



## Welcome

Welcome back to Food Focus! This is the first issue since late 1998 and marks a timely return to a regular quarterly newsletter. Why the pause? The new logo in the top corner

of this page provides a clue. Last year it had been intended to set up a Food Assurance Authority within MAF, integrating the food safety functions of MAF and the Ministry of Health. At the last minute, hiccups in the legislative process meant this was delayed but the former MAF Reg was split into two

separate groups, the MAF Food Assurance Authority (MAF Food) and MAF Biosecurity Authority. Government is still planning on an integrated food agency although details are yet to be finalised, but our work continues and that includes communicating with stakeholders.

In this issue, we've some catching up to do. Among the news is a look at the work being done to harmonise the regulatory systems of MAF and the Ministry of Health. We update the implementation of the Animal Products Act and what it means for industry, and in Research Watch we look at the challenges involved in determining an "appropriate level of protection".

## Singing the same tune

Like the traveller crossing international borders, food products moving along the value chain to the consumer's plate must navigate a series of jurisdictions: different Acts and regulations, different organisations enforcing them.

While the various pieces of legislation affecting food safety have differing requirements at present, it is possible to harmonise the way they are applied.

There is a fundamental shift going on, in the way that food safety is assured. The "command and control model" focused on the "how". The new regulatory regime shifts the emphasis to required outcomes – food that is delivered "fit for purpose" in both New Zealand and overseas markets. A generic risk-based approach to food safety and market access is what makes this model work. It is now established government policy.

Why the shift? There are plenty of reasons, says MAF Food Group Director, Andrew McKenzie, but one of the most compelling is being able to respond to change.

"The classic command and control legislation becomes obsolete the moment the ink is dry," Andrew explains.

"Responding to changes in the food safety

environment – a new technology for example – often required a change to the relevant Act or regulation. Under the new regulatory regime, the legislation sets a robust framework, but leaves it to industry to design verifiable, risk-based management programmes.

"This way, industries can respond quickly to new challenges such as the emergence of a new pathogen. They can also respond quickly to new market opportunities without waiting for legislative machinery to catch up. The key for industry is to develop risk management programmes that deliver the required safety outcomes."

The new regulatory regime depends on a three-way partnership between the regulators – MAF and the Ministry of Health (MoH) – consumers and industry. Industry is required to develop risk-based management plans to produce food and related products that are fit for purpose.

These plans are based on the Hazard Analysis Critical Control Point (HACCP) approach and they need to be auditable by an independent verifier.

Fortunately this won't require the reinvention of the food safety wheel and it shouldn't place an unfair compliance burden

on industry. In fact a generic approach should enable consistency and flexibility throughout the food production chain.

Assurance programmes aimed at food safety and market access revolve around several key pieces of legislation. Each provides for plans to manage the risks associated with biological, chemical or physical hazards in food.

MAF Food administers the Animal Products

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#### Quality Quote

"Food is not just about eating. To me it's about passing the potatoes around the table, ripping up some bread, licking my fingers, getting tipsy and enjoying the company of good friends or family. Pass us the mustard, Dad."

The Naked Chef, Jamie Oliver

# RESEARCH WATCH: How do we set the safety bar?

There are a couple of reasons why the food safety business is so important to New Zealanders. First, food products earn about \$11 billion of our annual export revenue. And secondly, we are committed to a free trade philosophy that makes us very accountable for the way we manage consumer safety and market access.

It's an obligation that crosses international boundaries. Our food safety programme must be acceptable both domestically and internationally. Our market access depends on this.

New Zealand's response to this obligation, says Steve Hathaway, has been to develop a new way of doing business. Steve is MAF Food's Director, Programme Development.

## Generic framework

"Ours is a three-tiered approach," Steve explains. "At the highest level Government is building a generic risk management framework. The aim here is for a seamless regulatory regime that requires risk-based management programmes across all jurisdictions.

