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President's Report

Our scientific meeting in Auckland last month was extremely successful and a very enjoyable conference. Congratulations and thanks to David Marks for organising everything: program, venue, accommodation. This was extremely well done.

Our next meeting is in Sydney, following on from the Australian Poultry Science Symposium at University of Sydney, 14-15th February 2007. A general theme for this meeting will be food safety/public health although papers will be broader than this. This will be a vital meeting for the AVPA and I would encourage as many members as possible to attend the business meeting as we will be considering the future of our organisation (see below).

We also decided to hold a second scientific meeting in 2007, late in the year in Adelaide. Margaret Sexton and Kim Critchley have volunteered to organise this – many thanks to both for their enthusiasm.

The extending outbreak of virulent Newcastle Disease in Papua New Guinea is of concern to all of us and the executive has written to the Australian Chief Veterinary Officer as well as key ministers encouraging our government to aid and support PNG in its efforts to control and hopefully eradicate this disease. Urgency in this matter has been strongly requested.

AVA Matters

AVPA is a Special Interest Group of the AVA. This requires certain compliances from us and makes AVA responsible corporately for AVPA affairs. Consequently things have come to a head in legal terms as the AVPA is at variance with the AVA constitution. Specifically, this would require several membership situations to be altered. Under the AVA constitution, only veterinarians can be full members

of a Special Interest Group (SIG), other members must be classified as "Affiliate" members without voting rights. Further, all veterinary members would also have to be members of AVA. In the past, both of these stipulations have not been acceptable to AVPA membership and I doubt that this will have changed. Unless the membership is content to fall in line with these requirements, which I doubt, we really have no other choice than to separate formally from the AVA and become an incorporated association in our own right. In meetings with the AVA President and CEO, this seems to be the most mutually acceptable progression. From both the AVA and AVPA viewpoints, there would still be value in continuing a relationship with the AVA: they need an expert input on poultry issues and we can benefit from the stronger national and professional profile of the AVA. In this respect, we could become an official Advisory Body to the AVA and continue to exist as our own identity.

These matters will need to be fully discussed and debated at the next OGM (February 14) and the organisation needs to decide upon the path forward. I have emailed all members with a more detailed dissertation of the issues and encouraged everyone to attend this meeting if possible or at least to communicate their views to the Executive or through other members as proxies to the meeting. I hope to have circulated some notices of motion prior to the meeting for your consideration. Any motions from any member (and a seconder) are welcome and I would be pleased to receive these prior to the meeting if possible. We have invited Kersti Seksel, AVA President to address us (this will be the last presentation on Wednesday 14th's scientific session prior to our OGM) with time for discussion in an open forum. Please feel free to communicate with me on any of the issues here.

With best wishes for Christmas and the New Year.

Peter Groves

Season's Greetings to all AVPA members

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The Australian Veterinary Poultry Alliance is a Special Interest Group of the Australian Veterinary Association. Membership of the AVPA is available to individuals and groups working in, or interested in, any veterinary aspect of poultry.

Dander will be published quarterly (March, June, September and December). Contributions are welcome. Electronic copy is requested. Deadline for copy is by the end of the second week of the month of publication. Please send information on abstracts of interesting papers, summaries of reports, case histories, social news etc. to Kevin Whithear, School of Veterinary Science, The University of Melbourne, 250 Princes Highway, Werribee 3030, Victoria <kevingwt@unimelb.edu.au> fax 03 9731 2366.

Summary of Upcoming Scientific Meetings

February 2007	Australian Poultry Science Symposium. Webster Theatre, University of Sydney. February 12-14. Contact: Prof. T. Scott. Email: toms@camden.usyd.edu.au . Web: < http://www.vetsci.usyd.edu.au/apss >.
February 2007	AVPA Sydney Conference. Webster Theatre, University of Sydney. February 14-15. Contact: Dr Peter Groves. Email: "Peter Groves" zootechny@bigpond.com . There will be a joint session with APSS on the morning of February 14.
March 2007	56th Western Poultry Disease Conference. Riviera Hotel & Casino Las Vegas, Nevada. March 27-29. Contact: Dr Bruce Charlton. Email: bcharlton@ucdavis.edu
September 2007	XV Congress of the WVPA. China International Conference Center for Science and Technology (CICCST), Beijing, P.R.China. September 13-16. Fax: +86 10 62174126. Email: llwang@wvpc2007.org . Web: www.wvpc2007.org . Abstracts must be submitted to the Congress Secretariat via the WVPC website no later than 28 February 2007. AVPA member Amir H, Noormohammadi is the Houghton Lecturer at the WVPA Congress.
June-July 2008	23rd World's Poultry Conference and Sixth Asia Pacific Poultry Health Conference. Brisbane Conference and Exhibition Centre. June 29 - July 4. AVPA Contact Dr Peter Groves; Email: "Peter Groves" zootechny@bigpond.com .

MEMBERSHIP MATTERS

Membership List

Thanks to all members who have renewed their AVPA subscriptions for 2006.

New Members: AVPA welcomes the following new members: **Ravi Ravindran; Kent Dietemeyer; Julie Wagner and Leone Basher** and new student member **Alireza Mahmoudian**.

Current members are asked to encourage potential new members to join the AVPA. There is always strength in numbers!

2006 Financial Members: George Arzey, Edla Arzey, Caroline Ash, Phillip Ashby, Trevor Bagust, John Barnett, Leone Basher, Carol Bates, Peter Beers, Susan Bibby, Doug Black, Pat Blackall, Wayne Bradshaw, Gabriel Brown, Glenn Browning, David Buckley, Graham Burgess, Brian Burke, Eleanor Chaine, Neil Christensen, Peter Claxton, Kim Critchley, Mike Cundy, Peter Curtin, Colm Culligan, Wieslaw Demkowicz, Kent Dietemeyer, Elizabeth Evans, Gordon Firth, Peter Gray, Tom Grimes, Peter Groves, David Hampson, Bob Hughes, Clive Jackson, Rod Jenner, Noel Johnston, Bob Johnston, Brian Jones, Wayne Jorgensen, Vivien Kite, Azadeh Laghai, Phil Lehrbach, Mark Lindsey, Margaret MacKenzie, Michael McDermott, Paul McQueen, Con Malliadis, David Marks, Krystyna Minkiewicz, Linden Moffatt, Iain Mortimer, Kerry Mulqueen, Amir Noormohammadi, Frank Pace, Barry Philips, Ravi Ravindran, Rod Reece, Bruce Remington, Grant Richards, Julie Roberts, Simon Robinson, Ambrosio Rubite, Peter Scott, Margaret Sexton, Wafi Shinwari, Jo Sillince, Peter Spradbrow, Jillian Templeton, Andrew Turner, Greg Underwood, Aileen Vanderfeen, Julie Wagner, Steve Walkden-Brown, John Walters, Ben Wells, Kevin Whithear, Pam Whitley, Bill Williams, Sarah Wiley.

