primarily a smallholder operation, but cattle production is based on large scale, commercial operation. Small-scale farmers largely support commercial poultry production.

Traditional subsistence animal production in PNG is based on pigs and chickens. Pigs in particular have played an important role in the lives of people of nearly all of the 700 ethnic groups of PNG. According to Bakau and Galgal (1994) there is no history of grazing animal management in PNG. However, there is evidence that pigs have been raised in the highlands of PNG for some 5000 years. The existing populations of cattle, sheep, goats and buffaloes are based on those introduced into the country by Missionaries, Plantation Settlers and

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Colonial Administrations as early as the 18th Century, mainly for the purpose of weed control under coconut plantations, draught power and self-sufficiency in fresh meat and milk supply.

There are several types of farming systems in Papua New Guinea that can be identified and classified according to the objectives, purposes and productivity as outlined by Ashworth and Associates (1985) and Holmes (1988). An attempt is made in this paper to very briefly describe each group and how the cultural factors affect animal health and production.

1. Subsistence Farming

This system is largely independent of other farming systems and formal institutions. The dominant input into the system is labour and land. It is categorized by a low level of cash cropping and an almost total dependence on the staple crops, which vary by regions.

The objective is to produce staple food like taro, sweet potato, yams, bananas and sago for the nutrition of families participating in the system. Pigs in some cultures are required to maintain social status within the community. The purpose of the system is the survival of its participants and to improve their socio-economic position. The system is characterized by owner operations in family or kinship groups.

2. Smallholder System with Livestock

This system includes approximately half the total rural population and participants are defined as those who produce more than 25 percent, but less than 75 percent of their output for cash sale. Most farmers have a livestock component in their system and full range of species may be found. The principal activities of participants in this system are cropping, but a small number are predominantly livestock farmers on extensive grazing areas.

The participants aim to diversify use of their land and crops may occupy most of the land to which they have access. Livestock, while usually subsidiary to the cropping activity, are often integrated with it to make use of waste products or fallow land.

The prime purpose is to generate cash income and to maintain a reasonable degree of self-sufficiency in staple food production. Individual families or kinship groups operate this system. A large proportion of the national coffee, cocoa, coconut and spice such as cardamom output is

derived from smallholders who are also significant producers of staple foods.

3. Commercial Mixed Farming – Grain Livestock System

This systems contains large-scale company owned enterprises presently mainly with expatriate management. This system is limited to the Upper Ramu and Markham Valleys and to a small area in Central Province, but includes the largest producers of grain, cattle and pigs in PNG. They produce beef and pork for formal markets and replace imported feed grains for the intensive pig and poultry industries.

The objective is to produce grain, beef and pork. The system produces grain for animal feed and meat for urban consumption. The purpose of this system is profit. In the case of the pig enterprises large amounts of animal manure are generated to augment fertilizer for grain.

Land and labour are direct input while capital is used to purchase other inputs like seeds, fertilizers, machinery for cultivation, planting and harvesting, grain drying facilities and labour.

External linkages with traditional cultural practices (small holders subsistence producers) are very weak, although there is considerable potential for customary land to be used for grain production on a share-lease or lease arrangement. There are strong linkages with commercial traders, both as sellers of inputs and buyers of outputs.

There are reasonable levels of expertise in management, machinery use, livestock handling facilities and ability to control cattle and, significant influences on beef prices, access to steady markets in the beef and grain industries. Limited financial backing, cultural practices and lack of involvement of traditional landowners in some cases adversely influence management decisions.

4. Commercial Mixed Farming – Tree Crop Livestock System

Under this system, managers operate large-scale commercial plantations usually company owned, while many small plantations are owner operated. The major resources are the land, capital and labour. Capital input concerns management, tree crops, crop processing facilities, machinery, fertilizer, livestock and livestock handling facilities. Large plantations often own the land rather than lease it.

According to Quartermain (1979) 48 percent or Ashworth and Associates (1985) 14 percent of the cattle populations of PNG graze under coconuts. The majority of smallholder draught buffaloes are also found under coconuts.

The objective is to produce cash crops and to produce beef cattle. The purpose is financial gain.

Cash cropping is the dominant consideration with animals usually being seen as a weed-controlling device. The outputs are the tree crop products, by-products, waste and meat. Manure can be regarded as an output if there is some form of fertility transfer from non-crop areas to areas under tree crops.