"At the next level we are developing legislation to support this risk-based approach. The Animal Products Act marks the first stage of this reform process. It's significant because it is the first time HACCP-based risk management programmes have been required by law. Reform of legislation covering dairy and other food products will begin soon."

The third level – the business end of food safety – is the development of risk-based sanitary measures that achieve an "appropriate level of protection". The concept of an appropriate level of protection to achieve consumer safety is central to the World Trade Organisation Sanitary and Phytosanitary Agreement.

Protecting human health is the most important driver of decisions about appropriate level of protection, but it's not the only consideration, Steve says. "Decision makers also have to allow for factors such as technological feasibility and social or economic concerns."

## Sound science

Another important principle in the development of sanitary measures is that they are based on sound science. But science can't always deliver the quantitative data to make genuine risk-based decisions.

This is especially so in the case of microbiological hazards in food. "Getting international consensus on numerical values in this area is difficult," Steve concedes. Nonetheless, many countries are now developing quantitative risk analyses for microbiological hazards. This is leading to a 'velvet revolution' in the way regulators are setting food safety standards.

For chemical hazards the situation is very different, and decisions about appropriate levels of protection can be based on detailed quantitative data.

Steve says most countries, including New Zealand, currently build their sanitary measures for microbiological hazards on good hygienic practice (GHP). "Where quantitative data is not available, risk evaluation focuses on hazard analysis," he says.

## Lowest practicable level

"Qualitative judgements have to be based on the nature of the hazard. For example, it's well known that faecal contamination can transmit pathogens to humans via meat products. Achieving an appropriate level of protection for consumers is done indirectly by reducing the level of all hazards to the lowest practicable level."

That is not to say science won't eventually support a quantitative basis for decisions on appropriate level of protection for microbiological hazards in food. As risk assessment information becomes available on particular pathogens such as *Salmonella* and *E.coli* O157:H7, decisions on appropriate level of protection and risk-based food safety objectives will be taken, Steve says.

"Baseline surveys of carcasses and fresh packed meat, and interim microbiological food safety objectives have been established by MAF Food and industry."

One successful application of quantitative risk assessment to food safety measures has been the case of *Taenia saginata* in cattle. This internal parasite affects cattle and humans.

A quantitative risk assessment revealed that the intensive post-mortem inspection techniques traditionally used for *T. saginata* cysts in slaughtered cattle yielded a negligible benefit to human health protection. In fact there was evidence that the "hands-on" inspection techniques actually increased the risk of cross contaminating the carcass with microbiological pathogens.

## Conservative response

The upshot will be the removal of the requirement to routinely inspect the cattle's masseter muscles, although other routine procedures will be maintained. "This is a very conservative response," Steve says. "Health outcomes are not affected, but the change has reduced compliance costs and enhanced food safety in other areas."

This example is a reminder that all risk management is based on consideration of a continuum of risks ranging from intolerable levels of risk requiring major constraints, through to negligible levels of risk requiring no risk management action.

"Determining an appropriate level of protection is part of a complex process that balances protection of human health against efficiency and technological feasibility. The views of consumers and industry stakeholders have an important bearing on the final decisions we must make," Steve concludes.

## Jordanians to see NZ food programmes first hand

Four officials from the Jordanian Ministries of Health, Agriculture and Trade and Industry are in New Zealand this month on a training visit. They are looking at food production facilities and our inspection and certification systems. Jordan imported \$36 million worth of New Zealand products last year, and virtually all of this is meat, dairy, seafood and horticultural produce. Mandatory inspection requirements for all imported food into Jordan sometimes causes problems.

It's hoped that the visit could smooth the way for acceptance of New Zealand inspection standards. This would help reduce delays caused by import inspections and avoid unnecessary rejections of imported produce.

## Certification for EU going on line

Verification of dairy products to meet EU quota requirements is taking a leap into the 21<sup>st</sup> century. MAF Food's Dairy and Plant Products group is developing an electronic system for certifying volumes of cheese and butter.