Student Member: Gabriel Brown, Alireza Mahmoudian.

Life Members: Balkar Bains, Leon Barlow, Roger Chubb, Dinah Fry-Smith, Paul Gilchrist, Harvey Langford.

Please see the AVPA website for information on sustaining members and links to websites

AVPA Sustaining Members 2006

Sustaining members contribute funds that help defray costs of services to members of the AVPA. We thank all sustaining members for their active interest and support.



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Importation and Exotic Diseases Subcommittee Report

Chicken Meat Import Risk Assessment (IRA) — Morsels of Evidence and Chunks of Doubt

Introduction

In an age of overcapacity of countries to produce commodities and the inability to apply the primordial instinct of aversion to any risk, risk assessments are gaining popularity as a tool to demonstrate in a transparent fashion human knowledge and human fear. The principles of import risk assessments are no different from other risk assessments and while most risk assessors would deny that it is about predicting the future, nevertheless, hidden among the scientific analysis are a few tea leaves to remind the observer that the most profound risk assessment is a combination of science and the juggling of uncertainties and certainties governed ultimately by the ability to balance the two and restrain the natural tendency of humans to believe in their own creation.

Was this the reason for describing risk analysis as “a blend of art and science” (SC MacDiarmid, Rev Sci Tech Off.Int.Epiz 1993 12:1093) or is the science of assessing and analysing risk not precise and it may suffer from significant inaccuracies, not the least of which are those associated with the human mind refusal to accept its limits? Although rarely acknowledged, the scientific risk assessment aims to negate or support the human perception of risk also known as the “effective risk”. Translated to the Chicken Meat IRA, this could mean the ability to demonstrate that low probability of introduction of an agent to Australia (0.05-0.3) when the expected import penetration of 176,000,000 carcasses per annum is considered, imposes either an unacceptable level of risk or an acceptable level. A low probability in its higher range (0.3) translates to acceptance of the scenario that 52.8 million carcasses imported to Australia could be infected with an agent of quarantine concern.

Realistically, in these circumstances, the risk analysis “task” is to alleviate the effective risk through a careful and transparent scientific risk procedure.

The Elements

In accordance with OIE code, import risk assessment is an evaluation of the likelihood and the biological and economical consequences of: **Entry, Establishment and Spread** of a pathogenic agent (**Hazard**) within the territory of an importing country. A more simplistic representation of the concept of modern risk is presented in the formula; Risk = probability of events x impact.

Assessing the probability of events solely on probabilistic and expert assessment of various hazards without an historical background, often used by actuaries to estimate risks and premiums, is a challenging task and assessment of the consequences across an interdependent large group of variable is another challenging task befitting actuaries and economists. Because the consequences are of paramount importance (ie high probability of entrance, exposure and spread but very low impact, results in very low risk) in reaching the final decision on the RISK, many aspects should be incorporated into the impact studies and environmental impact should receive expert assessment.

Several elements of impact need to be considered:

- How good are we predicting events? (eg WNV impact in the USA compared with its origin) Was it possible to predict that WNV would kill alligators, Wolf/ Dog, Reindeer, Sheep, Black Bear, Squirrel, Mountain Goat, Alligators and Harbor Seal?
 - Present knowledge and future knowledge (Would H5N1 receive a rating of Extreme Impact 10 years ago?)
 - Have all the epidemiological aspects been considered?
 - What weight is given to impact uncertainties?
 - Are impacts on the environment and natural fauna reversible?
 - Do we get more than “one bite at the cherry”?
 - Cascading effects of the extinction of a large population of birds or even the small population of endangered species. The loss of endemic birds may help to initiate cascading extinctions among associated plants and invertebrates and the loss of biodiversity.
 - Independence of other causes on predicted events
 - Multiple agents effect-simultaneous entry of more than one agent
 - Constant environment – are climatic changes likely to have impact on the epidemiology of diseases and their spread?
 - Endangered species- inconsistencies between the IRA approach to death of endangered species and other IRA's done on the effect of wind turbine on the Orange Bellied parrot.
 - Past cost of achieving freedom from certain diseases in Australia eg Pullorum
 - Underestimation of impacts by public servants – Published tendency to underestimate costs. Cost overrun of 50-100% not uncommon.
-

Likelihood of entrance to Australia

Considering the large volume of infected meat that is part of the import scenario, the difference between Moderate, Low or Very low likelihoods is very significant and accurate determination of the 'entry' likelihood is important. The examples discussed below, raise significant questions about the determination of likelihoods in this IRA.

Entry (release) Likelihood vvIBDV

- Likelihood of infection at slaughter - **Moderate**
- Likelihood of non detection of infection – **High**
- Selecting an infected individual - **Moderate**
- X-contamination of carcass - **Moderate**
- X-contamination to uninfected flock - **LOW**
- Non removal of contaminated carcass - **Very High**
- Non inactivation during processing - **Very High**

Conclusion of release assessment - LOW likelihood that imported chicken meat would be contaminated with vvIBDV.

It is difficult to reconcile the conclusion (low likelihood) with the above likelihoods, all but one moderate to very high. It is also difficult to reconcile the difference in the final assessment of the likelihood of arrival of vvIBDV (LOW) and virulent variant IBDV (MODERATE) in Australia when all the components (above) were identical for both agents.

It is also difficult to reconcile the 'high probability' of introduction of vvIBDV into NZ backyard flocks (NZ IRA 1999/2000) when the import penetration considered was 1% while the Australian Draft 2006 IRA anticipating 40% import penetration, concludes that the probability of arrival is Low (page 115, Sec C).

