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New biosecurity system taking shape

By Murray Sherwin,
Director-General, MAF

In August last year the Cabinet adopted the Biosecurity Strategy and determined that the broad strategy and recommendations of the Biosecurity Council would be developed and refined. Much of the "big picture" design work for the management structure of the new system was completed in the lead up to Christmas, and I was left with a number of options to consider.

At the beginning of February 2004 staff in the key government agencies responsible for managing New Zealand's biosecurity effort were given an outline of the decisions I have made, and informed of those yet to be made.

In this editorial, I would like to explain the decisions made so far, and discuss the decisions that are still to be made.

As Director-General of MAF, I now have responsibility, under the Biosecurity Strategy, for the overall leadership of the whole of the biosecurity system, not just the biosecurity concerns relating to the primary production system, as has previously been the case. Bearing this in mind, it's clear that the decisions to be made were enormously significant ones, requiring consideration of how the function will fit into the wider organisation of MAF, and our deployment of resources. The decisions required careful thought about the shape and function of MAF needed to meet all its objectives, as well as the kind of culture or 'personality' of the organisation.

The options developed by Deputy Director-General Larry Fergusson and his team focused on a couple of key structural options – in particular relating to the location of the biosecurity function within the overall MAF structure and how it should be set up in terms of line management and reports.

The decisions made fall into two distinct areas: strategic function and high-level structure.

Biosecurity Strategy Group

In terms of strategic function, there will be a Biosecurity Strategy Group reporting directly to the Director-General and the Biosecurity Chief Executives' Forum. The establishment of this group is an important outcome of the Biosecurity Strategy.

The CEOs of other biosecurity agencies put high store on this group bringing integrated, holistic thinking to decision-making and prioritisation in biosecurity. For an initial period of 18 months to two years, these CEOs wish to see the group standing outside the regular MAF structure – giving it visibility and a sense of independence from the perceived primary sector/economic interests of MAF.

High-level structure

Looking at the high-level structure, this is to be based on 'points of intervention' – that means management around pre-border, border, surveillance, response and pest management.

I believe this will very effectively drive 'whole-of-system' thinking into our processes. It's more likely to be understood by our stakeholders and will lead to the use of standard models for particular interventions across the whole of the system. The plan is for MAF's Animal Welfare and Investigations/Compliance functions to remain within the groups in which they're currently located.

MAF Quarantine Service to remain separate

The MAF Quarantine Service will not become part of a MAF Biosecurity Group, but will report directly to myself in a separate management group. This decision may be revisited in a couple of years as new structures and processes settle down. However, there will be very close attention to ensuring close interaction and collaboration between the Biosecurity Group and MQS at all levels.

Further decisions to come

And I still need to do further consulting and evaluation regarding the management of MAF's laboratories and the Verification Agency. I expect to be making a decision on these two areas in weeks rather than months.

As you can see, there are some significant changes in the wind and a great deal of work to come to get it all in place. We may be the Ministry of Agriculture and Forestry, but our responsibilities now spread well beyond enhancing the primary industries.

MAF is now a very important contributor to both the economic and environmental (marine and land-based) well-being of New Zealand. We are a direct contributor to public health outcomes, and we are an important agency promoting and facilitating the economic and cultural interests of Maori. We have a big agenda ahead and I look forward to updating you on developments in future issues of *Biosecurity*.

"There are some significant changes in the wind and a great deal of work to come to get it all in place"

- On pages 4-5 of this issue, Biosecurity Strategic Unit Director, Geoff Hicks, brings more detail on stakeholder participation, and the workplan ahead for the development of our biosecurity system.

Work proceeds creating new biosecurity system

The Biosecurity Strategy Implementation Team and the Biosecurity Strategic Unit have merged their workplans and have a full year ahead bringing to life recommendations of the Biosecurity Strategy. A number of projects have been prioritised and the 2004 work programme formulated.

Leadership structure a priority

Highest priority goes to projects that have a direct bearing on the design of the new biosecurity organisation. Firstly there is the task of designing the leadership structure for the new system.

"We'll be considering the functions and activities of the Governance and Leadership (Strategic) Unit, assessing the staff needed, estimating budgets and examining the links with MAF's Policy and Regulatory groups, the Quarantine Service, laboratories and other biosecurity agencies," Strategic Unit Director Geoff Hicks explains. "This work is urgent as it will inform the final size and shape of the new biosecurity system."

A full design is expected by the end of March 2004.

Regulatory and service delivery functions

The design of the regulatory and service delivery functions is another high priority. Significant work has already been undertaken towards this, but Geoff Hicks says this project will formalise activities and create a vital connection to other projects on the workplan. Included is a look at

- internal structure
- management span of control
- functional links between parts of the new organisation
- integration of system-wide risk management functions
- cultural values.

"It's a big task," Geoff admits, "but it's important to recognise that MAF's existing Biosecurity Authority has much work to do to 'morph' itself into the new biosecurity organisation and take on what is expected of it from the Strategy."

The teams are putting a lot of thought into the relationship of the new organisation with its supporting bodies and stakeholders. A project is considering the establishment of some mechanisms to ensure the delivery of a holistic, inclusive approach to biosecurity. The first key steps have been taken – the creation of the Ministerial Committee for Biosecurity, the Chief Executives' Forum and the Strategic Unit. This project will establish further supporting bodies, such as a central and regional government forum and possibly an industry forum, to allow for good stakeholder participation in the biosecurity process.

Geoff says another key project on this year's agenda will define the boundaries of the system and its service-delivery roles.

"The Government agreed that MAF will have overall responsibility for biosecurity, including the pest management function," he says. "That means that the roles and responsibilities of all agencies with biosecurity functions need to be revisited. This project will look at who should do what and agree on the systems and arrangements needed to make it work."

Fresh identity to emerge

A branding exercise will be undertaken to describe the look and feel of the new biosecurity structure. "Everyone's expecting some newness and freshness, and so a branding project will set out to create an appropriate identity for the organisation," says Geoff. "It is vital that the public see a strong alignment between all elements of the biosecurity system, expressed in one clearly recognised brand."

A human resources project is setting out to prepare current MAF staff for the transition. HR expertise is being sought to manage the change process, advise on organisational design issues and on the practicalities of staff retention and recruitment during what is an intense period of organisational change.

The development of a system-wide risk management and decision-making framework is expected to be completed towards June. "This integrated framework, accounting for economic, environmental and social/cultural interests, will need to be simple yet robust to ensure consistency and transparency in risk management decisions," Geoff Hicks explains.