The Inward Monitoring Arrangement (IMA) project will combine three functions into one: verification, certification and volume reconciliation.

The new system goes on line on 1 July, and will be one of the first of its kind. New Zealand is leading the way in using electronic data systems for export certification, and the IMA project promises to deliver a much faster and more streamlined process.

The IMA certification focuses on trade issues, and will provide EU officials with government assurances about the volumes of butter and cheese being imported. The verification is based around measurement of fat content, weight, and age of product. It will complement the food safety assurances system for dairy products already administered by MAF.

The project marks the transfer of responsibility for volume certification from the New Zealand Dairy Board to MAF. This transfer is being co-sponsored by the two organisations, and is made at the request of the European Commission.

Project manager Carol Barnao says the IMA project could be a model for efficiencies in other areas of export certification.

## Mark your diaries!

MAF Food is in the early planning phase for two exciting food industry events.

### 15, 16 and 17 August 2000

MAF Food, together with the Food Safety Inspection Service of the United States Department of Agriculture, will present a conference in Auckland entitled "Food Safety Initiatives Influencing Public Health and Trade".

Planning at this stage is for three sessions. One dealing with New Zealand "domestic" issues; another relating to the international food safety environment and one specifically relating to the United States market. The latter two sessions will be conducted by senior officials from US regulatory authorities, together with MAF Food representatives.

### Early September 2000

MAF Food has invited representatives from Consumers International to visit New Zealand to discuss how consumers' are represented and their views are incorporated into food safety policies and standards in other countries. We plan to invite New Zealand consumer, industry and Government groups to an event designed to provide an opportunity to engage in a discussion on this topic.

Full details of venues, times and dates will be provided for both events soon.

## Meet our People



Roger Cook, National Manager Microbiology

When Roger Cook gained his PhD on the microbiology of urogenital tract diseases from the University of Otago, he didn't expect his microbiological expertise would one day play a key role in access negotiations for New Zealand meat in overseas markets.

But these days, when trade access is so dependent on sound science, that is exactly what he does – most recently as part of a team which successfully argued the equivalence of our National Microbiological Database programme with the US Pathogen Reduction/HACCP ("Mega Reg") programme.

In addition, he has developed an industry testing programme for today's "hot" emergent pathogen *E.coli* 0157:H7, as well as co-ordinating baseline microbiological surveys of carcasses and other studies necessary to maintain the integrity of the MAF food safety programme and ensure continued access to our markets.

Currently he is part of a team working with the Ministry of Health and ANZFA on the development of monitoring and surveillance strategies for the "risk management framework" designed to assure the safety of all New Zealand foods.

Before joining MAF in 1995, Roger was a research scientist with MIRINZ in Hamilton. Originally from Bluff, work and a busy family life keep him from more time on the water following his fanatical love of yacht racing.

### ABOUT FOOD FOCUS

MAF Food Focus is issued four times a year by the MAF Food Assurance Authority. It provides an overview of issues impacting on the regulatory environment for the food industries. People requiring specific information are invited to contact the Authority. Food Focus welcomes feedback and suggestions for future editions.

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# Animal Products Act is up and running

It's one of the most significant pieces of legislation affecting our food industry for decades. The Animal Products Act 1999 (APA) marks the transition of food safety and market access from the old prescriptive regime to a flexible system that focuses on risk management outcomes. While the industry is left to design risk management programmes to achieve food safety outcomes, they are also required to follow some overriding principles. These reflect Hazard Analysis and Critical Control Point (HACCP).

## Three-year transition

The APA will replace the Meat Act 1981 and the Apiaries Act 1969. This will happen over a three-year transition that started in November last year and finishes on 31 October 2002. During the transition the APA will operate in parallel with the Meat Act and Apiaries Act, except that from 1 November 1999 there has been a single regime for homekill and export controls.