LP AIV

The Draft IRA concludes also that the likelihood of release of LP AIV was Very Low. Only LP H5/H7 are included in the IRA and it is not clear why for example H9 and other LP AIV not present in Australia/Australian poultry or present at extremely low prevalence in wild birds should not be included. The IRA reasoning for the Very Low likelihood of arrival is that 'LP AIV spread is limited and slow and LP AIV is not likely to be present in muscle tissue'.

- H9N2 found often in muscle tissue and bone marrow of imported chickens from China since 2001 (Kishida et al Arch Virol. July 2004)
- Capua et al Avian pathology –presence in muscle strain related.
- OIE ad-hoc Nov 2004- Presence in meat unresolved

As to the reasoning in the IRA that LP AIV spread slowly and not widely perhaps the following should be considered:

- Capua & Mutinelli Av Influenza 2001 (Publisher Papi Editore). On the 29/3/99 - LP diagnosed & in 2wks, 63 outbreaks are reported.
- China 1994 - H9N3 spread to multiple broiler and layer sites
- Minnesota 1985-73 flocks (10-19/week)
- LPAIV in Virginia, West Virginia & Carolina March 8-April 12th –more than 60 farms. By July 1997 one hundred and ninety seven farms (An overview of the 2002 outbreak of low-pathogenic H7N2, avian influenza in Virginia, West Virginia and North Carolina D.A. Senne, T.J. Holt, B.L. Akey, library.wur.nl/frontis/avian_influenza/06_senne.pdf

The evidence of presence of LP AIV in muscles and the historical account of rapid spread of LP AIV are at odds with the IRA reasoning and it would affect the outcomes of; "agent survival" "exposure outcome", spread and the consequences. The above examples demonstrate a possible trend to underestimate the likelihood of introduction and significant inconsistencies that erodes the confidence in the outcomes of the draft Risk Assessment.

The difference between Very Low and Low is a mere possible release of an additional 41,000,000 infected carcasses

Considering the anticipated high volume of import penetration and the huge numbers of infected carcasses that could be associated with the proposed likelihoods of entry, it is essential that other components in the risk assessment (Establishment and spread) are comprehensive and include all epidemiological possibilities and also all uncertainties should be considered against the background of the possible massive introduction of infected meat

Exposure

One of the pivotal elements of the incursion outlined in the IRA is the Unbroken Chain of events leading from the origin of the consignment to a susceptible host in Australia through ingestion of infected imported chicken scraps. One of the dangers that risk assessments must endure is walking the tight rope between real elements and imaginary elements, satisfying the international community and yet diligently assessing some of the less recognised epidemiological elements and less obvious pathways that may appear insignificant.

- NDV isolated from the faeces of a cat 5 months after it was fed infected chicken (Bolin 1948)
- Rats reported to excrete NDV for 24-72 hours (Vet Rec 1949)
- Invertebrate (Hofstad 1949)
- Earthworms 18 days survival of NDV
- Snails –Several weeks

These examples demonstrate the ability of agents to infect the host despite the fact that the ‘chain has been broken’. The “unbroken chain” principles may lead to underestimation of the exposure potential and to underestimation of risk.

The requirement for direct ingestion of the infected imported meat also may lead to underestimation of the exposure group. 6-7% of households in Australia are estimated to have backyard flocks but an additional 10% of households in Australia own birds that are not carnivorous but yet may come into contact with infection. The Netherlands experience demonstrated that an infection like AI could be transmitted between members of the same household. Why not between household members in contact with the infected imported meat and their birds? Additionally it could be argued that up to 30% of households use some form of garden composting regardless of the presence of birds or not and these compost piles may serve as a source of infection to avian and non avian species for a considerable length of time.

Generally the exposure group size is underestimated. The Australian commercial flock is estimated in the IRA to be 73m+13L+6Br = 92M (Part B page 76). However, the Australian commercial flock consists of 73m+13L+6Br + 17m game birds = 109M. This is an 18% underestimation of the exposure group.

The 4 potentially susceptible groups considered by the IRA are wild birds, low biosecurity poultry, medium/high biosecurity poultry and non-avian species. The highest acceptable level of risk by the Australia Government is defined as Very Low. Any risks above this level are considered unacceptable and require some mitigation. As a result of this definition the following agents have been assessed as imposing risk above the Australian threshold – VERY LOW.

- Highly pathogenic notifiable avian influenza virus - **High**
- Low pathogenicity notifiable avian influenza viruses - **Moderate**
- Newcastle disease virus - **Moderate**
- Very virulent infectious bursal disease virus - **Moderate**
- Virulent variant infectious bursal disease virus - **Low**
- *Salmonella* Pullorum and *S. Gallinarum* - **Low**
- *Salmonella* Enteritidis and multi-drug resistant *S. Typhimurium* - **Moderate**

Although the IRA found these agents to be above the threshold level, examination of the various aspects employed by the IRA demonstrate inconsistencies, logical anomalies, lack of full consideration of known epidemiological aspects and inadequate considerations of uncertainties to a degree that may lead to questioning the risk found for other agents.

Diseases of concern and in need of a reassessment

Have all the hazards been identified? Have some Hazards been excluded prematurely? Hazards are defined as all pathogenic organisms that could be associated with the importation and could produce adverse effects beyond what is currently experienced. The Fish Department of West Australia expressed its concern (Jones et al. 1997) with the OIE approach of identifying only significant disease or diseases of concern. It pointed out that for most wild fish populations, history has shown that the real danger has come from those agents not recognised at the time as diseases of concern.

The AVPA identified at least 8 agents that should be considered as a quarantine hazard and for which reassessment should be applied. These are: *Chlamydophila*, *Campylobacter*, Arbovirus, Non H5/H7 LP AIV, Avian Pneumovirus, Reovirus, Group 2 Adenovirus and *Mycoplasma iowae*.