5. Commercial Ruminants

Many commercial ranches are operated by Government Agencies, often with expatriate management. They make use of land which has limited natural fertility and which has not traditionally been used extensively for food cropping. The land is usually under lease agreement. This system is heavily dependent on purchased inputs such as animal health services, minerals, transportation, formal slaughtering facilities, marketing and contract labour.

The objective of the system is some economic gains in using extensive areas of grassland for livestock production. The purpose is to earn income and to produce young cattle for sale to smaller scale livestock producers. High-grade bulls have to be imported to improve the population of the stock. Minimum work is done on pasture improvement even though some good quality forage seeds are available locally. Machinery use is under utilized and imported fuel is expensive. Capital inputs are considerable, mainly in fencing, housing, livestock and employment of expatriate management.

6. Commercial Non-Ruminants

These systems supply the bulk of the formally marketed poultry meat, eggs and pork. Enterprises are concentrated at few locations close to main feed production and demand centers.

The objective is capital-intensive, high technology commercial production. They operate for financial gain and also supply chicks for small-scale meat bird production. They are operated by a few large companies supported in certain cases by, medium or small-scale out growers. The system involves high level of technical management and import of breeds and strains of animals for meat production. Large capital inputs are required and, reliance on production of high quality compounded

feeds. The output may require high technology processing facilities.

They include breeding, hatcheries, feed milling and meat processing. Production is totally controlled or is contracted to private entrepreneurs.

These systems are strongly linked to feed supplies, overseas supplies of breeding stock, processing facilities, marketing channels and support services such as electricity and water.

Animal Health

An overview of livestock in PNG shows that it is free of many of the major diseases, which affect animals in other parts of the world (Ashworth and Associates 1985, Asiba 1989, Kanawi et.al. 1994). The main animal health problems are associated with poor management and poor nutrition, including failure to control internal parasites, or correct mineral deficiencies (Quartermain 1979, Asiba 1995, 1996). A good example is at the subsistence farming system level where the village animal producers adopt minimal animal disease control measures. Most grazing animals are run on an extensive basis and animal health problem are minimal. Under such situation, however, mineral deficiencies become a major concern.

Diseases Encountered

Anthrax, pneumonia and internal and external parasites in pigs; tick, *Boophilus microplus*, buffalo fly and mineral deficiencies in cattle; internal and external parasites in sheep and goats and poor management practices. Screw worm fly (*Chrysomya bezziana*) is a problem in all species. Poultry diseases are mostly associated with poor management practices, which exposed the birds to infection.

Endemic Zoonoses

The animal diseases, which are known to be present in PNG which are transmissible to man include porcine brucellosis, anthrax, melioidosis, erysipelas, leptospirosis and salmonellosis. Bovine brucellosis has been eradicated and tuberculosis is controlled. A new introduction to PNG is Japanese Encephalitis, detected serologically in one of the villages close the Australian border. Zoonoses, which are not present in the country, but which could constitute a threat are rabies, hydatids and cysticercosis. Diseases posing a possible threat to PNG are those diseases, which are notifiable and

listed in the Animal Disease and Control Act. For example, foot and mouth disease, rabies, cysticercosis, swine fever and African swine fever and new castle disease.

Cultural or Social Factors

There are certain social and cultural factors needed to be discussed here that may affect animal health and production in Papua New Guinea.

1. Livestock

Pigs are by far the most important animals in the economy of PNG. Besides pigs, dogs and poultry are the only other domesticated animals, with which most people have contact. Other introduced domesticated animals and types of management involved are new concept, for example keeping cattle in fenced paddock, in an enclosed space of any kind, or tethered.

In PNG cultural value of pigs is well known. However, at present main exogenous animals (cattle, sheep, goats) are also almost equally valued. They have entered into the exchange system practiced in the country. In many societies people are forbidden to eat pigs reared within their own households. Seventh Day Adventists (SDA) are forbidden to eat pork or to do anything with pig in general. Either sheep or goats had substituted pigs in this faith.

Cattle are larger and stronger animals and are feared by people during handling. Fear may result in lack of handling and this may result in cattle becoming wilder and therefore induce greater fear. Cattle are large animals compared with goats, sheep and or pigs and, considering family consumption, the small species are more beneficial.