From 1 November 1999, all provisions of the Act commenced except those in Part 2 of the Act establishing risk management programmes. (Registration of these programmes is expected to start during the third quarter of 2000.)

There was a six-month window, ending 30 April 2000, for:

- < homekill and recreational catch service providers to list with MAF;

- < all exporters (including current holders of fish, meat and game export licences) to individually register with MAF as exporters.

Applications to register risk management programmes for existing licensed premises should be made prior to 1 August 2002, in order to ensure registration will be completed by the end of the transition period. Once a business has changed over to a risk management programme, it cannot revert to the old Meat Act regime.

From the commencement of Part 2 of the APA, any new business must operate under a risk management programme. On 31 October 2002 the Meat and Apiaries Acts will be repealed and animal product businesses will come under the APA.

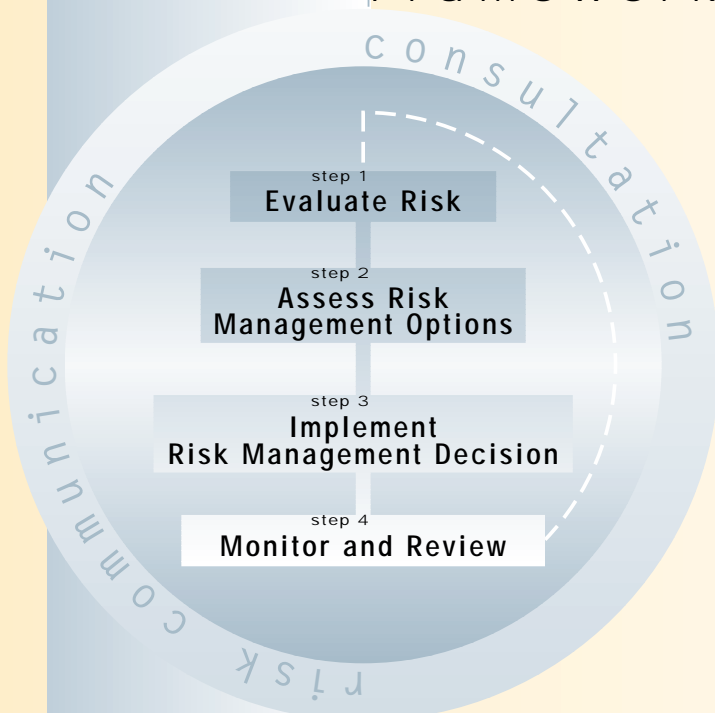
## Fits with other food legislation

The APA is a far-reaching Act, but flexible enough to ensure it dovetails properly with other legislation such as the Food Act.

In areas such as secondary processing of animal products for food (eg, smallgoods) the product safety can be covered by the Food Act. Risk-based food safety programmes developed under the Food Act have equivalence with risk management programmes required under the APA.

Victor Walker is MAF Food's Project Manager, Animal Products Act. He says the new legislation marks a significant departure from MAF's traditional role as combined rule maker, inspector and

## Risk Management Framework



- ▶ Act 1999, the Dairy Industry Act and the Animal Remedies and Pesticides Acts. On the domestic front, the MoH administers the Food Act. Like MAF, the Health Ministry sets standards and approves safety programmes.

To improve effectiveness and efficiency in regulating food, Government is currently reviewing the possibility of integrating the administration of food regulation into one agency. In the meantime, MAF and MoH are maintaining their regulatory systems in parallel. However there is plenty of work going on to harmonise the two regulatory systems.

Andrew McKenzie says this will be of great benefit throughout the food industry, for both large and small businesses.

"At the top end, some businesses work under several food safety assurance regimes because they're handling product through a range of stages and a variety of markets. By harmonising their safety programmes through a generic approach to risk-based management plans, there is scope for much greater efficiency. They can take a common approach to safety and quality management."