The IRA states that “Antibodies to HEV/MSDV (group 2 Adenovirus) were not detected in 618 wild birds in Southern USA, indicating that the infection of wild birds is probably not common place” (IRA). Following this rationale one could also state that AIV is not common in ducks since antibodies to AIV have been detected in Australia in less than 0.5% of wild ducks (3000 samples). This reason, based entirely on one survey in one part of a continent was used to justify the estimation of VERY LOW likelihood that Adenovirus would infect wild birds

Although isolation of *Mycoplasma iowae* from chickens is not uncommon (Kleven et al Poultry Dis 10th Ed.), the IRA states that “Since *Mycoplasma iowae* is primarily a disease of turkeys and prevalence in chicken flocks is unknown, the IRA considered it unlikely that chicken flocks would be infected”. Isn’t ‘not uncommon’ indicating a significant prevalence? Shouldn’t this be regarded as a significant uncertainty rather than “considering it unlikely that chicken

flocks would be infected”?

Reoviruses are excluded from the RA although the IRA states “Australian strains appear to be of low virulence in comparison to North America and European strains” (IRA page 304). However, on page 308 the IRA states that “There is difficulty in determining that exotic strains are more virulent than Australian strains making it difficult to accurately target risk management. Therefore the IRA concludes that no further RA is necessary (IRA page 308). Isn’t this a prime case of putting the cart before the horse?”

If risk management could not be accurately targeted shouldn’t the IRA endeavour to establish in the first instance an accurate as possible risk and then ponder the conundrum of risk management?

Other reasons for exclusion of agents/diseases range from; *Chlamydophila* multi-resistance “reported only in ducks and the IRA deals with chicken meat” to “no evidence”, “not in chicken meat”, “can’t be acquired by ingestion” and the vector requires exposure to live infected animal, or presence of the agent in Australia etc.

Arboviruses provide an example where perhaps exploration of the depth of the epidemiological data available may indicate a potential for acquisition of the infection not necessarily through the classically recognized transmission method. Careful examination of the epidemiological depth could also alert the scientist to the myriads of “epidemiological surprises” that diseases may harbour.

- High prevalence of some arboviruses in chicken meat has been reported (60% serological prevalence of (JEV) in chickens in Singapore).
- WNV also was isolated from myocardium, spleen, kidney, lung, and intestine collected from chickens scarified at 3, 5, and 10 DPI (Avian Dis 44(3) 2000). The authors (Senne et al) concluded that the level of viremia detected in inoculated chickens suggests that chickens can contribute to the perpetuation of WNV in nature.
- Mosquitoes under artificial conditions -Water deprivation and nature of previous feed affects the response to feed stimuli.
- Dogs & cats are readily infected by ingestion (WNV)
- Mice can also be infected by ingestion
- Human infection by ingestion reported (mother’s milk).
- Birds have been shown to be infected by ingestion (experimentally) and Emerging Inf Dis (Jan 2004) concluded that “the transmission of WNV through scavenging seems another important route”- Viremia in mammals following ingestion of 10⁴ PFU/ml is sufficient to infect mosquitoes.
- Arbovirus were found to survive in dry blood for several months.
- In geese, seroreaction in 3 of 4 cohorts tested exceeded what would be expected by mosquito transmission alone (Can Vet J. 2004 Feb; 45(2):117-23).

Erring on the cautious side is necessary considering the volumes of imports and the potential risk.

Campylobacter is not considered a significant agent of quarantine concern. However although it is present in Australia the drug resistance patterns in the Australian isolates are significantly lower than other countries such as Thailand (80% fluoroquinolone resistance) and USA (20% fluoroquinolone resistance).

Consequences revisited

One of the intriguing aspects is the difference in the concept of consequences on wild birds between this IRA and an RA that was done on the Orange-bellied Parrot.

The Chicken Meat IRA – “If LPAIV in wild birds was to result in illness or death - sporadic in nature and a few in number. Therefore impact on the environment unlikely to be discernible”.

A risk assessment that was carried out in December 2005 on the potential impact of wind turbines on endangered species found that “the impact of wind turbine collisions on the Orange Bellied Parrot may be up to 1 bird death/year. However it concluded - almost any negative impact on the species could be sufficient to tip the balance against its continued existence.” (Modelling cumulative impacts on the Orange-bellied Parrot of wind farms in south-eastern Australia December 2005). The project was not approved by the Federal Minister for the Environment.

Are mortalities “sporadic in nature” and “few in numbers” among endangered species in Australia possibly as a result of import chicken meat less significant than mortalities caused by wind turbines? Was the impact on endangered species assessed? It would appear from the statement Section C Page 37 LPAIV that the direct impact of a disease on wild birds was considered by the IRA to be “UNLIKELY TO BE DISCERNIBLE”.

Some birds (eg ostrich) are particularly susceptible to LP AIV (Capua and Mutinelli 2001) and therefore, due precaution should be exercised in predicting possible impact of LPNAI on a variety of wild birds in Australia. Even with HP AIV, evidence exists that within the same family of birds different species could demonstrate significantly different susceptibility eg House finches vs Zebra finches (Perkins et al Avian Dis 2003).

LPAIV can cause dysfunction and lesions in various organs.

Finally, the IRA states that clinical signs of LPNAI in non-avian species have not been reported. H7N7 with an IVPI of 0 (LP NAI) was isolated from humans with conjunctivitis and presumably conjunctivitis is regarded as a clinical sign. Clinical signs of other LP AIV have been reported in a variety of species in association with mortality.

1979 - Human AIV severe disease in camels in Mongolia (Ruminants).

1982 - H4N5 Harbour seals 60 dead.

1984 - H10N4 infected mink (10,000 died).

1985 - H13N2& 9 infected whales (20% pneumonia).

1991 - H3N8- 20% mortality horses in China.

Conclusion

The AVPA is of the opinion that although the final outcome excludes the importation of chicken meat without due mitigation from countries where these diseases are present, many technical aspects of the IRA remain questionable, may lead to underestimation of the risk components—entrance, exposure, spread and require clarifications. Additional agents should be included in the risk assessment and a broader definition of exposure pathways is warranted. Uncertainties considering the expected volume of imports are as important as certainties. The phrase guilty beyond reasonable doubt should be in the context of IRA changed to innocence beyond reasonable doubt.

Perhaps it is appropriate to cite the next speaker (HJ Pharo) in Avian Diseases Vol 47 2003—"The assessment of the risks posed by avian influenza in imported poultry meat is surrounded by uncertainty as a result of which the analytical approach to risk analysis implied by SPS agreement is currently untenable".