2. Alternative Source of Income

Comparing livestock to crops, the latter bring in quick money at regular intervals, say once a year as with coffee when it comes to production. Livestock like cattle or pigs take longer to reach marketable size and social obligations may be delayed.

3. Land

There are variety of customary land tenure systems more or less modified by post-contact factors. For example, in some societies (culture), land is passed on from the mother to the daughter(s) (matrilinal) and in others from father to son(s) (paternal). In others land is communally owned and several groups or clans may own the land.

Conflict over land is very widespread and this may render some areas unusable. There is an increasing resistance among land holding groups in some area to allow land to be used for cash crop purposes rather than livestock since construction of fences and animal handling facilities may be taken or viewed as dividing the land.

4. Labour

There is a constant demand for employment of local labour, especially on government agency run farms or where the land is being leased to the government. Failure may result in damage to facilities or loss of animals. Demands are also made for animals for Christmas parties or other local activities by the landowners.

There is out-migration of young male from the less privileged to more privileged areas. This creates a situation where mass of the population is left with the female or elderly.

5. Motivation of Clansmen

Security of livelihoods and social status are key elements in motivation. For example, among men who have initiated and established a livestock and other project within the community that improves the living standard, status is enhanced. This has been reported for the large-scale development of smallholder sheep farming by the Development Cooperation Division of the Ministry of Foreign Affairs and Trade of New Zealand Government (NZODA/GOPNG 1993). Traditionally, the smallholders are "big-men" within the community.

6. Tribal Fights

Whenever there is tribal warfare or fighting, it always results in destruction of properties, including livestock and crops. Livestock are further included in the compensation payment after the fight.

7. Marketing

Animals sold on the singsing (ceremonial) market fetch a much higher price than in the formal market. Therefore owners prefer to retain their animals until singsing market arises. This may lead to overstocking and overgrazing which then results in increased losses.

8. Management Skill

In general management skills are lacking at the smallholder level, especially regarding the husbandry of introduced domestic species (cattle, sheep, goats).

9. Social Obligations

In some cultures pigs are only consumed on certain occasions such as those arising from compensation or bride price payments. The most interesting phenomenon is that experienced in the Highlands Provinces where several clans come together in pig killing ceremonies. Large number of pigs are killed and exchanged.

Social obligations may also result in the spread of a disease. For example, from personal observations, if a pig dies of anthrax the carcass may be given away to a neighbouring village as a compensation payment, bride price payment or in settlement of other debts incurred previously. Transborder crossing between PNG and Indonesia may introduce Cysticercosis to PNG (Banks 1988).

Conclusion

Whatever farming system is practiced in Papua New Guinea, cultural factors will always have some effect on animal health and production. The major factor is the land tenure system, a problem, which the present government is attempting to solve. At present there are no major viral and bacterial diseases in the country, which are experienced overseas, but there is a possibility of introducing them.

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• *Fill the unforgiving minute with sixty seconds worth of distance run*

~ Rudyard Kipling (1865-1936)

Dolphin Harvesting In The Solomon Islands - A Clash Of Cultures*

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Solomon Islands in Brief

Solomon Islands is an archipelago of islands, East of Papua New Guinea and North-east of Australia. Discovered in 1568 by the Spanish, attempts in later years to colonize the islands by the Spanish failed. This was followed by the early black-birding and the Indentured labour recruiting for the cane fields and the banana plantations of Australia and the other Pacific islands. Solomon Islands was declared a British Protectorate in 1892 and got its political independence from Britain in 1978. The Solomon Island adopts the Westminster System of Government, where the Queen is represented as the Head of State by the Governor General.

From 1999 to 2003 the country was torn apart by ethnic conflict. Solomon Islands has been the headline news until the intervention in mid 2003 by the Regional Force headed by Australia and New Zealand to bring back law and order.

Inter-Island Cultural Clash

Dolphin is a very sensitive topic locally as well as internationally. Dolphin hunting, harvesting, rituals and worshipping has been a tradition and an integral part of island cultures for centuries. Different island cultures view dolphins differently. Some cultural groups hunt and harvest dolphins entirely for food and as a source of protein. These cultural groups regard dolphin meat as a delicacy and attempts have been made to farm live dolphins in pens near their islands. Dolphin meat and teeth are sold to other cultural groups who also use these commodities.