A definition of system-wide outcomes has been developed and drafts are currently under consultation with concerned departments and stakeholders. Further work on outputs, activities and performance measures is continuing and will inform the final organisational design.

Finalising the 2004/05 budget package and a review of funding are the two final high priority projects on the work programme.

Geoff says that throughout the year, work will continue on other slightly lower priority projects including a review of the many recent reports on biosecurity, and a look at information management systems for the new organisation.

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Stakeholder participation in biosecurity

The Biosecurity Strategy for New Zealand proposed a number of institutional mechanisms to support the expansion of MAF's biosecurity mandate and to help ensure delivery of 'whole of system' biosecurity.

Of these, the biosecurity Chief Executives' Forum and Strategic Unit were established immediately following the release of the Strategy in August 2003. The Chief Executives' Forum, comprising the chief executives of MAF (chair), the Department of Conservation, Ministry of Fisheries, Ministry of Health and Te Puni Kōkiri, is tasked with developing the strategic direction for biosecurity and monitoring the performance of the biosecurity system.

The Strategic Unit advises the chief executive of MAF and the Chief Executives' Forum on direction setting, priorities, capabilities, system performance and relationships with Māori. A Ministerial Committee for Biosecurity has also been convened to oversee the biosecurity system.

The work programme for the Strategic Unit over the next few months includes establishing the other supporting bodies identified in the strategy for stakeholder participation in biosecurity:

- reconstituting the Biosecurity Council as a ministerial advisory group, to provide independent advice to the Minister for Biosecurity on the performance of the biosecurity system; and
- establishing a central-regional government forum, reporting to the Chief Executives' Forum, to involve regional councils in strategic direction setting in relation to decisions at the boundaries of central and regional government responsibility;
- the Strategic Unit will also consider the case for a single industry forum, reporting to the Chief Executives' Forum, to advise on strategic direction setting at the boundaries of central government and industry responsibility.

This will involve developing terms of reference – specifying role, scope of activity, governance, membership and operation – and securing appointments to each body. The Strategic Unit will approach stakeholder organisations in April with an invitation to suggest names of suitable people for appointment to these bodies.

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Biosecurity People

Biosecurity Coordination team

Mike O'Hara joined MAF Biosecurity Coordination, Contracts Management team, as Programme Manager (New Organisms) in January 2004.

Mike completed his PhD in Microbiology at Massey University in 1989, studying genetic variation in the clover symbiont *Rhizobium.* He spent the next ten years in veterinary vaccine research and development in New Zealand and the United States.

He was biological project leader in the original transfer of technology from the UK to New Zealand and left (what was then) Mallinckrodt Veterinary as Research and Development Manager in 1995. After a stint in California as Good Manufacturing Practice Projects Director at a small biotechnology firm, Mike returned to New Zealand to work for CSL. In these roles he interacted with many regulatory authorities and much of the relevant legislation as a 'user', which gives him a pragmatist's perspective on his new role.

Mike also spent three and a half years at ACC, running the ACC Project Office. During this time, he enhanced his project management skills with involvement in international benchmarking of project management methods and approaches and led the development of ACC's current project reporting and project management methods and practice.

Biosecurity Coordination team

Tane Woodley has just joined MAF Biosecurity as part of the Contracts Management team, in Biosecurity Coordination. He is working in the new role of Systems Planner (New Organisms). This position was created to develop and implement a coordinated doctrine dealing with new organisms, with a particular emphasis on logistics and pre-planning.

Prior to joining MAF, Tane worked at Telstraclear in its Wellington office. Before this, he was an officer in the Regular Force of the New Zealand Army. He served for 11 years, mainly in the logistics field.

He continues to serve with the Wellington unit of the Territorial Force.

Avian influenza – the risk to New Zealand

The current avian influenza pandemic in Asia has raised many questions – not only about the nature of the disease, but also about the potential risks to and from wild and domestic birds in New Zealand.

The biology of the virus that causes the disease in birds is the key to understanding the subject. There are safeguards in place to protect New Zealand from exotic disease such as highly pathogenic avian influenza, but awareness and vigilance are important to ensure this protection is maintained.

What is it?

Avian influenza is a viral disease of poultry caused by RNA viruses of the family orthomyxoviridae. There are three main groups of influenza viruses: type A, B & C. Avian variants of influenza virus are classified as type A. Influenza B & C viruses are generally restricted to humans.

Influenza A viruses are widespread in birds and mammals although most avian and other non-human variants do not infect humans. Very few of the many thousands of variants of avian influenza virus recognised have been found to cause significant disease in birds. Influenza A viruses are frequently isolated from a wide range of birds, including healthy waterfowl (especially ducks) and some sea birds (i.e. shearwaters, terns, gulls) and shorebirds (i.e. knots, ruddy turnstones). The number and range of these non-pathogenic viruses isolated varies from year to year and is higher in juvenile birds.

The epidemiology of influenza A viruses is complex. There have been occasional reports of deaths attributed to avian influenza viruses in terns, passerines (i.e. starlings, sparrows), birds of prey and in captive psittaciforms in quarantine, but in most cases underlying factors such as concurrent disease and physiological stress contributed to the death of the birds. It is still not known why some variants of avian influenza become virulent under certain circumstances while others do not, but it is thought

that inter-species mixing (e.g. quail, geese, ducks, chickens) and high population densities, such as occurs in bird markets in China and other Asian countries, may promote genetic reassortment amongst the viruses circulating in the different species of bird.

Genes exchanged between viruses

The subtype of the virus responsible for the current pan-Asian influenza outbreak is an H5N1 virus. There are 15 heamagglutination (H) and nine neuraminidase (N) types and these antigens are coded for by specific genes. These surface antigens are used to type the viruses into antigenic subtypes. Small changes in the expression of these surface structures results in antigenic 'drift'.

Antigenic 'shift' results in more significant changes in the virus and are due to genetic reassortment whereby genes are exchanged between viruses. The term 'highly pathogenic avian influenza' (HPAI) is reserved for viruses that fit the definition outlined in the diagnostic manual prepared by the world organization for animal health, the Office International des Epizooties (OIE). This definition is based on antigenic characterisation of the virus and also laboratory tests i.e. in vivo (experimental challenge tests) and in vitro (cell culture) pathogenicity attributes.