"When endangered native birds may be at stake the public perception of risk is driven by the uncertainty".

George Arzey
Convenor

This is the full text of a paper presented at the recent AVPA Scientific Meeting in Auckland by the Convenor of the AVPA Importation and Exotic Diseases Subcommittee. It serves also as the Report of this Subcommittee to AVPA members in this edition of *DANDER*.

Welfare Subcommittee Report

The Welfare Subcommittee (John Barnett, Rod Jenner and Peter Scott) has been relatively quiet in 2006. The AVA policy on beak trimming remains unresolved and the implementation of the ARMCANZ (now PIMC) recommendations is unclear, with the potential for adverse publicity for the egg industry.

Beak trimming: AVPA members were advised in 2005 that a draft policy on beak trimming prepared by members of the AVPA Welfare Subcommittee and other industry personnel was still progressing through the AVA. This policy on beak-trimming, while recognising the need to beak trim, also recommends further R&D to find ways of both reducing the need and improving the procedure. It strongly encourages the use of accredited trimmers via the 'beak trimming accreditation program' which defines national competency standards, the role of the work-place trainer and the formal assessment of the skills of persons trained in the task of beak-trimming chickens. This policy is still with the AVA Policy Council.

Relevant to this policy is ongoing research funded by the Poultry CRC on alternative methods. Infra-red beak trimming was only introduced into Australia in the last few years and appears to be gaining popularity. One advantage is that this method requires birds to be trimmed at the hatchery ie. an early beak trim as supported by the science. Its effects on modifying the painfulness of the procedure and the efficacy of the procedure are currently being researched as is the option of laser-trimming.

ARMCANZ recommendations: The Agriculture and Resource Management Council of Australia and New Zealand, which is the national group of State/Territory

Agriculture Ministers, and is now termed PIMC (Primary Industries Ministerial Council), finalised an agreement in August 2000 that included increasing cage space allowance from 450 to 550 cm²/hen with state/territory regulations in place by 2008. This appears to be on-track with legislation already introduced in Queensland, Tasmania and the ACT to comply with the provisions of the Model Code of Practice for the Welfare of Poultry (4th edition). Regulations have been introduced in Victoria, including a space allowance of 550 cm²/hen, and come into effect on 1st January 2008 for new establishments with a 12-month period to achieve compliance for existing establishments. By 2015 all establishments must be compliant; this latter phase-in time applies to those establishments that were already compliant with the 1995 Code of Practice, ie. including a space allowance of 450 cm²/hen. NSW, WA and SA governments are in the process of drafting or preparing to draft the necessary regulations.

RSPCA annual scientific conference: The conference to be held in Canberra on 27th February is focussed on the topic of confinement and is titled 'How much space does an elephant need? The impact of confinement on animal welfare'. One of the speakers is Christine Nicol (from Bristol University, UK) who will be speaking on confinement in poultry (and lab rodents).

John Barnett
Convenor

Acknowledgement: I am grateful to Geoff Runge for providing some of the information on the ARMCANZ recommendations.

Therapeutics Subcommittee Report

Update of ongoing APVMA reviews

Virginiamycin

While the poultry industry was generally satisfied by the outcome of the APVMA review into virginiamycin, allowing broilers to be treated for necrotic enteritis for up to 21 days, other sectors, particularly the cattle industry, were not. The cattle industry is now restricted to each individual animal undergoing one course of treatment of 28 days for lactic acidosis. Phibro have challenged the virginiamycin review, and until this challenge is resolved, the macrolide review has also been deferred.

Dimetridazole

A draft report of the review of dimetridazole by the APVMA was released in September 2004, and following consultation with the poultry and pig industries, this review is continuing. The pig industry wish to retain the product for use in treatment of dysentery and the trade implications of this are currently being assessed by the APVMA. The poultry industry was consulted over the use of this medication in broiler breeders and turkeys, and a 28 day withhold on eggs and egg product for human consumption was set. APVMA is currently seeking confirmation that this withholding period could be complied with.

Susan Bibby
Convenor

WVPA Bureau Member Report

During 13-18 November, the President of the WVPA (Professor H. Hafez, Free University of Berlin) and myself travelled to Beijing, at the invitation of the Chinese Branch, to assist in planning this next Congress. We were very well received and looked after. Already we can tell you that the location (several different hotels on one site), Congress Venue and Scientific and Social programs should be excellent. More details on all of these will be made available to you all early in 2007, when the Second Notice for this congress will be sent out by email and air mail. Then will also be the time to think about getting serious-including submitting of Abstracts for Oral or Poster Presentation: Incidentally Posters are being proposed to be particularly well featured for viewing by participants in this congress.

On arrival (Syd-Beijing 11 Hours) it will cost you about USD10 (!!) and 20 mins max by freeway to get from the Beijing International Airport to the Congress Venue, the Jiuhua Spa & Resort. This is a terrific locale, about halfway between the airport and the Tienamen Square which is literally in the heart of Beijing. The Spa setup with terrific natural hot springs is a prominent feature of operations – and once the site of an emperor's palace because of them. The whole site takes up about 200 Ha, across which development has been progressing since 1999. A video clip on the range of Facilities available will be accessible through the Congress website.

As well as the usual clouds of taxis around the hotels at the Juihua, the Organizers will be providing shuttle buses in and out of Beijing's inner city several times for both congress participants and their accompanying people. As a policy, Chinese Organizing Committee will also deliberately be keeping the costs for Congress Registration quite low. For example a Registration will automatically include tickets for you to attend all of the Congress Functions, including the Welcome Reception Wed 12 September) and the Congress Banquet (Fri 14 September).

And to complete for now, here are the details of the topics and speakers who have been invited to present the Keynote Papers in the Scientific Program. Your papers will be invited for presentation in streams, for which the theme will reflect one of these Topics.