Other cultural groups on the island of Malaita use dolphin hunting as a ritual and rite of passage for young men to adulthood. These groups also use dolphin teeth as traditional currency to pay compensation, bride price, settling disputes, purchasing land and other agricultural produce. They also use the teeth in decorations and as ornaments. These activities are principally subsistence in nature.

Other cultural groups from the central and western parts of the Solomon Islands regard dolphins as totally sacred. Dolphins are seen as associates of the gods and the spirits of the sea and are regarded as a re-incarnation of the ancestral spirits. These groups ban their tribal members not to touch, interfere or have anything to do with dolphins as contact with dolphins bring bad luck and eternal curse. They also ban their waters from being hunted for dolphins by the dolphin hunting communities.

Other remote cultural groups from the outer-lying islands in the east, south and north of Solomon Islands regard dolphins as friends from the sea. They are referred to as navigational aid that can assist you to finding land when you are lost at sea. They can also prevent shark attacks when you are floating in the water after your boat or canoe is capsized.

The dolphin hunting and harvesting communities in which 3 are still active kill between 100-300 dolphins per hunting season. Anecdotal information suggests that the cumulative total catch of 600-1000 dolphins are killed each year by these communities.

Inter - Global Clash

The population surveys done in the Solomon Island waters show that there are 15 species of marine mammals that are present. The surveys show abundance figures of 700,000 to 950,000 dolphins in Solomon Islands territorial waters which is an area of 1.2 million square kilometers of seawater.

The most noted dolphin species is the Tursiops spp (Bottlenose dolphin) and this is also the most caught dolphin species. Other species are also included in the catches and these include the *stenella* spp. and porpoises. For the last 10 years population studies show that the dolphin populations are stable or increasing. It was concluded that traditional hunting and harvesting in the Solomon Islands is very sustainable.

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Arguments from the Western cultures that dolphins are intelligent and therefore is morally wrong to kill dolphins cannot be comprehended by a villager from the dolphin hunting communities who would argue that they see no difference from killing of pigs, sheep, cattle and horses for food.

On the issue of exploitation as highlighted by overseas groups that one live dolphin sold to the export consortium by the Solomon island dolphin fishermen for US\$500.00 (SI\$4,000.00) is later sold to the foreign buyers for US\$20,000-US\$30,000.00 each. Villagers would argue that US\$500.00 (SI\$4000.00) is better than traditional bartering or selling which can only fetch around US\$15.00 (SI\$100.00) for the meat and teeth. As argued by the villagers that SI\$4,000.00 is money that they have not seen before in their lives and this amount can sustain a nuclear family for more than a year in terms of school fees, fishing nets, fuel and other necessities whereas to a person from the western society that may only be a family's evening meal at the Ritz, Calton or Travelodge.

Villagers have now argued that they are no longer killing dolphins but capturing and selling live animals for a better return. The numbers that have been caught have reduced greatly compared to numbers caught during traditional dolphin hunting sessions.

The central Government is putting pressure on export consortiums to invest some of the profit back into the dolphin hunting communities. This is an area where dolphin hunting communities have always argued that foreign vocal groups always criticize their activities but would never come up with practical alternatives or to finance projects that these dolphin hunting communities can get engaged in and substitute that for dolphin hunting and killing. The villagers find it very offensive and frustrating that people in their computerized offices in New York or London with all the luxuries of life trying to tell them what to do or attempt to remote control their daily activities.

Political Clash

The Solomon Island Government has been under enormous pressure from International Donor Agencies, Foreign governments, Non government organizations (NGO), environmental groups, animal rights and liberation groups to impose a total ban on dolphin hunting, capture, killing, utilization and recently export of live dolphins.

The government recognizes and respects the tradition and culture of its people and therefore no government will ever ban the traditional right of the people to harvesting and utilizing this resource and the social and religious activities involving dolphins.

It will be political suicide for any government or political party in the Solomon Islands to restrict or ban traditional dolphin activities. Successive governments have had ruling majorities in the 50 seat parliament with 5 members or less. The current government has a parliamentary majority of 4 seats. Dolphin hunting communities have 7 representatives in parliament of which 6 are with the government. A swing by these representatives will mean the downfall of the government. Despite all the lobbying and pressure from foreign governments and vocal groups, the Solomon Island government has to handle this issue of dolphins with great caution.