All of the reported outbreaks of HPAI in chickens have been caused by viruses of the H5 or H7 subtypes with HA cleavage sites that contain multiple basic amino acids. This feature relates to the ability of host proteases to cleave the HA in to two components (HA1 and HA2) to facilitate infection of a wide range of cell types. Such 'highly pathogenic' influenza (HPAI) viruses are therefore able to cause systemic disease in chickens (Gallus sp.) while less pathogenic forms are only able to establish replication in the gut or respiratory tract. However, other subtypes of influenza virus, such as H9N2, have caused high mortality and morbidity in chickens and turkeys even though they do not fulfil the definition for HPAI.

The disease – diagnosis not always clear cut

The clinical signs seen in avian influenza vary, and diagnosis is not simple. Respiratory signs may predominate but often there is general malaise and diarrhoea. In some cases there may be neurological signs but sudden death may be the only sign. It is likely that the clinical presentation depends on the age

and immune status of the infected host as well as species, population dynamics, the presence of concurrent disease and the type and dose of the virus to which the host is exposed.

Newcastle disease and other systemic infections may appear clinically similar and can also cause high mortality. Respiratory diseases such as mycoplasmosis or pasteurellosis may also complicate the diagnosis of avian influenza. Mortality and morbidity rates are variable but devastating losses may occur over time as the virus replicates in the gut and is rapidly spread from bird to bird directly via faeces and also respiratory secretions or via fomites (inanimate disease vectors).

To demonstrate that avian influenza viruses have been the primary cause of death requires the virus to be isolated and characterised. In addition there would need to be evidence that any pathology attributed to influenza viruses isolated was sufficient to cause death.

Prevention and control

Because there are many subtypes of virus and these are constantly changing, the epidemiology of avian influenza is complex. The virus survives well in the environment, especially in waterways and in cool damp areas. It is destroyed by ultraviolet light.

Because influenza A viruses have a lipid envelope, most disinfectants and detergents are effective against them and this allows good control should an outbreak be reported and confined rapidly. Control strategies generally rely on depopulation and disposal of all sick and in-contact birds, followed by decontamination and a rest period before restocking.

There is good evidence to suggest that the H5N1 virus in the current Asian pandemic, was circulating in China and other parts of Asia for many months before it was reported and this, in part, is why it has become so widespread. Vaccination has been considered but is controversial because inappropriate selection and use of vaccine may mask infection and facilitate further spread. There are a range of vaccines, including recombinant vaccines, available but recommendations for the use of these remain controversial.

Have avian influenza viruses been found in New Zealand wildlife?

In New Zealand there have been several studies to assess the prevalence of avian influenza and paramyxoviruses in mallard ducks (Anas platyrhynchos). In one of the larger studies Stanislawek et al., (2002) isolated 33 viruses from 321 cloacal and tracheal swabs collected from ducks trapped in various sites around the country.

There were six influenza viruses isolated (two H5N2 and 4 H4N6 subtype viruses). Serological samples were also assessed and the result indicated that mallard ducks were frequently exposed to influenza and paramyxoviruses. The ducks sampled were apparently healthy and the influenza viruses isolated were further characterised. The H5N2 subtypes did not fit the OIE criteria as being highly pathogenic as they did not possess multiple basic amino acids at the HA cleavage site.

Other studies have also reported the isolation of avian influenza viruses from mallard ducks in New Zealand (Austin & Hinshaw, 1984) and more surveillance work, sampling a wider range of avian species, is planned. Although the influenza viruses isolated were not HPAI it is important to note that it is not possible to predict which H5 or H7 (or other) subtypes can become virulent in different bird species. The way to minimise any risk to, or from, poultry is to minimise contact between poultry and game birds and other species such as wild ducks, waders or sea birds. This should be part of any avian biosecurity plan.

The risks to, or from, poultry and wild birds

Inter-species transmission of avian influenza viruses has been recorded on a number of occasions. The H5N1 Hong Kong strain was transmitted from chickens to people in 1997 and on other occasions subtype H9N2 viruses have also been transmitted from chickens to people, although in both situations human-to-human spread did not become significant.

There are also reports of transmission of avian influenza viruses between ducks, quails and geese (H5N1, H9N2 & H6N1 subtypes) with reassortment to virulence of H5N1 subtypes and subsequent transmission of such viruses to humans (Shortridge et al., 2003).

And there are reports of transmission of H7N7 subtypes from seals to humans; therefore there is potential for inter-species transmission, especially where virus replication is rapid and large amounts of virus are produced.

The mechanism by which influenza viruses can adapt to the host cell receptors of another species is not fully understood, but there is current concern that the Asian H5N1 avian influenza virus may enter humans and reassort with the current Fujian H3N2 human

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influenza virus to create a new human pandemic strain. Much of the current disease control effort in Asia is directed at preventing this, with a collaborative effort from national and international veterinary and public health organisations.

There is good evidence that avian influenza viruses can adapt to the host receptor of the pig trachea and that these viruses can then more readily infect human cells. Although this has been well demonstrated in vitro, the role of the pig in the field transmission of avian influenza viruses to humans is not really known.

Risk to native species low

Any avian species could potentially become infected with avian influenza viruses because these viruses do survive in the environment, especially in ponds and waterways. It is also likely that they are endemic in a range of wild species, but due to the population dynamics and behaviour of many native species in New Zealand, the risk of exposure to HPAI, should it occur in poultry, is low.

It is not possible to predict the pathogenicity of avian influenza viruses in different avian species but no deaths due to influenza viruses have been reported in this country to date.

Managing the risk to New Zealand

How do we prevent the entry of exotic, highly pathogenic avian influenza virus into New Zealand?

Potential routes of entry include illegal imports of unprocessed poultry products or the movement of contaminated carriers (i.e. avian faecal material on packaging, clothing, equipment etc) from infected areas. MAF Quarantine Service staff inspect passengers and luggage, consignments of cargo and imported commodities to ensure that the risk of introducing exotic pathogens such as the current subtype H5N1 into New Zealand is minimised.

There is little risk of entry through legal importation of poultry products and related commodities because current permits and Import Health Standards (IHS) require compliance with strict requirements to ensure that poultry products pose no disease risk to New Zealand.

Migratory birds

There is some suggestion that migratory birds may carry H5N1 from Asia to New Zealand but the species that migrate to New Zealand along the Asia-Pacific flyways at this time of the year are not currently thought to pose any direct threat to poultry, people or other species. MAF and DoC are currently collating information about the species, numbers, flyways, stopovers and destinations of all migratory species that come to New Zealand as well as assessing the movements of waders and other species within the country.

