

FOOD focus

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New Zealand hosts international food standards meeting

It is possible to please all of the people all of the time, according to the results of the eighth session of the Joint FAO/WHO Food Standards Programme Codex Committee on Meat and Poultry Hygiene (CCMPH).

The latest session, held at the Duxton Hotel in Wellington from 18–22 February, was attended by 138 participants from 37 member countries and nine international organisations. Some countries unable to attend also sent comments to be included in the meeting.

MAF Food Assurance Authority Group Director Dr Andrew McKenzie chaired the meeting, the terms of reference of which were to establish a set of worldwide standards and/or codes of practice appropriate for meat and poultry hygiene.



MAF Food Programme Manager Steve Hathaway plays a key role as consultant to the Codex Alimentarius Commission.

The CCMPH is part of the Codex Alimentarius Commission – an international agency set up by the Food and Agricultural Organisation (FAO) and the World Health Organisation (WHO).

Codex aims to protect the health of consumers and promote fair practices in the food trade by setting international food standards for commodities such as fruit, fish, meat and dairy production as well as guidelines for related processes. These guidelines include food safety risk analysis, labelling, inspection and certification.

Andrew says the Codex committee on meat and poultry hygiene is responsible for setting world wide standards for meat and poultry hygiene and, as a country heavily reliant on trade in food, New Zealand strongly supports Codex's role in promoting sound, science based international standards for consumer health protection and fair trade.



MAF Food Assurance Authority Group Director Dr Andrew McKenzie (left) chaired a successful meeting of the Codex Committee on Meat and Poultry Hygiene in Wellington in February this year.

He says while the new Animal Products Act (APA) approach is internationally recognised, the conference provided an opportunity to further discuss benefits and opportunities of the risk based approach, in conjunction with Codex, and to listen to comments from other countries about philosophies in relation to meat hygiene.

“New Zealand has been one of the countries leading the way towards a more flexible, outcome-focused meat hygiene system rather than concentrating on the detailed and prescriptive process-driven approach favoured previously.”

Andrew says the meeting was held with the purpose of creating an international code of meat hygiene (now including poultry). “Common sense indicated where we wanted to end up and we tried to not lose sight of that outcome.

“Because the code is so huge, and there was an immense amount of work to be got through, we worked between meetings to ensure modified drafts

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A prudent course of antibiotics

There is no doubt that there is growing resistance to antibiotics in bacteria that cause diseases in humans. This is a world-wide phenomenon. And there is no doubt that this resistance is directly linked to the widespread use of antimicrobial (or antibiotic) treatments.

What isn't clear is the role of the antibiotics used in food animals. While that is yet to be resolved, MAF's Food Assurance Authority is taking a prudent line, balancing the needs of animal health and welfare with the need to manage the risk of causing antibiotic resistance in human pathogens.

In 1999, MAF and the Animal Remedies Board adopted prudent use guidelines to help minimise the overuse of antibiotics that could compromise human health. All antibiotics – human and animal – are being reviewed by the appropriate authorities. The focus in veterinary medicine has been on in-feed antibiotics, but all are being reviewed.

From 1 July, all 'human' antibiotics also used in veterinary medicine will be prescription only, including those previously sold over the counter. The rules of use for many products will be tightened, and some products will eventually disappear altogether.

Reviewing each drug is not a simple task. The array of antibiotics licensed for animal health is extensive. The various 'families' differ widely in their chemistry, their use patterns and their significance in animal health. Because the risk factors are so different – for example some animal antibiotics such as the ionophores aren't used in human medicine – the risk management is being tailored to suit the identified hazards.



The MAF Food Agricultural Compounds and Veterinary Medicines Group commissioned an expert panel to review antibiotics used in agriculture. The ACVM Group have 'stratified' the compounds into six different groups, according to potential risk. Within each classification, there are strict veterinary guidelines. For example, some antibiotics used in human medicine and associated with increased resistance, will no longer be licensed for use as growth promotants.

International Food Standards meeting: continued from front page

were ready for the committee to examine. This background work was instrumental in preventing hold-ups and achieving the excellent progress we enjoyed."

Andrew says the meeting discussed the WTO Sanitary and Phytosanitary (SPS) Agreement Code that will make a difference to international trade.

"There are five headings to the SPS code – everything must be science based and include: science based risk assessment, consistency, transparency, equivalency and a recognition of the concept of regionalisation."