The Government's policy is to convert renewable resources into money provided it is utilized sustainably through proper conservation and management based on sound scientific data and population surveys for the maximum benefit to its people and the country. To ease pressure the Solomon Islands government decided to consider other alternatives and these includes,

1. Eco-tourism and eco-attraction parks
2. Capture and sell of live dolphins to foreign zoos and marine parks instead of the traditional capture and kill.
3. Breeding in captivity for future sale. - although this may be too technical and expensive for the village communities.
4. Set up quota systems to control catches.

The government's idea and intention is to come up with compromise activities that would satisfy all sectors of the community. In 2002 the Solomon Island government set up the first export quota of 100 live dolphins per year under provisions of its Fisheries Act 1998. The total quota of 100 is based on scientific survey data and best information available and is subject to review annually.

The first License for a joint operation was issued to a Canadian consortium. The local dolphin fishermen are to be utilized for their hunting and capturing skills while the consortium is to buy the dolphins and to provide all the necessary requirements to meet export criteria. Local and overseas veterinarians will be engaged in providing all the necessary veterinary health care at the consortiums expense.

The project began with 56 captured dolphins but only 28 dolphins satisfy all the requirements for export. These dolphins were exported to a marine park in Cancun city, Mexico. This brought widespread criticisms from London to New York, Brussels to

Canberra and Wellington. It was even brought up in Parliaments of these Western countries by the Green and Environment parties. The Government of Mexico under pressure then suspended further imports of dolphin from the Solomon Islands. The reason for this suspension is not clear to date.

The Solomon Island government argues that it is not alone in the utilization of marine mammals. Many countries kill these animals directly or indirectly and turning a blind eye on the issue. The United States through the approval by the IWC allows Alaskan eskimos to kill a number of bowhead and grey whales each year. Canada, a non IWC member kills about 700 blue whales out of a 7,000 population. Japan and Norway kill whales, dolphins, porpoises to the tune of 5,000-10,000 annually. In neighbouring Australia, the Aborigines and Torres Straight islanders are allowed to kill and use dugongs (Pers comm., Ted Harmond).

The Government wishes to point out that 30,000 dolphins and other marine mammals are caught and discarded by Purse seine fishing fleets globally each year (BBC World Report 24th July, 2003). In the Eastern Pacific dolphin mortality associated with tuna purse seining is approximately 2,000-3,000 each year (IATTCI Report 2002).

When we come to consider a commercial quota of 100 animals annually in which only 28 animals was exported in 2003 and a dolphin population of 700,000 - 950,000, the dolphin fishermen and the Solomon Island government believe that the figure is very sustainable and saw no reason for all the foreign criticisms.

Welfare Clash

The welfare of the dolphins is an area of concern to activists and environmentalists especially those from the Western cultures. Due to the numerous allegations against the operation at the Gavutu facility, the Solomon Islands Department of Fisheries invited Independent groups from overseas to assess independently the welfare of the dolphins held at the facility. On August 2003, a combined team was organized which included representatives from the diplomatic missions, dolphin experts, disease specialists, welfare experts and representatives of other overseas concern groups to see if the facility meets International recognized standards and secondly to assess the level of animal stress at the facility.

The findings show that the facility meets the Animal and Plant Health Inspection services (APHIS) standard of United States at high and low tide and also satisfied the Australian and European animal care

standards at high tide but may be marginally satisfactory at low tide.

The International Cetacean Group (ICUN) that was supported by the foreign Environmentalist and Conservation groups also made an independent report. The report was in favour of the facility meeting most requirements and this did not go well with the groups that sponsored the trip. This shows clearly that the intention of the sponsors was totally different.

The level of stress and risk to animals in light of areas such as

- a. feed
- b. water
- c. bacterial levels
- d. animal care in terms of person per animal
- e. transportation was also assessed.

The findings report that a total of 39 dolphins, including a 3 month old calf born in captivity, are well fed. Animals are fed 4 times a day or total of 8 kg of fish per animal per day. To the local fishermen this is an additional income of \$20,000.00 per month of fish.