All available biological information is included in risk analysis, surveillance and incursion response activities.

The New Zealand public can assist with surveillance by reporting any suspicious mortalities in migratory and other wild birds.

Raising awareness

A collaborative approach is required to protect the biosecurity status of New Zealand and everyone has an important role to play.

Should it occur here, highly pathogenic avian influenza would cause devastating losses in poultry in New Zealand and may also pose a threat to indigenous species and the public. It is appropriate and important to be vigilant and to be prepared for the possibility of the disease entering New Zealand.

Animal health professionals and advisers can help by raising public awareness about the disease. They can do this best by:

- becoming informed about the disease and its differential diagnoses
- becoming familiar with the diagnosis of disease in birds so that they can give informed advice to clients with birds and to wildlife conservancies; and
- keeping in regular contact with MAF Biosecurity with regard to recommendations for submission of samples for avian influenza and other avian diseases, should disease investigation be required.

It is also advisable to encourage poultry keepers to keep their birds separated from wild birds. A number of diseases can cause high mortality in birds and the isolation of avian influenza viruses may not indicate that this agent is responsible for deaths. For this reason, a full investigation is required to assess the cause of death and the virulence potential of any influenza viruses identified.

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Useful websites

FAO – Avian Influenza Disease Card:

www.fao.org/ag/againfo/subjects/en/health/diseases-cards/avian.html

OIE –Avian Influenza:

www.oie.int/eng/info/en_avinf.htm

World Health Organisation – Avian Influenza Fact Sheet:

www.who.int/csr/disease/avian_influenza

MAF Biosecurity Authority

www.maf.govt.nz/avian-influenza

Ministry of Health

www.moh.govt.nz/birdflu

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Developing a New Zealand FMD vaccine bank

Because an international arrangement to source FMD vaccine is ending, New Zealand is looking to make its own arrangements for reliable supplies of vaccine.

Essential component of contingency planning

Vaccination is an essential component of any national contingency plan for an outbreak of foot and mouth disease (FMD). It can effectively contain FMD until adequate resources are available to depopulate and dispose of high volumes of carcasses, and is an approach favoured by environmentalists and animal welfare advocates in Europe who experienced the carnage of the 2001 outbreaks.

The option to employ emergency vaccination as an adjunct to eradication in the event of an outbreak of FMD in New Zealand is long standing. New Zealand, the UK, Australia, Ireland, Finland, Sweden, Norway and Malta are members of the International Vaccine Bank (IVB). The IVB was established in 1985 to hold a range of FMD antigens that can be rapidly formulated into FMD vaccine for any contributing member. The members have drawing rights in proportion to their contribution to capital and maintenance costs. New Zealand contributes 15.73%, allowing 300,000 doses to be drawn. The IVB is co-located with the Institute for Animal Health, the world reference laboratory for FMD in Pirbright, UK.

International Vaccine Bank to be terminated

The IVB will terminate on 30 June 2004 since it is no longer able to deliver FMD vaccine of the quality that members now require. Manufacturing facilities meet neither European nor New Zealand standards for licensing of veterinary pharmaceuticals. With the changing international perspective on the disposition of FMD vaccinates, it is essential that any emergency vaccine is registered in New Zealand.

Although antigens from the current IVB will probably be incorporated into a new IVB model, the nature of that potential model is currently unknown as member countries have not agreed about a future vaccine bank arrangement with a commercial supplier. New Zealand's likely requirements could be met by a contingency supply arrangement for 500,000 doses – the minimum volume generally available commercially.

Access to vaccine bank vital

International experts have advised that if the option to vaccinate for FMD is included in national contingency plans for FMD, the only guarantee that supplies of vaccine will be available when required is to be a member of an antigen or vaccine bank. Most FMD-free countries store only vaccine antigen concentrate (antigen), as formulated vaccine has a limited shelf life. The North American FMD Vaccine Bank (Canada, United States and Mexico) has existed since 1982 and the European Union FMD Vaccine Bank since 1993. Individual EU countries including Belgium, Denmark, France, Germany and the Netherlands hold additional independent FMD vaccine reserves. Outside the EU, Bulgaria, Croatia, the Czech Republic, Poland, Hungary, Israel, Romania, Russia and Slovenia hold vaccine banks.

Multiple strains required for full protection

There are seven serotypes of FMD virus (O, A, C, ASIA1, SAT1, SAT2 and SAT3), with little or no cross protection. Some, such as serotype A which is prevalent in South America, have several antigenically unique strains requiring multiple type A vaccine strains to ensure protection. Currently vaccine for nine strains is considered the minimum to ensure adequate protection for New Zealand.

New Zealand investigating own arrangements

Australia weighed the alternatives and decided to enter a commercial contract independently in April 2003. New Zealand is also investigating private arrangements with a commercial vaccine manufacturer to ensure an initial supply of emergency FMD vaccine from 1 July 2004. New Zealand would purchase antigen for important strains of FMD virus currently circulating in the world, focusing on those in South East Asia. The commercial manufacturer would agree to hold vaccine antigen frozen in liquid nitrogen, guarantee quality and break routine commercial production to formulate emergency vaccine for New Zealand for immediate delivery. There is no ready off-the-shelf supply of FMD vaccine and the establishment of a contract with a commercial FMD manufacturer will ensure that New Zealand has immediate access to an FMD vaccine that reflects the current circulating strains representing the greatest threat to New Zealand.

Constant threat

FMD is a low probability but high consequence risk for New Zealand. Recent experiences in Taiwan 1997 (free since 1929), South Africa 2000 (free since 1956 in domestic livestock), South Korea 2000 (free since 1934), Japan 2000 (free since 1908) and the UK 2001 (free since 1967) are reminders that the threat from FMD is constant.

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Ants targeted by intensified surveillance

The introduction of a new 'See, Contain, Report' brochure is part of MAF's ongoing national invasive ant programme.

The programme was initiated in 2001 to assist in the early detection of exotic invasive ants. For three years MAF has focused surveillance and monitoring on high-risk locations such as international ports, transitional facilities, container yards and some nurseries.

This intensified surveillance has resulted in the recent discovery of approximately 200 red imported fire ants at the Port of Napier. The ants were found in attractant bait traps set in high risk areas and an exotic pest response was immediately implemented.