Keynote speakers:

1. Poultry Management and Disease control – Dr P. F. McMullin, UK
 2. Food-borne diseases and Public health – Dr. A. Hensel, Germany
 3. Poultry Production: Health and environmental protection – Dr J. L. Spencer, Canada
 4. Immunosuppressive diseases – Dr Cui Zhizhong, China Comparisons of various immunosuppressive viral infections for their interactions in immunosuppressive effects on vaccinations against AIV and NDV.
 5. Mycoplasma Houghton Lecture (Title: Who is smarter, the mycoplasma or the host?) – Dr A. H. Noormohammadi, Australia
 6. Bacterial Respiratory Diseases: Diagnosis and control – Dr P. J. Blackall, Australia
 7. Viral Diseases of Waterfowl – Dr Liu Xiufan, China
 8. Education and Training for avian veterinarians – Dr C. L. Hofacre, (USA)
 - 9 Enteric Diseases are we making progress? (Title: Current and future ways of detecting enteric and other viruses of poultry) – Dr D. Cavanagh, UK
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10. Turkey Diseases new challenges for veterinarian – Dr H. M. Hafez, Germany
 11. Marek’s disease: Yesterday, Today and Tomorrow – Dr R. L. Witter, USA
 12. Avian tumour viruses their diagnosis and control – Dr I. Davidson, Israel
 13. Avian Influenza globally – Dr D. E. Swayne, USA
 14. Avian Influenza in China – Dr Yu Kangzhen, China

Trevor Bagust
WVPA Bureau Member

What constitutes A CRITICAL NATIONAL NEED?

(The production of Australian vaccines in SPF eggs of non Australian origin)

George Arzey

The Australian Contingency Policy for specific pathogen free (SPF) chicken eggs requires that - *“non-Australian SPF eggs will only be considered if there is an inadequate supply of Australian SPF eggs to meet the production needs of essential veterinary vaccines, human therapeutic use and in vitro uses”*.

Several recent applications to invoke the contingency policy brought to the surface several questions including **what is essential from a national perspective?** According to the Macquarie Dictionary, Essential is defined as (1) Totally necessary (2) Indispensable.

Vaccines are produced to meet demands and therefore the first assumption is to equate the inability to meet the market demands with a critical need and invoke the contingency policy.

Is a demand equal to essential (or to indispensable)? In a society based on consumerism and free market it is easy to confuse the two. Is a potential critical shortage of a vaccine created by its use (demand) for a purpose for which it is not registered, an essential need?

If one or 2 mainstream Industry players use the bulk of the vaccine produced for one purpose to administer to flocks to counteract a problem not necessarily associated with the intended purpose of the vaccine, is it justified to argue that a potential shortage could be critical on a national scale and it is essential to use SPF eggs of non Australian origin to produce millions of doses to be used for a purpose other than the intended purpose of the vaccine?

Are one or 2 medium or small players enough to constitute a national need? If a sector of the Industry is using vaccine A where vaccine B could be used (and has been used for years before vaccine A became available) without undue harm and the same effectiveness, is it justified to argue that overseas SPF eggs are required for the production of a vaccine that is not essential for this sector?

It is possible to argue that a rationalisation of Industry practices for a short period of time may resolve any critical shortage created through the usage of a product where it is not essential to use it. (Rationalisation of Industry usage could be induced through the availability and judicious usage of a vaccine)

It is possible to argue that a rational technical assessment of the entire range of vaccines available for a specific purpose and judicious use of vaccines in periods of potential national shortage could alleviate the need for production of poultry vaccines in SPF eggs of non Australian origin.

It is possible to argue that if 2 vaccine manufacturers produce the same type of vaccine and one has ample Australian SPF eggs to meet the market requirements for this vaccine, the second vaccine manufacturer could channel the scarce Australian SPF eggs into the production of the vaccine that is exclusively produced by only one manufacturer. Is concern about the loss of market share, a national need for a vaccine to be produced in non Australian SPF eggs by a vaccine manufacturer?

A sector may use a vaccine only in response to the appearance of a specific disease in an area. This is usage of unpredictable pattern and magnitude. Should we consider that the need of a sector that may require the vaccine is largely unpredictable but traditionally of humble proportion when we debate the issue of critical national need?

If the entire anticipated annual production of a vaccine could meet only a small fraction of the national demand (or a State based demand) if an outbreak occurs, is it sustainable to consider the usage of SPF eggs of non Australian origin to produce this small fraction as a critical national need?

Should players in this sector ensure their potential limited supply by buying the vaccine and storing it for a rainy day when it is available rather than expecting the vaccine suppliers to pull the rabbit out of the hat if the disease appears and requires control measures?

Can the answer to any of the questions above illustrate that the production of Australian vaccines in non Australian SPF eggs is totally necessary or the vaccine is indispensable?

Any comments are welcome.

Minutes of OGM, Waipuna Hotel, Auckland 31 October 2006

Present: Peters Gray and Groves, Ben Wells Neil Cooper Kerry Mulqueen Julie Warner, Susan Bibby Aileen Vanderfeen Wayne Bradshaw John Reeves Kent Deitemeyer Bruce Remington Kim Critchely Viv Kite Peter Scott Margaret Sexton Trevor Bagust David Marks Clive Jackson

Apologies: Phil Ashby, Soy Rubite, Rod Jenner, Dinah Fry-Smith, Edla Arzey, Greg Underwood

Minutes of previous meeting: Accepted Peter Scott/David Marks

Matters Arising WPS Conference in Qld - Peter Groves to liaise with committee. AVPA will run a poultry health segment to be known as **AP6**. Peter Scott, Amir, Pat Blackall and the executive will be the scientific committee. Peter Scott will chase sponsorship

APSS meeting will be in Sydney in February 2007. AVPA will run a scientific meeting immediately following. The theme will be *Public Health*. Fort Dodge and Elanco have kindly offered to bring across overseas speakers for this meeting. Dander has carried a call for papers. AVPA will have a dinner on Wednesday night 14 February and Peter Groves will investigate venues possibly in the Botanic Gardens.

Australian Veterinary Association. Peter Groves reported that AVA now understand we will not hand over our AVPA funds to AVA. AVPA does not have sufficient AVA members to qualify as a SIG of AVA and Peter Groves flags to members that we may have to incorporate as an Association in our own right and become an independent advisory group to AVA

Beak Trim Policy. The AVPA policy on beak trimming is finalised and Peter Groves will take it to an AVA. policy meeting. Peter showed pictures of cannibalism which persuaded AVA to adopt our policy which is binding on AVA all SIGs. This matter is now resolved

Marek's Disease Conference - Townsville 2008. Steve Walkden-Brown will be asked to prepare a paper for this conference

TREASURER'S REPORT

Peter Gray reported that we are in good shape with approximately \$97,000 in cash assets.