Large pens are 110 m long by 60 m wide and small ones about one third of this. Water flow from incoming and outgoing tides plus the different directional current flows provide good flow to holding pens. Bacterial buildup is minimal as compared to the static pools in most artificial and man-made aquariums and marine parks. This facility with clear, pristine and unpolluted waters are natural. Despite this, it is a recommendation that any facility will have to do monthly water bacterial tests and monitoring.

The facility employs 40 people and this is a ratio of one person per dolphin. Two qualified veterinarians are engaged in the daily health care of the animals. The animals have more doctors compared to humans in the Solomon Islands. Currently the majority of dolphins are now hand fed which indicates that the level of care is improving and satisfactory.

Capture and transport of live dolphins is only encouraged if the area of capture is within proximity of the facility. Transporting dolphins over long distances is not encouraged especially when there is no proper training and equipment for the local handlers and the risk of animals receiving injuries in the transportation is high.

The requirement by some overseas groups from developed countries in terms of Infrastructure to meet welfare requirements may be unnecessary as it is financially expensive for a developing country as Solomon Islands and may only be cosmetic in nature.

Veterinary Clash

A lot of foreign vocal animal groups have been active in lobbying their Governments to send up veterinarians to assess dolphin welfare and matters relating to dolphin health. However, a lot of these Foreign Governments have rejected the idea as it is an infringement in the country's internal matters and sovereignty. It could only be done on the invitation of the Solomon Island Government through its veterinary / livestock department, Ministry of Agriculture.

The veterinary profession and association has been accused of corroborating with dolphin exporters and dolphin fishermen and have done nothing to address the issue of dolphin hunting, capture, killing, harvesting and export.

The Solomon Island Veterinary Association (SIVA) has responded to these allegations accusing foreign NGO's, animal liberation, animal rights groups and animal lovers of gross unfairness and the blatant attacks that are only dictated more by personal emotions than anything else. These foreign vocal groups have demonstrated a high degree of biasness and misconstrued propaganda with a lot of allegations and media information that are totally baseless.

To question the credibility and academic background of members of the Solomon Island Veterinary Association, as some groups have done would mean questioning the validity of the veterinary schools and faculties that these veterinarians graduated from which in our view is outside the point of argument. Solomon Island veterinarians graduate from veterinary schools and faculties in developed countries and some are among the best in the world. None are graduates from any third world countries.

The veterinary profession in the Solomon Islands is only providing a facilitatory role as far as dolphin activities are concerned, The Department of Fisheries, Environment and Conservation is the issuing authority for permits and licenses. The veterinary profession provides the health care, conducts health assessments, blood tests and any veterinary medical/surgical requirements in order that dolphins are healthy and meet export requirements.

In veterinary public health, as required by the public health by-laws, all animal meat sold in urban centers has to be inspected and certified healthy and fit for human consumption. The veterinary profession provides this service to the community.

The Solomon Island Veterinary Association (SIVA) respects the culture and tradition of its people and its members. The Association is currently trying to draw up working guidelines with regard to dolphin issues.

The SIVA members are representatives of the different cultural and traditional groups. Two of our members are representatives of the cultural group that regard dolphins as totally sacred and they will have nothing to do with dolphins. Even attending to treatments or inspection and certification of meat as required by the public health by-laws.

There is also a veterinarian from the dolphin eating community. This veterinarian always talks about the low fat and leanness of dolphin meat and recommends it for weight watchers.

The fourth veterinarian is a representative from the dolphin catching area that uses dolphin teeth for decorations, ornaments and in dowry and bride price.

The question here that needs to be addressed by SIVA in regard to some of its members is, which takes precedents, your cultural and traditional belief or the ethics of your profession. Can these veterinarians be held liable for professional negligence on their part as veterinarians if they refuse to provide veterinary attention because of their cultural and traditional beliefs?

A lot of foreign animal rights and animal lovers are secretly waging war against practices and veterinarians who are involved in dolphin activities. These veterinary practices are seeing clients change practices. Solomon Island is a small country and therefore nothing is secret.

The issue of dolphin health and care has brought in another line of animal for the Solomon Island veterinarian. With marine veterinarians and dolphin experts from the United States working together with local veterinarians, it gives the local counterparts exposure and experience in marine mammal aquatic medicine. The International Association Animal Aquatic Medicine (IAAAM) has strongly encouraged Solomon Island local veterinarians to join the association and be part of

the international pool of aquatic veterinarians. Solomon Island veterinarians have an advantage in that the number of dolphins available to them for exposure and training in medicine and surgical procedures is enormous.