He says the SPS Code was intended to replace the current Recommended International Code of Hygienic Practice for Fresh Meat, Game, Ante-Mortem and Post Mortem Inspection of Slaughter

Antibiotic use in New Zealand

Relative to other countries, use of antibiotics in New Zealand food animals is low. Where they are used, the treatment is usually therapeutic – short-term treatments to deal with outbreaks of disease.

Antibiotics are used more routinely in the pig and poultry industries where, because animals are housed relatively densely, infectious disease management is a bigger issue. In this context they are sometimes used prophylactically, where treatment is for a short period in anticipation of a high risk period. Weaning in piggeries is one such time when prophylactic treatments are used.

Of more concern is the routine use of antibiotics as growth promoters in pork and poultry operations. This is done throughout the animal's life by adding small quantities of antibiotic to feed or water. There is concern that the length of exposure could lead to resistant strains developing.

ACVM Group Director Debbie Morris says this change caused some initial concerns among farmers anxious to keep access to treatments such as penicillin, used for emergency treatments during lambing.

"While veterinarians will now need to take a more active role in the use of antibiotics, the rules are still flexible enough to ensure animal health and welfare won't be compromised," she says.

"There will be a transition period of up to 24 months to allow old stocks to be used up. Certainly animal owners won't be suddenly deprived of medicines they need to keep their animals healthy.

"We're taking a prudent approach. Not all antibiotics used for animals are significant in human health, but we're reviewing all of them anyway. We won't see any drastic changes, but we will be managing the risks much more effectively and we'll be gathering much better information about actual patterns of use."

The New Zealand Veterinary Association has welcomed the moves. NZVA Chief Executive Dr Murray Gibb says the New Zealand approach is "probably ahead of anything proposed elsewhere in the world".

He says it is a rational preventative approach without resorting to drastic measures such as blanket bans on individual antimicrobials.

Animals and for Ante-Mortem and Post-Mortem Judgement of Slaughter Animals and Meat.

"Codex is an international norm and an extremely important tool used to settle such things as trade disputes – it is also used widely by countries to create standards and codes that reflect their law. Obviously each country tends to favour those principles which best reflect their own law and it takes some time to work through these."

Andrew says the CCMPH meeting generated an air of cooperation. "Everyone seemed happy, with the outcomes. Most countries understood the need for tolerance in order to progress a science-based approach to the future."

The ninth session of the CCMPH is tentatively scheduled for 17-21 February 2003 in Wellington, subject to further consultations between the Codex and New Zealand Secretariats.

BSE Liaison Group informs key groups

In 2000, MAF Food set up a Liaison Group to ensure that all groups affected by the work being done on BSE issues were kept informed of progress. The MAF BSE Liaison Group meets when needed and brings together the key players in New Zealand's defensive efforts against the disease.

The group involves regulators, including MAF Biosecurity, MAF Food, the Ministries of Foreign Affairs and Trade, Research Science and Technology and Health, as well as consumers, industry groups such as the Meat Industry Association and Federated Farmers, pet food manufacturers, animal health laboratories, veterinarians, academics, scientists, farmers, importers and retailers.

MAF BSE Programme Coordinator, Mirzet Sabirovic, says early in 2001 MAF and the BSE Liaison Group conducted an analysis to reconsider all of the possible pathways by which BSE might enter this country and ways it could be spread among cattle should it ever be introduced. The analysis confirmed that entry points into

New Zealand had been closed for many years, and that border controls remained strong.

“However, this is an area where our knowledge is limited and science cannot supply all of the answers yet,” says Mirzet. “We need to stay in close touch with the work being done internationally and be prepared to respond to new information as it comes to hand. We also need good communication links with the groups involved and the BSE Liaison Group is playing a key role in this regard.

“While no system is perfect, especially in an area of uncertainty such as BSE, I believe New Zealand has robust systems in place to prevent the introduction or spread of the disease.

“With good strategic management to back this up, and the strong communication links the BSE Liaison Group is providing, we are well placed to deal effectively with the potential BSE risks to our consumers and economy.”

Mid-year launch for new authority

As from 1 July 2002 a new organisation, the New Zealand Food Safety Authority (NZFSA), will replace the existing regime currently administered by two separate organisations: the Ministry of Health (MoH) and the Ministry of Agriculture and Forestry (MAF).

A new ministerial portfolio has been created to take responsibility for food safety and Hon Annette King has been appointed as Minister-designate.

Bringing the two regimes together will provide a stronger and more coordinated approach to food safety within New Zealand.

“New Zealand needs a food regulatory programme that will meet the challenges of improving consumer protection while at the same time ensuring the continued well-being of our vital trade in food and food-related products,” says Andrew McKenzie, Group Director MAF Food.