Andrew says smaller businesses such as a butcher operating as a homekill and recreational catch service provider could adapt a template risk management programme to their needs. They wouldn't need to develop a complex and costly programme from the ground up.

enforcer. "It allows MAF to focus on standard setting and policy while devolving inspection and verification.

"While MAF's role in providing official assurances will remain, there will be room for contestability in the inspection and verification services, for the domestic market and for exporters depending on importing country requirements."

Potentially the APA covers any animal product – not just food products – for both domestic use and export. For the purposes of the APA, the definition of "animal" covers the entire animal kingdom (save for humans!) right down to insects and invertebrates.

The Act can potentially follow animal products through the processing chain. In some cases this starts "on-farm" while the animals are still being raised. With avian eggs for example, risk management programmes for food-borne diseases like Salmonella need to start early – with the chicken (layer bird) rather than the egg, as it were.

To summarise, the main activities covered by the Act are:

- < primary processing of animal materials into animal products (this stage is exclusively covered by the APA)
- < secondary processing of products for human or animal consumption where they are not covered by the Food Act
- < exporting of animal products with official assurances
- < homekill and recreational catch.

## Compliance costs

Victor Walker says MAF is conscious of the need to manage a smooth transition to the new regime and to minimise compliance costs for industry.

"The Act allows some flexibility without compromising on standards. We do not intend for the food industry to have to re-create programmes they've already designed. MAF will allow for some update of existing HACCP plans. Also Section 32 of the APA allows for food safety programmes developed under the Food Act to be recognised as risk management programmes.

"Under Section 34 an allowance is made for domestic processors who do only the occasional export consignment. Again, their risk-based food safety programme can be deemed a risk management programme for the purposes of a single consignment.

"Also, we are keen to work with industry to develop risk management programme templates and codes of practice where one sector covers a number of similar operations. They would still have to be individually tailored to the particular operation, but this approach could save a lot of time and money."

For more detail on the Animal Products Act, visit the MAF web site:

[www.maf.govt.nz/animalproducts/guides/summary-brochure](http://www.maf.govt.nz/animalproducts/guides/summary-brochure)



## Organics made simple

New Zealand organic produce will have an easier ride into the potentially lucrative European markets thanks to a tidying-up of the market access arrangements. At the heart of the matter is assurances that food has been grown to standards accepted as truly organic.

Being "truly organic" isn't as simple as it sounds, and producers in New Zealand have a choice of several internationally recognised organic production systems. The most commonly used are the Bio-Gro, Certenz and Demeter standards. Certification hinges on issues such as the length of time land has been "retired" from chemicals and synthetic fertilisers.

As things stand, organic produce going into Europe is certified as organic by organisations approved by each EU member state, such as Bio-Gro New Zealand. The European Commission Regulation that provides for this process is to continue until 2005. After that, New Zealand exports of organic produce to EU markets will need official government assurances.

While that is still five years away, there will be benefits from simplifying access arrangements sooner. The Organic Products Exporter Group, with the support of the Ministry of Foreign Affairs and Trade, has asked MAF to develop an official organic assurance programme, and the task has been taken up by MAF Food.

A draft programme for plant products has already been completed, and will be extended to cover animal products – including dairy – in the coming months before being submitted to the EU. The documentation will then be reviewed and EU organic experts will visit for a first-hand assessment of the programme.

Tim Knox, MAF Food's Director, Dairy and Plant Products, says MAF is hopeful that the process can be completed by March 2001.

"Once our programme is approved by the EC, the pathway for New Zealand organic produced into EU states will be much more straightforward – providing, of course, it has met the requirements of the official assurance programme," Tim says.

# Prosecutions



## Injectable zinc litigation highlights remedies legislation

The value of New Zealand's system for licensing animal remedies has been highlighted by a long-running series of court cases surrounding illegal sales of injectable zinc products.

A Waikato man, Robert James Pickering, was convicted in 1996 under the Animals Protection Act for using unlicensed injectable zinc oxide products without the necessary code of ethical conduct.