The SIVA is encouraging all its members except those for cultural and traditional reasons who cannot work with dolphins to take alternating time out to work with the American aquatic veterinarians to get more exposure and experience in the daily health care of dolphins. This is an advantage and a bonus for our local veterinarians.

Conclusion

The issue of dolphin harvesting in the Solomon Islands, whether traditional or commercial has brought about numerous criticism and clashes locally and internationally. The Solomon Island government recognizes the sensitivity of the issue and the potential it has to unseat any government in power. Therefore, the government has to handle the dolphin issue with great caution and to come up with compromises to satisfy parties who have vested interest in the dolphin issue. The Solomon Island government also knows the potential of utilizing its marine resources to bring in foreign currency provided that it is done on a sustainable level based on good scientific, management and conservation data.

Despite all the criticisms, the rights of the people to their cultural, traditional and religious practices cannot be restricted or banned as this would be a deprivation of the fundamental human and democratic right of the people.

The local veterinary profession is also caught up in this clash of dolphin issues. In spite of all these clashes the veterinary profession and members of the local veterinary association stand to benefit enormously in the dolphin knowledge, exposure, experience and technology that is brought to their country by experts and specialists in this area. Local veterinarians do not need to travel overseas to gain this knowledge but they can remain at home and still can practice in this field. With the influx of foreign dolphin experts, specialists and the readily available animals to practice on, the local veterinarians will one day be experts also and will be able to pass on this expertise for the betterment of the veterinary profession.

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How To Read A Pet Food Label

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"Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information on it."

— Samuel Johnson, quoted in Boswell's 'Life of Johnson'

In the majority of countries, there is little government legislation regarding the labelling of pet food. There is often no legal requirement for the label to display information about the product, or for the food to be nutritious or safe. Instead, there are various pet food industry associations that represent the local pet food manufacturers and set standards for labelling claims. The Pet Food Industry Association of Australia (PFIAA) is an example of such an organisation. Its members include all major and most of the smaller pet food manufacturers in Australia, and associations are maintained with the

Australian Companion Animal Council, and the Australian Veterinary Association. PFIAA maintain a code of practice for standards related to labelling, marketing, and nutritional design and claims. It aims to protect the interests of consumers and establish standards for self-regulation of the industry.

The Association of American Feed Control Officials (AAFCO) is internationally recognised as the organisation that sets the most rigorous and comprehensive standards for pet food labelling claims. Most national pet food industry associations, such as the PFIAA, base their nutritional and labelling requirements on AAFCO standards.

AAFCO dog and cat nutrient profiles define the minimum requirements of all nutrients for each species and life-stage, as well as the maximum requirements of selected nutrients. The labelling term 'nutritionally complete' indicates that all required nutrients are present in the food in adequate quantities, while 'complete and balanced' indicates that all required nutrients are present in the proper proportions as well as in adequate quantities. The pet food labelling term 'formulated to AAFCO standards' indicates that the food has been formulated to meet the AAFCO nutrient profile for that species and life-stage. It is important to realise that if a label claims that a dog food is 'complete and balanced for adult maintenance', then that food will not necessarily be complete and balanced for dogs at other life-stages, such as growing pups, breeding bitches, or performance dogs.

If a diet contains all required nutrients, it does not automatically mean that those nutrients are available to the animal when the diet is consumed and digested. Pet food formulations that meet AAFCO standards can be additionally tested by AAFCO digestibility feeding trials. This is the preferred method for substantiating a nutritional adequacy claim. To meet these requirements, diets must be tested by long feeding trials where animals at the required life-stages are fed only the test food and water while being monitored for nutrition-related disorders. When a dog or cat food meets this high standard, the following statement may be included on the product label: 'Animal feeding tests using AAFCO procedures substantiate that (Name of Product) provides complete and balanced nutrition for (life-stage)'. In certain circumstances, pet foods with very similar formulations may be considered comparable to those that have been tested by AAFCO digestibility feeding trials and this statement may appear on the label: '(Name of Product) provides complete and balanced nutrition for (life-stage) and is comparable in nutritional adequacy to a product which has been substantiated using AAFCO feeding tests'.