“We are moving into an era of changing and increasing risks in food. New organisms such as BSE are emerging; we are eating a wider range of foods from more countries; we are eating out more; eating more ready to eat foods and people want to spend less time in the kitchen than they did in the past.”

Andrew says the NZFSA will bring many benefits with one of the most obvious being a reduction in duplication of services. “A single authority will allow the management of food-related risks from farm gate to plate, with less opportunity for inconsistencies to occur.”

He says the pooling of resources of both regulatory agencies will ensure more effective use of scarce expertise in some specialist areas such as microbiology, risk assessment and toxicology. There will also be a consistent approach to regulation of all food production, whether for export or for sale on the domestic market.

“Food and food-generated products continue to generate nearly \$14 billion in export earnings per year – more than half our total exports. Looking after consumers in New Zealand and providing assurances internationally that our food exports continue to meet their expectations of safety will be priorities for the new authority.

“Bringing the two groups together best positions New Zealand to meet the changing risks and consumer demands in an area that impacts so importantly on New Zealanders' health and economic well-being.”

EC official visits New Zealand

During early February, Herman Versteijlen, head of the Milk and Milk Products Unit in DG Agriculture of the European Commission visited New Zealand.

He was here for a first hand look at the New Zealand dairy industry and MAF's regulatory programme.

Mr Versteijlen had an intensive 10 day trip. He visited the NZMP sites at Kauri, Whareroa and Clandeboye, had meetings with Fonterra, Westland Milk Products, MAF and Ministry of Foreign Affairs and

Trade staff. Mr Versteijlen also visited three dairy farms and climbed on board an NZMP milk tanker to observe milk collection.

He was impressed with the size the manufacturing plants that he saw. “They are very large in worldwide terms. For me, it [the trip] was also a relatively intensive crash course in dairy manufacturing in one of the countries which is the most important in terms of quantities relative to size,” he said.

Key pest control chemical under review

It's been used as a pest control for more than a generation, but despite its long track record and the millions of possums and rabbits it has killed, the use of 1080 poison in this country is coming under increasing scrutiny.

Public acceptance of widespread pesticide use has been less forthcoming in recent years, and 1080 is no exception. Opposition touches on a range of issues, but can be most intense when it's to be used anywhere near population centres.

While most New Zealanders seem to support the primary objective of 1080 use – possum destruction for environmental protection and control of bovine tuberculosis – concerns are nonetheless expressed. They tend to focus around:

- by-kill of other wild species, especially deer and birds
- possible accidental poisoning of farm livestock
- possible contamination of waterways
- possible entry of the poison into the human food chain
- accidental poisoning of highly susceptible companion animals, especially dogs.

These and other identified risks are routinely monitored and have been intensively researched over the years. While no significant

problems have been identified, the use of 1080 in New Zealand is to be reviewed for the first time since its initial registration in 1964.

The review will be carried out by the Environmental Risk Management Authority (ERMA) under the Hazardous Substances and New Organisms (HSNO) Act. The review will be the first of its kind under the new legislation.

It has been initiated by the Animal Health Board (AHB) and Department of Conservation (DoC). Each is a major user of 1080 poison for possum control.

The AHB targets possums and other disease vectors such as ferrets and stoats, to help reduce the spread of bovine tuberculosis to deer and cattle. Possum control is a cornerstone of the recently released national pest management strategy, which aims to achieve Tb freedom in New Zealand herds by 2013.

DoC also uses 1080 to target possums in the conservation estate, to help reduce the pest's serious impact on the forest canopy and on native birds and invertebrates.

The application for a review is being prepared and will be lodged next year.

Debbie Morris, Director of MAF Food's Agricultural Compounds and Veterinary Medicines Group, says the chemical was first registered by MAF as a pesticide in 1964. "Registration takes into account factors like public health, the environment, animal welfare, trade and biosecurity.

"Use of 1080 has increased considerably since it was introduced," she says. "There has been no significant data produced that would change our views on its safety, but considering that it's been nearly 40 years since it was registered and there could have been changes in the way it is used, a reassessment of the risks and benefits is appropriate."

Debbie says MAF's view is that 1080 can be safely used provided it is done so within the specified guidelines.

"We will be watching the review with interest."