He was convicted on further charges in 1998. The product was claimed to protect against facial eczema, treat ill thrift, footrot, and assist reproductive performance. Evidence in the trial showed that animals suffered abscesses at the injection sites. In one case, more than half the injected animals suffered from facial eczema.

Last year an appeal was made to the High Court by Colby Corporation, against the Animal Remedies Board's (ARB) decision to decline registration for "Fertex Sheep", an injectable zinc formulation. This appeal was abandoned after three days of hearings. The Court confirmed that it would uphold the ARB decision.

Earlier last year there were two cases of stock at slaughter being condemned when it was discovered they had been injected with Fertex Sheep.

Colby Corporation submitted a new application to the ARB for registration of Fertex Sheep in December last year. In March 2000 a provisional licence was granted for trials to provide data to support a future licence application for the product. However the product may not be sold or used on farms in the meantime.

Debbie Morris, Director of MAF Food's Agricultural Compounds and Veterinary Medicines (ACVM) Group, says the long-running litigation surrounding various unlicensed injectable zinc products has important implications for food safety assurance.

"Use of unlicensed products such as this challenges the robustness of our total food assurance system," she says. "We need to demonstrate to domestic consumers and our trading partners that only licensed products are used in animals slaughtered for food."

Debbie says that although there are no domestic or international maximum residue limits for zinc, the other ingredients of the products are unknown to MAF or the ARB.

"We are unable to gauge if there should be a withholding period for food safety reasons."

## Certification scams punished



The perils of trying to take short cuts around New Zealand's export certification requirements have been highlighted in two successful Crown prosecutions. The cases also highlight the much more serious consequences for such actions under the new Animal Products Act (APA).

Christchurch animal product exporter Hill & Lichtenstein Director Noel Dew was found guilty and fined under the Crimes Act S.266B for using an altered or reproduced document with intent to defraud. The company was found guilty and fined on three charges under S.229A of the same Act for taking or dealing with certain documents with intent to defraud. The company now no longer operates under that name.

In a second, but similar case, exporting company DR Johnston and one of its commodity traders, Grant Milner, were found guilty and fined under the Crimes Act on several counts of forgery and using a document to defraud. In this case fines totalled \$15,000 plus costs. A second commodity trader of this company is also facing charges and a defended hearing is scheduled for late August 2000.

MAF Food Programme Manager (Operations), Phil Ward says the Meat Act does not address the issue of forgery relating to by-products and that is why the cases were dealt with under the Crimes Act.

"The Animal Products Act does provide for more severe consequences, however. It requires all exporters of animal products to be registered. If MAF considers a company or person to be unsuitable, then registration can be denied. Any past offences involving export certification would certainly be taken into account.

"The Act also provides for much higher fines than those handed down in the Hill & Lichtenstein and DR Johnston cases. For situations where public health is threatened the law provides for prison sentences."

Phil says that while the Crimes Act provides for harsher penalties than the APA for forgery-type offences (eg imprisonment for up to 10 years as opposed to 5 years under the APA), the appearance of forgery-type offences in the APA will allow MAF to deal with these matters through its own legislation. It also gives the Court a clearer indication of the seriousness of the offending by the penalties specified, he says.

## Lindane bust



Importing a banned organochlorine pesticide – Lindane – cost Van Zanten Ltd a \$750 fine plus costs earlier this year after a prosecution brought by MAF. The company could face further charges brought by the Otago Regional Council under the Resource Management Act, and legal action by farmers seeking compensation for long term damage to farm land.

Lindane has been banned in New Zealand since 1990. The MAF Enforcement Unit investigation leading to the conviction was sparked by the discovery of an empty Lindane container by a sharp-eyed farmer.

Van Zanten had been importing bulbs and materials from Holland to produce flowers on leased land in Southland. It appears different sites had been used in earlier years.