Although it is not clear how the ants may have entered the country, sea containers are a known pathway for unwanted pests. Since 1 January 2004, six-sided inspection of all sea containers has been in place, with further checks at MAF-approved transitional facilities during unloading. Additional checks have been put in place since the red imported fire ant find.

The red imported fire ant is one of the ant species featured in the brochure, which includes information to help people recognise, identify and report exotic invasive ant species. The brochure will be distributed in high risk areas and contains characteristic descriptions of seven exotic ant species.

Invasive ants have the potential to significantly affect New Zealand's native insect, bird, reptile, and plant life, in turn upsetting the natural ecology of the environment. Despite New Zealand's stringent biosecurity controls, the importation of ants is difficult to control due to their size and ability to stow away on pretty much anything. If we are not cautious, they can easily become established in New Zealand.

Early detection is the key to eradication and this brochure is a valuable tool in the protection of New Zealand against exotic invasive ants.

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Biosecurity People

Animal Biosecurity

Fiona Stuart has recently joined MAF Animal Biosecurity as Programme Development Manager. Fiona graduated in Veterinary Medicine from the Royal Veterinary College, London University in 1978. She also has an MSc in Medical Microbiology (1984).

Fiona joins MAF after an interesting and varied career. She started as a resident small animal surgeon at the Royal Veterinary College and then had a short stint in practice. In 1979, Fiona joined what was the Ministry of Agriculture, Fisheries & Food (MAFF) Central Veterinary Laboratory in the UK, where she worked on research and diagnosis of livestock diseases, principally bovine tuberculosis (Tb), brucellosis and anthrax.

Fiona lived in Zimbabwe from 1989 to 1999, doing a variety of different jobs including research into skin disease in farmed crocodiles, field work on diagnosis of anthrax in hippos, locums in small animal practice, breeding horses, running a smallholding and selling retirement homes.

In 1999, she returned to the UK to set up and manage the bovine Tb research programme for the Department of Environment, Food & Rural Affairs (DEFRA). She was also involved in managing the animal welfare, veterinary medicines and endemic diseases research programmes.

Biodiversity focus for seminar

Biosecurity and how it fits in with efforts to safeguard New Zealand's biodiversity is the theme of the New Zealand Biosecurity Institute's national education and training seminar (NETS) to be held in Rotorua from 21-23 July 2004.

With speakers ranging from those involved in international issues, such as the Invasive Species Specialist Group and the Australian Quarantine Inspection Services, to scientists from research institutes and field staff working at the coalface, this promises to be a challenging and interesting three days.

A feature this year will be the inclusion of speakers from some high-profile environmental groups, sharing insights into the achievements they have made in talks that are open to the public. This session has been a great success in the past, and is part of the NZBI's outreach programme to raise public awareness of biosecurity issues.

NZBI membership is open to all those who work with, or are interested in, biosecurity issues. Non-members are also welcome to attend NETS2004.

Information contact:

Carolyn Lewis, NZ Biosecurity Institute,
NETS 2004 Organising Committee

Registration details and a draft programme will be available soon at:

www.biosecurity.org.nz

Electronic solutions to enhance sea container risk management

MAF and the New Zealand Customs Service are developing a system that will electronically assess biosecurity risk and provide clearance for imported sea containers.

"This project addresses a number of expectations from the Government, including the biosecurity strategy, closer integration between border agencies, the development of e-commerce capability and reduced compliance costs for industry," explains Carolyn Whyte, MAF's National Adviser, Border Risk Management.

"The project is part of an increased focus on the risk management of the sea container pathway. The aim is to provide a single electronic facility for industry to lodge required information with government agencies. This will increase efficiency and hopefully reduce compliance costs."

Customs Information Systems Manager Peter Rosewarne says Customs is pleased to help MAF achieve this aim.

The project is still in the early stages and MAF and Customs will be engaging with industry groups such as port companies, shipping companies, importers, transporters and freight forwarders over the coming months.

One of the first steps was an inter-agency workshop held in early February to scope the project and develop timelines. Some decisions have already been made: MAF will begin using Customs' CusMod system to risk assess incoming sea containers. The electronic data about each sea container will then be exported to MAF's QuanCargo program, replacing the interim manual data entry process for sea containers that was implemented on 1 January 2004.

"Incorporating biosecurity container risk profiling into Customs' CusMod, with subsequent export of relevant information to QuanCargo for biosecurity clearance, is the most cost-efficient and industry-friendly means of developing these capabilities," Carolyn says.

"Customs already receives electronic information about sea containers from importers and brokers, and has the capability to electronically select specific types of containers requiring certain actions. MAF Quarantine Service staff will then inspect high risk containers and issue electronic container biosecurity directions and clearances through the QuanCargo program."

As a final step, the accredited persons responsible for checking low-risk containers at approved transitional facilities will also be able to electronically lodge the results of their checks, and receive final container clearances.

"The project is multidisciplinary, involving staff from regulatory, operations, information management, applications development, communications and legal groups of both MAF and Customs," Carolyn adds.

"The project forms the first stage of a closer integration of information management between the two agencies."

Full live implementation is scheduled for the end of June 2004.

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Biosecurity People

Border Management Group

Dr **Grant Knight** has recently joined the MAF Biosecurity Authority, Border Management Group based at Ballantyne House, Auckland, as part of a two-person Container Risk Profiling Team.

Grant graduated from the University of Canterbury as a zoologist with a marine biology specialty and then was employed by the University of Auckland Medical School, becoming a Senior Research Fellow in the Department of Surgery, running the analytical chemistry laboratory and jointly coordinating clinical trials.

This involved all aspects of project management, volunteer recruitment, data collection and dissemination of results. This later led to liver transplant research, pharmaceutical development, and, latterly, contract work looking at efficient waste disposal and resource recovery.

The combination of ecology, biochemistry, project coordination and data analysis will be put to good use in formulating an efficient and workable profiling strategy to beat the exotic hitch-hikers on, and in, shipping containers.

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Simplifying biosecurity risk assessment of air passengers

Managing biosecurity risk from incoming passengers is expensive. In New Zealand the annual cost is more than $18 million. In many countries the sheer numbers involved present almost insurmountable logistical challenges. X-ray screening of passengers' bags at their point of departure – rather than at arrival in New Zealand – could help meet such challenges.

X-ray screening of incoming passengers' baggage at their point of departure could help streamline passenger processing at the New Zealand border.