1080 fact file

- 1080 is sodium monofluoroacetate, a naturally occurring plant toxin found in more than 40 species. It evolved as a defence for plants against browsing animals.
- It is used for pest control in Australia, the United States, Mexico, Japan and Israel as well as New Zealand.
- Use in overseas countries is often restricted because of the danger that native mammals will be accidentally poisoned. Because New Zealand has no native mammals, apart from two small bat species, this is less of an issue here.
- Its toxicity varies widely between species. Dogs are the most susceptible, followed by target species such as possums and rabbits.
- Birds are more resistant to 1080 than most mammals. They can be poisoned by 1080 but changes in the preparation of baits have helped reduce bird deaths.
- Humans can be poisoned by 1080, although there has never been a recorded death from the poison in New Zealand. There is no antidote.
- A person would need to eat at least 100g of the carrot baits used in a poison drop for possums, to receive a fatal dose.
- To receive a fatal dose a human would have to drink, in one sitting, over 5000 litres of water from a watercourse directly contaminated during a properly carried out poison drop.
- No traces of 1080 have ever been detected in New Zealand reticulated water supplies.
- Livestock can be poisoned by eating poisoned baits. To be affected by the poison, a human would have to eat, in one sitting, at least 37kg of meat from a sheep that died of 1080 poisoning.
- Where a sub-lethal dose of 1080 is taken by an animal, the poison is completely excreted within a few days.
- 1080 is not cumulative like other poisons such as organophosphates. It is highly water soluble and is broken down by micro-organisms in soil and water.
- It is very persistent in the carcasses of dead poisoned animals. A dog that eats a possum or rabbit poisoned by 1080 is likely to be poisoned itself.

Testing for 1080 in food

Since MAF residue testing in meat for the active chemical in 1080 began in 1998, there have been two instances where traces have been detected. Both occurred in 1998 and involved feral deer. In one case, it is believed a carcass had been directly contaminated by the chemical during transport. Debbie Morris says procedures have been tightened up since then to prevent a recurrence.

"The maximum residue limit for the chemical is set at the limit of detection, which is 0.001 parts per million."

Research watch: *Salmonella* Brandenburg research update to be presented

The findings to date from a *Salmonella* Risk Assessment Project will be presented at a public meeting on 10 May at the Invermay Agricultural Centre, Mosgiel.

John Bassett of MAF Food says latest findings at this mid point in the study will be presented by the leaders of the various groups working on *Salmonella* Brandenburg, as part of the risk assessment of *Salmonella* in sheep meat.

“We focused on *S. Brandenburg* because of the significant effect it is having on livestock and people in southern New Zealand. The project aims to identify what the risk is to consumers from eating sheep meat, but in doing so gathers information from the farm right through to the consumer. We want to present our findings so far back to the people affected, and discuss how best to use that information while we complete the risk assessment.”

The Ministry of Health, Massey University, AgResearch and ESR as well as Meat New Zealand, the meat industry, veterinarians, farmers, and animal remedies industry are all involved in the project.

“Massey University has carried out research on farms to look at the differences between those sheep that have contracted *S. Brandenburg* and those that haven’t. AgResearch and ESR have been studying the presence and amount of *Salmonella* found at the various stages in the production of meat from carcasses, from

slaughter to the retail level. ESR is also looking at the risk factors that occur more frequently in those people who contract salmonellosis,” John explains.

Key findings so far include:

- establishing the use of strip grazing and back fencing is a significant risk factor on farms
- generally there appears to be very little *Salmonella* associated with sheep meat
- levels of *S. Brandenburg* drop to almost zero throughout the processing and storage of meat.

At this stage there has been no indication that sheep meat plays a significant role in transmitting this particular strain of *Salmonella*.

John says the purpose of the 10 May public meeting at Invermay will be to present the research results gathered to date and to outline areas where research is ongoing.

“We have found out a lot about what is happening and have some useful results to present at the meeting. We will also reiterate the aims of the project and discuss how results should best be applied, for example through codes of practice.”

If you are interested in attending please contact:

John Bassett, MAF Food, phone 04 474 4192, bassettj@maf.govt.nz



The gloves are back on!

Chain gloves are de rigeur, as are Kevlar® fabric gloves, latex or cotton – in primary slaughter premises anyway.

A MAF Food Programme Development project carried out in three New Zealand meat processing premises has closely examined microbiological contamination of bare hands and protective cut-resistant gloves in a variety of situations.

The objective of the study was to determine whether or not the use of selected protective gloves, prior to post-mortem inspection, adversely affects the hygienic slaughter and dressing of pig, beef and sheep meat.