Generous support from our sponsors has enabled the Auckland meeting to cover costs completely. This support is greatly appreciated by all members and the logos of sponsoring companies was shown at the meeting. A list of conference sponsors is attached to these minutes

Clive Jackson asked if we could spend some of our assets on a 2008 meeting

Treasurer's report was accepted Peter Gray/Trevor Bagust

Matters Arising. It was agreed that students would get free membership of AVPA which would give them Dander and members costs at scientific meetings

OTHER BUSINESS

AVPA expressed thanks to George Arzey for the tremendous effort in responding to the chicken meat IRA

Susan Bibby reported that four Vet students had completed a three week placement in industry and University of Melbourne being exposed to breeders, broilers turkeys, layers, feed milling and laboratory work. They have all written reports and are eligible for the \$1,000 scholarship payment.

WVPA membership costs us 20% of our AVPA membership. The value of this was discussed. A passionate defence of our continuing membership was raised by Trevor who is a Vice President of WVPA and actively involved on our behalf. Trevor pointed out that we should all shortly get a copy of the WVPA magazine *Aerosols*. There will be a WVPA meeting in Beijing in 2007.

Next Meeting

APSS is locked in. It was decided that a second meeting be held in 2007 in Adelaide. This meeting will be organised by Margaret Sexton, Kim Critchley and the Executive. The scientific committee will be Peter Scott, Trevor Bagust and the Executive

It was decided to meet in NZ again in 2009

Meeting closed at 1735 with thanks from the President

Ben Wells Hon Sec

Abstracts of Some Scientific Papers Presented at the AVPA Auckland Meeting

The New Zealand Experience with *Salmonella*

Vaccination

Julie Wagner, BVSc

Pacificvet Limited

Christchurch, New Zealand

The UK report on the Microbiological Safety of Foods issued in 1993 noted "the maintenance of salmonellas in the environment is by complex pathways, and rodents and wild birds may act as important reservoirs of infection." Given the density of the animal population in New Zealand and its history of salmonella epidemics in the large animal and wild bird populations, the New Zealand poultry industry has long understood the problem of *Salmonella* reservoirs. As a consequence, the New Zealand poultry industry became proactive and took steps to comprehensively combat *Salmonella* and became one of the first countries in the world to include *Salmonella* vaccination as another control tool along with HAACP, hygiene, biosecurity, and testing programmes. *Salmonella* control is effectively a 'numbers game' aiming to lower the level and eliminate the bacteria from the food chain. This paper reviews the experiences and the lessons learned on how attenuated *Salmonella* vaccine has been successfully used for *Salmonella* control in the poultry industry.

Housing temperature influences experimental infectious bronchitis

Rob McFarlane and Juan Carlos Lopez

Lincoln University

As part of a programme to learn about the effects of environmental change on the physiology of poultry, a trial studying housing temperature was undertaken. In it, broiler chickens of three weeks of age were housed in one of three temperature regimes (10°C, 20°C or 30°C). Shortly afterwards, all birds were experimentally infected (intra nasally) with an endemic strain of infectious bronchitis virus (IBV) and various outcomes measured.

Both temperature extremes were detrimental to the health of the broilers and caused reactions indicative of fear (tonic immobility). Severe respiratory signs were present in (only) the low temperature group. The presence of ascitis secondary to right ventricular failure followed pulmonary hypertension and was caused by the cold temperatures *per se* or, more likely, the superimposition of cold temperature on the IBV infection. However, prevalence of lesions at necropsy and mortality was highest in the high>low>moderate temperature groups. Lesions found in the high temperature group were due to temperature rather than IBV effects.

Both extremes of housing temperature were detrimental to the immune responses (both antibody and cell mediated) against IBV, when measured two weeks after experimental infection. This change in immunity may account for some of the pathology exhibited among treatment groups. The factors that bring about changes in immunity are unknown but corticosterone levels were elevated in the low temperature group and may have been contributory. Further experiments to elucidate the role of this hormone as an immune modulator, or indeed indicator of welfare status, are currently in progress.

Continuing Professional Education for Avian Veterinarians Online: Is this Desirable? Is it Feasible?

Trevor Bagust and Anthony Chamings,

University of Melbourne Faculty of Veterinary Science, Werribee VIC 3030 Australia

The poultry industry is the most rapidly growing agribusiness world- wide. On-going advances in the sciences and technology provide the underpinning needed to sustain the trends currently seen in this industry globally: more efficient production, productivity increases and improved processing of poultry products. Markets, the major force driving this industry, continue to increase with *per capita* consumption rises along with the volumes of poultry products being traded internationally. The **two major professional roles of avian veterinarians** in summary are to optimise (1) Avian health and welfare (2) Human health, in which the Key Concept is - *For any agroindustry to be successful, consumers must be able to trust that industry as 'the custodian of food safety'*.

How can veterinarians systematically develop the competencies that are needed to operate effectively in modern intensive poultry industries? It has long been a requirement for graduate practitioners- in all professions- to actively work to maintain and update their knowledge and competencies. Continuing Postgraduate Education (CPE) will be undertaken in several ways, but especially participation in professional specialist meetings and formal courses of study, either intensive workshop formats or by distance education. Internet-based technology, with its continually increasing capacities for electronic delivery of information and interactive communication world-wide, is now becoming a central platform by which professionals are able to participate in CPE.

During 1998-2004, the University of Melbourne developed a Master of Veterinary Studies (Avian Health) course of six learning Units, which was delivered by traditional ("face-to face") educational approaches. From early 2005, development of this MVS (Avian Health) coursework specifically for web-based delivery has been in progress at the University of Melbourne, with financial support from The Australian Poultry CRC. Screen layouts, lecture texts and practical exercises, designed with specific educational needs in mind, enabling successful self-paced learning through part-time study (so veterinarians can continue in their workplaces) have been developed, as have been the interactive systems for student feedback and formal assessment of their learning. Units #1 (*Production-Health Interactions*) and #2 (*Poultry Pathology and Diseases Diagnosis*) are being delivered during 2006. Completion qualifies for the formal Award of the Postgraduate Certificate (PGC) in Avian Health. Unit #3 (*Microbiology and Serology*) and Unit #4 (*Product Safety, Public Health & International Trade*) are now in production, in cooperation with international collaborators. With 2 other Units (*Production & Financial Analysis and Research Projects*), the 6 Units collectively make up the full course required for Awarding of the Masters level degree. Delivery of courses for both Award levels will commence in March 2008. The operational and learning features of **Avian Health Online™** will be demonstrated during this presentation. For more information and background, see <http://www.avianhealthonline.vet.unimelb.edu.au/>.