MAF Biosecurity is working with representatives of other border agencies, airport authorities, airlines and technology suppliers in the International Air Transport Association (IATA) Simplifying Passenger Travel Group (SPTG) to develop innovative global solutions to cost effectively manage risks associated with air travellers.

Much work has been done in the immigration and customs environments to risk-assess passengers prior to their arrival at their destination airport, using advance passenger information. In many countries, passengers are already risk-assessed as they are checked in and non-acceptable passengers are denied boarding.

From a biosecurity perspective, advance passenger information alone is insufficient to enable effective risk assessment.

Remote biosecurity screening

Neil Hyde, Director Border Management, who represents MAF on IATA SPTIG, and System Engineering Technical Assistance (SETA), developed a concept that involves remote biosecurity screening of x-ray images of bags captured during security screening at the departure airport. This replaces x-ray screening of the bags on arrival.

This concept was tested in conjunction with Australian Quarantine and Inspection Service (AQIS) and MAF Quarantine Service (MQS) in late 2003, involving seventy Sydney to Auckland flights. This trial proved that, from a technological perspective, the concept was feasible. Significant international interest has been generated, including from countries with very significant passenger flows.

The proposal is linked to a number of other initiatives, including installation of hold stow baggage screening at airports, automated kiosk check-in, touch screen declarations, smart cards, Advance Passenger Information (API) and Passenger Name and Record (PNR) data, transfer, data mining, and automated x-ray image recognition, and radio frequency identification tags.

Touch-screen biosecurity declaration

When introduced, the system will, from a biosecurity perspective, involve a passenger making a touch screen biosecurity declaration at check-in. The declaration information will be bundled electronically with the x-ray images of the checked baggage and the API and PNR data collected at their check-in process. X-ray images will be remotely scanned along with the electronic declaration and API and PNR data, and a decision made as to whether biosecurity processing on arrival is necessary. Undertaking biosecurity risk assessment before passengers arrive at their destination airport, will result in up to 75 percent of passengers not requiring any biosecurity processing on arrival, apart from a "free flow" detector dog screening, and random search regime for deterrent purposes.

Implementation would also involve x-ray screening of hand baggage at the departure airport for biosecurity risk goods. This would probably be undertaken at the aviation security point. In some cases, restricting the sale of certain products in departure areas may be required.

Benefits for passengers

Once operational, the concept will result in significant facilitation benefits for passengers, lower airport infrastructure costs and greater passenger processing efficiency. By facilitating people who do not pose a biosecurity risk, it encourages passengers not to carry risk goods.

There will always be a need for skilled biosecurity staff at airports, along with detector dogs and inspection technologies. The new process focuses on the use of these specialist resources on the passengers who pose the real risk. In New Zealand, less than 3 percent of passengers carry risk goods requiring seizure, and only one third have been not declared. The concept is now being widened to assess the potential benefits for risk assessment of mail prior to its arrival in the destination country.

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NZ–US bilateral discussions 2004

The annual New Zealand-United States bilateral quarantine discussions were held in Wellington and Kerikeri in January 2004. The meeting was attended by representatives from the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Phytosanitary Issues Management, and from MAF Plants Biosecurity Authority. The USDA team was led by Cathleen A. Enright, Assistant Deputy Administrator and the MAF team by Richard J Ivess, Director Plants Biosecurity.

Discussions held on the first day in Wellington continued the next day in Kerikeri, where the visitors were able to see New Zealand citrus export production and packhouse systems at first hand.

Topics discussed included the exports of citrus, persimmon, capsicum and pitaya to the United States, and the import of table grapes, grain, papaya, citrus and stonefruit from the United States. In addition, the meeting discussed joint strategies to promote changes in Japanese quarantine systems, in particular for the import of apples and cherries, and to reduce unjustified on-arrival fumigation.

USDA officials hear about insect pest monitoring procedures from Amanda Little in a citrus orchard at Kerikeri. L to R: Andrew Harty (KeriFresh), Mike Guidicipietro (USDA), Cathleen Enright (USDA), Karen Ackerman (USDA), Amanda Little (KeriFresh).

Bob Macfarlane, National Adviser, Plant Exports, bob.macfarlane@maf.govt.nz

Veronica Herrera, Manager, Plant Imports Team, veronica.herrera@maf.govt.nz

Container inspection training pays quick dividends

The implementation of the new standard for sea containers is progressing smoothly. Newly trained staff are already spotting pests which may have previously gone unnoticed.

Around 5,000 facilities are registered with MAF to unpack containers and 11,000 people are requesting accreditation to check containers.

February saw the roll-out of the online training for accredited persons to carry out biosecurity checks on low-risk imported sea containers. Within the first week over 800 people had successfully carried out the course. This is on top of the 5000 people who have been trained in classroom-based courses to date.

Having so many people trained in biosecurity awareness will bolster MAF's biosecurity inspections as an accredited person will provide an extra set of eyes and strengthen the biosecurity system. MAF continues to inspect 'high-risk' containers and biosecurity risk cargo.

Serious ant pests spotted

But recent interceptions show that low risk does not equate with no risk. Recently trained and accredited people have already found and notified a range of serious ant pests on low-risk containers. For example:

- **Green tree ants** – these can form large colonies with nests spreading over a number of trees. They are aggressive and will attack intruders. They swarm when provoked and give a painful bite.
- **Carpenter ants** – these can nest and cause serious damage to houses and buildings, telephone poles, or in other wood or wood products.
- **Crazy ants** – this is one of the world's worst invasive ant species. They can completely change community structure and species composition if infestations are large enough. They also protect honeydew-secreting bugs from predators, allowing these insects to thrive and hence have detrimental effects on plant life. They are also highly predatory on other insects.

Giant African snails intercepted

Stevedores (who have been trained as accredited persons) checking the exterior of containers on a ship in Auckland recently found giant African snails trying to slither their way into New Zealand.

The sharp-eyed stevedores who spotted these Giant African snails on a container in Auckland recently had been given biosecurity awareness training.

If the snails – which eat more than 500 species of plant and are one of the most invasive snail species in the world – became established, they could seriously damage New Zealand's vegetation.

The 21 snails, which can also carry a form of meningitis that can be passed to humans, are believed to have hitched a ride from the tiny French Pacific islands of Wallis and Futuna.

The intercepted snails ranged from 2-6cm, but can grow up to 20cm and can weigh around 1kg. They are prolific breeders. Each contains female and male reproductive organs and in a typical year an adult will lay about 1200 eggs.