Steve Hathaway, Director (Programme Development), says concerns regarding the effectiveness of cleaning and sanitation procedures for mesh gloves and cross-contamination, through material entrapped in the mesh, has historically resulted in their prohibition from use prior to inspection. However these concerns have never been scientifically evaluated, Steve says.

“The use of protective gloves such as chain mesh, latex and Kevlar® has become important as concerns mount over the unacceptable rate of knife-cut injuries, the frequent occurrence of skin disorders such as dermatitis and eczema in the slaughterhouse environment, and occupational transmission of zoonotic diseases such as leptospirosis.



“The study has demonstrated that the use of protective gloves does not adversely affect the hygiene of fresh meat, with the level of microbiological contamination on chain-mesh or Kevlar® protective cut-resistance gloves being no greater than on bare hands.

Further, gloves subject to normal cleaning requirements do not transfer more contamination to carcasses than hands.”

Steve says with world-wide approaches to food safety rapidly moving toward an environment based on risk management, equivalence arrangements between countries enable the use of protective gloves in New Zealand as long as they are used in a hygienic manner.

Meet our people: Carol Barnao: Programme Manager (Standards and Assurances)

Carol Barnao's schedule as MAF Programme Manager (Standards and Assurances) Dairy and Plant Products is a busy one involving a good deal of international travel, but she quickly dispels any suggestion of glamour attached to her globe trotting.

"There is nothing very relaxing about the sort of travelling we are required to do – most of it involves hard work and long hours and I am always pleased to get back home."

Carol rejoined MAF in June 1998 as National Manager, Technical Standards, after a spell doing consultancy work. But her association with MAF and the food industry goes back more than 20 years.

Her food industry career began in the quality assurance section of the Gear Meat Company in Petone. She shifted from there to the MAF Dairy Division Laboratory.

Since then, Carol's technical roles within the New Zealand Dairy Board have included involvement with Codex and the International Dairy Federation activities, work on the development and delivery of infant formula and nutritional products to meet the expanding Asian markets, and regulatory policy work.

In her current role in MAF as Programme Manager (Standards and Assurances) Dairy and Plant Products she is responsible for a team of four in Wellington and a further ten team members in the Dairy Certification Group in Auckland.

She manages the team developing regulatory standards for dairy products and providing assurances to consumers and importing country competent authorities on the safety, wholesomeness and truthful labelling of New Zealand dairy products.



Carol Barnao.

"We have been working under the old Dairy Industry Act together with some reasonably modern standards and now are moving into the Animal Products Act (APA) era. It is always a big challenge to move from one area of legislation to another. While being careful not to re-invent the wheel, we are mindful of the fact that we are actually working under different legislation.

"My team develops MAF Dairy Standards to meet the required outcome of regulations. They also provide assurances in the form of certification and are involved in establishing Memoranda of Understanding (MOUs) and agreements in the standards area. We take part in discussions and negotiations for trade access – smoothing the way in what can be a difficult and drawn out process.

"This programme ties into the APA. It looks at the overseas requirement for more transparency in international trade rules, and includes the further development of an electronic certification system expected to roll out completely in the next twelve months."

Quite apart from a busy work schedule Carol has other important commitments in her life.

She lives in Lower Hutt with husband Salve, and their two busy teenagers, Lauren (16) and Anthony (14).

When she is not being a teenagers' chauffeur, or standing on the side of a badminton court or cricket field she likes to take time out to just relax.

"When my spare time is not so committed I have plans to revive old hobbies or adopt new ones but, in the meanwhile, my idea of bliss is a good book accompanied by an equally good glass of wine."

Official organic assurance programme

MAF's Official Organic Assurance Programme is well on the way to progressing through the implementation stage. Food Focus readers may recall the May 2000 article introducing the programme that will provide simplified market access for New Zealand's organic products exported to the EU.

The programme was necessitated by an EU regulation, introduced in 1991. It requires that by 2005 all organic produce imported into the EU from third countries be accompanied by assurances from the Government's competent authority.

Kay Shapland, MAF Food's National Manager of Organics and Plant Products says that the progress is pleasing. "Inevitably, there

have been delays in the implementation of the programme. However, to date 34 exporters have registered to participate. We are nearly at the stage of recognising Third Party Agencies, and finalising the certificate issue process," Kay says.

Another positive development of the programme has been to extend its scope to include the United States and Japan. A visit to the United States in early May will further New Zealand's application for equivalence with the United States Department of Agriculture. Negotiations with Japan's MAFF will commence later this year.

For more information visit our website:

www.maf.govt.nz/food/safe/organics/index.htm