A full written paper was provided. The following is a Summary of Points included by the author in the paper:

- Develop a healthy applied knowledge of immunology and respect the immune system; it is a question of good veterinary ethics;
- Use health dividends to get off the treadmill - not just an excuse to push production and ramp up microbial tension;
- Sustainable animal production requires more husbandry; less 'sandlers';
- Use vaccines for ubiquitous and endemic disease; develop an applied understanding of cell and antibody mediated responses and how these relate (or don't relate) to vaccine protection;
- Upskill husbandry levels to control production-related disease;
- Food safety vaccination for preventing vertical and horizontal transmission (but always in conjunction with other robust controls, HAACP, biosecurity, rodent control, etc.



Happy delegates at the AVPA Meeting held at the Waipuna Hotel, Auckland NZ.

Reader Feedback

The following correspondence was received by the Hon Sec from AVPA Life Member, Harvey Langford.

Hello Ben Wells,

I expect you have forgotten me, but, no matter. Late of Upjohn and, before then, Coopers.

Some years ago someone was good enough to put my name forward as a Life Member thus joining a number of luminaries all of whom had forgotten more about the poultry industry than I ever knew. Nevertheless I appreciated the compliment as I had always held the AVPA and its works in very high regard and supported the industry whenever I could. There is much ignorance about the industry in the general population.

However, in addition to writing to show my appreciation of my continued membership I wished to comment specifically about George Arzey's contribution on AI in the last Dander. What an excellent review and a breath of fresh air on the often excited stories about AI in the media. It's a pity that it will be seen by such a limited readership.

With best seasonal wishes to you and to the AVPA,

Harvey Langford.

Ron Thornton

A full written paper was provided. The following are selected sections from the paper:

New Zealand's avian influenza status

New Zealand is free of highly pathogenic avian influenza. We know this because we have never had an outbreak of disease during more than 30 years of excellent passive surveillance and because we have never isolated highly pathogenic virus from many thousands of samples taken from wild and farmed birds. We do, however, have a wide range of lowly pathogenic avian influenza viruses, including H5 and H7 types, in wild birds. These wild bird infections are a low risk to commercial birds and they are not reportable to the OIE.

Drivers of surveillance

New Zealand's avian influenza surveillance programme has three main drivers: (1) the OIE requires more stringent reporting of disease status underpinned by surveys in commercial poultry; (2) New Zealand is part of a global network for early detection and reporting of highly pathogenic avian influenza; (3) MAF is expected, in the Ministry of Health pandemic preparedness plan, to be identifying and mitigating risk pathways and conducting surveillance. All this is driven by fears of an H5N1 influenza pandemic.

Future activities

Surveillance is planned this year in wild birds, free range layers, pullet rearing farms and farmed turkeys. Surveillance in out-years will include farmed anseriforms, ratites, game birds and back yard flocks/fancy birds. Survey data will be used along with risk assessments to fulfil New Zealand avian influenza surveillance objectives of demonstrating or achieving freedom from highly pathogenic avian influenza virus and freedom from notifiable avian influenza virus (all H5/H7) in galliforms.

Postgraduate Certificate in Avian Health Online



Veterinary Postgraduate Scholarships (2 available)

The Australian Poultry CRC invites applications from graduates in Veterinary Science for the award of two scholarships valued at \$10,000 each to cover tuition fees for a Postgraduate Certificate in Avian Health from the University of Melbourne. Applicants must be Australian citizens or permanent residents. The Certificate is a two-semester external coursework program delivered via the internet and commencing in March 2007.

Scholarship applicants will have enrolled as candidates for the Postgraduate Certificate at the University of Melbourne. The closing date for scholarships is 20th February 2007.

Further details about the course are available at www.avianhealthonline.vet.unimelb.edu.au or from:

Dr Trevor Bagust (phone) 03 9731 2011,
(email) trevorjb@unimelb.edu.au

Dr Anthony Chamings (phone) 03 9731 2012,
(email) chamings@unimelb.edu.au

Information about the scholarship including application guidelines and selection criteria can be obtained at www.poultrycrc.com.au or from the Education Coordinator:

Dr Julie Roberts (phone) 02 6773 2632,
(email) jroberts@poultrycrc.com.au

Tentative Programme for AVPA Conference, Sydney 14th -15th February 2007

Wed. 14 th February		
Morning	Shared Session with APSS on Avian Influenza	
12:30-1:30	Lunch	
1:30-2:30	The case against H5N1 human pandemic- a chook perspective	G Arzey
2:30-3:00	Afternoon Tea	
3:00-3:20	History of AVPA	P Groves
3:20-4:00	AVA & Advantages of Membership	K Seksel (AVA President)
4:00-4:20	Break	
4:20-6:00	OGM/AGM	
	Dinner	
Thursday 15 th February		
8:30-10:00	Keynote Speaker- Wet litter -a review	S Collett
10:00-10:30	Morning Tea	
10:30-10:50	Enteric Microbial Community Profiling	J Chin
10:50-11:10	Salmonella- 'methods ain't methods'	T Pavic
11:10-11:30	Salmonella in Layer Flocks in NSW	G Arzey
11:30-11:50	Cleaning Principles related to Salmonella	C Kidd
11:50-12:00	Discussion	
12:00-1:00	Lunch	
1:00-1:20	Sik Longlong Kakaruk- or how not to carry out a diagnosis	B Remington
1:20-1:50	Chlamydiosis	TBA
1:50-2:10	What's happened to Mareks Disease?	TBA
2:10-2:30	Pathogenicity Testing for Mareks Disease	TBA
2:30-3:00	Afternoon Tea	
3:00- 4:00	Postcards from OS Poultry Industry- recently returned vet's perspective	C Morrow TBA