The snails can live as long as nine years and cold weather is no problem – they can hibernate and survive in even snowy climates. They are originally from an area south of the Sahara in East Africa, but are now found in parts of the Pacific, where they were taken as a source of food, and in Asia.

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Saltmarsh mosquito: update

In December, the Associate Minister for Biosecurity, Hon Marian Hobbs, announced the eradication of *Ochlerotatus camptorhynchus*, commonly known as southern saltmarsh mosquito (SSM) from Napier and Mahia.

While this is a significant achievement for New Zealand biosecurity, the Minister cautioned that it was too early to be too confident.

Approval for eradication plan

The government had approved a $30 million programme to eradicate SSM around the Kaipara Harbour. This was in addition to $10.5 million programme for the eradication of SSM in Napier, Tairawhiti, Mahia and Porangahau.

Health consequences of SSM

Southern saltmarsh mosquito is a known vector for the debilitating Ross River Virus, which causes epidemic polyarthritis (inflammation of the joints). Symptoms can be wide ranging, from pain and tenderness in the muscles and joints to flu-like symptoms of chills and fevers. Most people fully recover within a month.

No locally acquired cases of Ross River Virus disease have been reported; however, people carrying Ross River Virus will regularly be present in New Zealand (e.g. people returning from Australian states where Ross River Virus is endemic). Ross River Virus disease can only be transmitted by mosquitoes – it cannot spread from person to person. However, possums and horses could act as 'bridge hosts' for the disease. Being an aggressive day-biting species, SSM also has a high nuisance value.

Southern saltmarsh mosquito: an aggressive species that attacks by day.

Eradication programme: Napier, Mahia

The eradication programmes in Napier and Mahia have been completed and the local public health service is undertaking routine monitoring of potential habitat as part of its ongoing saltmarsh surveillance. There have been no further finds in these areas.

Eradication programme: Tairawhiti, Porangahau

The eradication plan for the remaining Hawke's Bay site (Porangahau) and Tairawhiti (on the East Coast) is being implemented. Applications of S-methoprene to sites in Porangahau and Tairawhiti were completed in April 2003 and June 2003 respectively, and surveillance is continuing.

The last adult trapped in Porangahau was in June 2002 and the last larva was detected in August 2002. If no further larvae or adults are detected, eradication will be completed in September 2004. The last mosquito was detected in Tairawhiti in September 2002. If no further adults or larvae are found, eradication will be completed in October 2004.

Eradication programme: Kaipara

The Kaipara (including Mangawhai and Whitford) eradication programme is being fully implemented. Permanent sentinel surveillance sampling sites have been established at 31 locations including Mangawhai and Whitford, and sites are visited twice weekly and sampled for adults and larvae. Sites have been selected to represent known positive areas; intermittently positive areas and known negative sites and reports include community reports of unusual biting activity.

The last mosquito detected at Mangawhai was in December 2002. If no further mosquitoes are found, eradication will be completed in December 2004. The last adult mosquito detected in Whitford was in April 2002 and the last larva in November 2002. If no further adults or larvae are found, eradication in Whitford will be completed in November 2004.

New discovery: Whangaparaoa Peninsula

On 27 January 2004, following high rainfall a few days earlier, routine surveillance in the Whangaparaoa Peninsula found a number of mosquito larvae. Seventeen third instar larvae from one site next to Shakespear Regional Park were identified on 28 January 2004 as SSM. This site had been previously identified as high risk.

Delimiting was instituted on 28 January 2004 over the Whangaparaoa Peninsula and other potential habitat nearby, from Long Bay to Puhoi. To date, infestations have been found at two sites within two hundred metres of the index site, i.e. in the one location. However, a number of sites were identified as potential habitat but were dry at the time of the initial survey. Following recent heavy rain in the area, this potential habitat has been inundated and surveillance was repeated. While there were no further positive sites found, surveillance is continuing at the time of this report.

On 28 January 2004, the Associate Minister for Biosecurity agreed that actions taken in an attempt to eradicate SSM from the Whangaparaoa area are to be exempted from the provisions of Part III of the Resource Management Act 1993 as permitted by section 7A of the Biosecurity Act 1993. Treatment of 20 hectares of coastal margin in the Shakespear Regional Park was undertaken on the afternoon of 28 January 2004 to ensure the larvae in the index location were not able to mature.

It is likely that the infestation occurred from a mosquito blown or transported by mechanical transport east from the southern Kaipara to Whangaparaoa. At this stage the implications of this finding are unclear and will depend on the results of delimiting and adult trapping in the area. Once these results are available, Health officials will consider the implications of this discovery and options for action.

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Options for stepping up surveillance for exotic plant pests

Active surveillance for exotic plant pests is the key to early detection and the best possible chance for successful eradication. It can also act as an additional 'backstop' to pre-border measures preventing pests from entering New Zealand.

Most exotic pests associated with plants are detected as a result of submission of samples and reports by the general public and the scientific community to MAF's National Plant Pest Reference Laboratory (NPPRL). This is passive surveillance, and MAF is considering potential improvements to this system.

MAF currently operates several active surveillance programmes directed against specific plant pests in agriculture and forestry: fruit fly, gypsy moth and wood boring and bark beetle. Directed surveillance for forestry pests is also set up around transitional facilities, ports and small forest blocks.

Collectively, these programmes cost the tax-payer $1.75 million per annum. The fruit fly programme accounts for 57 percent of this, and the gypsy moth a further 17 percent.

Wider range of pests considered for active surveillance

These programmes are being used as benchmarks in considering the potential for applying active surveillance to other pests. MAF is considering improvements to surveillance, and this includes the possibility of implementing specific programmes targeting a wider range of exotic pests. These would involve the input of, and possible investment from, external parties. As a precursor to considering active surveillance, the MAF NPPRL has studied the range of different exotic plant pests to estimate costs of annual surveillance. In this study, a variety of different horticultural and arable pests (insects, fungi, bacteria, viruses) were selected so that a range of hosts, life cycles and biological features could be represented. The surveillance plans that were developed were based on annual field surveys. In these plans, each site was only visited once – unlike fruit fly surveillance where sites are visited every fortnight during spring, summer and autumn.