In some countries, it is a requirement that pet food manufacturers include a brief nutrient profile on their product labels, which outlines percentages of crude protein, crude fat, crude fibre, and moisture. This may take the form of a 'guaranteed analysis' of the minimum percentages for crude protein and crude fat and maximum for crude fibre and moisture. Importantly, this represents the 'worst case scenario' for levels of nutrients and does not reflect the exact or typical amounts of these nutrients. Alternatively, a 'typical analysis' may be supplied, indicating the average of the nutrient levels calculated from several samples. Actual nutrient levels may be within 10% (above or below) the stated 'typical' level. Knowledge of the moisture content of pet foods is important for calculation of the dry matter content of individual nutrients. A common mistake is to confuse the percentage of crude protein, fat, or fibre listed on the nutrient profile on the product label with percent dry matter (%DM) content for those nutrients.

Most pet food product labels contain an 'ingredient list'. For products that meet AAFCO standards, all ingredients are listed in descending order by weight and ingredient names conform to the AAFCO name (e.g. poultry by-product meal, corn gluten meal, powdered cellulose) or are identified by the common name (e.g. beef, lamb, chicken). These rules do not necessarily apply to ingredient lists of products that are not formulated to AAFCO standards.

As label information on the nutritive value of a pet food product may be quite limited, it is particularly useful if the full contact details for the manufacturer are supplied on the label. Ideally, a local telephone number should be included for each country that the food is sold in. This allows consumers to easily request additional information on the nutritive value of the product from the manufacturer.

The advertisement features a large bag of Purina Pro Plan Puppy Chicken & Rice Formula. The bag is dark with white and gold text. At the top, a silhouette of a dog is shown with the text 'PROTECTS WHILE IT NOURISHES'. Below this is the Purina logo and the product name 'PRO PLAN' in large, bold letters. Underneath, it says 'PUPPY' and 'CHICKEN & RICE FORMULA'. A small box indicates '28.1% PROTEIN' and '18% FAT'. On the right side of the bag, there is a vertical label that reads 'PRO PLAN PROTECTS WHILE IT NOURISHES'. The background of the advertisement is a collage of smaller images and text related to pet nutrition.

CALENDAR OF EVENTS**2004**

- 8th International Conference on Goats, Pretoria, South Africa. July 4th - 9th.
- 56th Annual Convention of the Canadian Veterinary Medical Association, Quebec. July 7th - 10th.
- CVA Executive Committee Meeting in conjunction with SAVA Congress, Cape Town, South Africa. July 27th - 30th.
- CVA Regional Meeting of ECS African Region, Lusaka, Zambia. 4th - 6th August.
- 11th International Conference of the Association of Institutions for Tropical Veterinary Medicine and 16th Veterinary Association Malaysia Congress, Petaling Jaya, Malaysia. August 23rd - 27th.
- BVA Congress, Cavendish Conference Centre, London, UK. October 1st - 3rd.
- 13th Federation of Asian Veterinary Association (FAVA) Congress, Seoul, Korea. October 25th - 27th.
- CVA Regional Meeting of Australasia/Oceania Region and Workshop, Lae, Papua New Guinea. October 28th - November 1st .
- CVA Regional Meeting of Canada Caribbean Region, Port of Spain, Trinidad. November 9th - 12th.

2005

- CVA Regional Meeting of Asian Region, Lahore, Pakistan. September (Date to be announced)
- CVA Regional Meeting of UK/Mediterranean Region. (Date and Venue to be announced)
- CVA Regional Meeting of West African Region. (Date and Venue to be announced)

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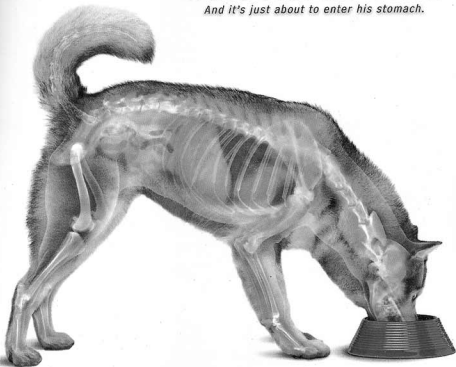
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