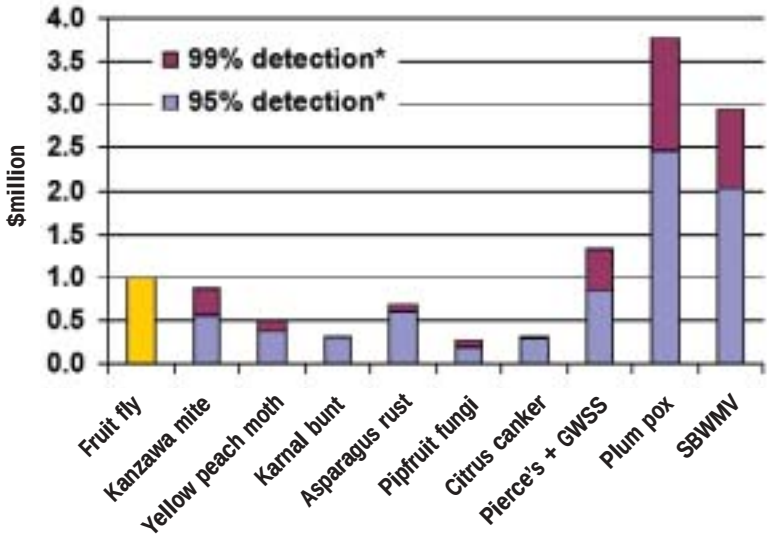

Figure 1. Estimated cost of active surveillance for high impact pests.
** given 5% incidence on any site visited.*

Estimated costs

Estimated annual surveillance costs ranged from $197,865 for three fungi of pipfruit sampled at 95% probability of detection* to $3.8 million for plum pox potyvirus at a 99% probability of detection*.

MAF also included soil-borne wheat mosaic virus, which was in fact detected in New Zealand at the end of 2003 through general surveillance. A programme for this disease based on taking leaf samples for diagnostic testing from areas of fields showing symptoms was estimated to cost $2.9 million at 99% probability (Figure 1). When random sampling was considered without searching for symptoms to bias in favour of detection, the cost at 99% probability was estimated at $22.5 million.

These costs do not include backyard surveillance in high-risk urban areas such as Auckland.

Given these costs and the number of potential target organisms, it would be unreasonable to expect a single institution to fund and deliver such surveillance programmes. Potential for active surveillance can be significantly enhanced through the involvement of affected parties (e.g. industry). Coupled with this, there is also potential to exploit existing crop management practices and identify opportunities to conduct surveillance, thus significantly reducing costs.

This information was presented in greater detail at the New Zealand Plant Protection Society conference in Christchurch, 12-14 August 2003 in two papers presented by members of MAF Biosecurity Authority and the MAF NPPRL. They can be downloaded from:

www.hortnet.co.nz/publications/nzpps/proceedings/03/03-005.pdf

www.hortnet.co.nz/publications/nzpps/proceedings/03/03-010.pdf

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Sweetcorn investigation of interest to Australian authorities

MAF Biosecurity Authority National Adviser Dr Barney Stephenson attended a meeting of the Australian Plant Health Committee (PHC) in Brisbane in December 2003. Before the 2-day meeting, MAF was invited to attend a half-day review meeting on the red imported fire ant (RIFA) eradication programme in Brisbane.

PHC meets annually and includes representatives from the Australian Government Department of Agriculture, Fisheries and Forestry, the eight state and territory departments and the Commonwealth Science and Research Organisation. The committee assists with overall coordination and policy development for endemic and exotic pest administration across Australia.

Barney presented New Zealand's country report, which included information on MAF's GM sweetcorn investigation in May 2003, an illegal plant importation, significant plant pest incursions and the National Pest Plant Accord. The report also covered MAF's simulation exercises for fruit fly and apple brown rot and industry surveillance initiatives in the past year. This formed part of a session which discussed incursions and management of significant pests.

New Zealand's experience with GM sweetcorn was of special interest, as Australia has not experienced an equivalent situation. Other discussions covered plans for incursion management, establishing pest-free areas, interstate quarantine and public awareness programmes.

Plant Health Australia, a public company responsible for developing national plant health policy in Australia, also contributed to the meeting. Of interest to MAF Biosecurity was their progress in developing an Australian plant pest diagnostic network and a laboratory accreditation scheme, and the cost-sharing agreement with industry which was close to being signed.

Included were papers on the capacity for Australian agriculture to respond to exotic pest incursions and a draft of PLANTPLAN, a national plant industry plan for incursion management.

Data presented at the RIFA meeting showed that the programme has been very successful in reducing populations of these ants to very low levels, and eradication was considered achievable.

Barney says involvement with the PHC will potentially provide significant opportunities for future co-operation, particularly in information exchange, application of science and in sharing diagnostic capacity and other specialist resources.

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Biosecurity People

Plants Biosecurity team

Christina Cundari Vieglais moved to Wellington on the day the GMO moratorium was lifted and joined Plants Biosecurity as National Adviser for New Organisms. In addition to contributing to the regulation of new organisms under the HSNO Act and assisting Plants Pest Management with management of exotic plant pest incursions, Christina will coordinate enforcement activities for the field testing, conditional release, and unauthorised release of genetically modified organisms. Christina has a PhD and MSc from the University of New Hampshire in Plant Biology, specialising in plant breeding and genetics, and BSc degrees in Biochemistry and Agronomy from Virginia Tech, Virginia.

Christina wasn't born in New Zealand, but travelled here as soon as possible, 15 years ago as a student recipient of a Fulbright Grant in plant genetics. In Palmerston North at DSIR's Climate Lab (now HortResearch's New Zealand Controlled Environment Lab), Christina characterised the inheritance of phytochrome-mediated photoperiodicity in strawberry as part of a USDA effort to develop daylength-insensitive, disease resistant cultivars bred for continuous fruit production. This project gave Christina first-hand experience with MAF's quarantine procedures, as she successfully imported 16 genotypes of strawberry tissue cultures upon her arrival to New Zealand, after completing a phytosanitary certification through USDA APHIS in Beltsville, Maryland.

Since meeting her Australian husband, David, at Kennedy Space Center in 1993, where they worked together on a global climate change project under NASA's Ecological and Environmental Programmes, the Vieglaises have gradually been moving westward. From Florida, they moved to the University of Kansas in Lawrence, where David developed The Species Analyst, a biodiversity informatics network providing standards and software tools for improving access to worldwide biodiversity data. Christina worked at Midwest Research Institute in Kansas City, developing methods for the rapid identification and characterisation of low-abundance transgenic and other novel organisms. With the expansion of The Species Analyst, Christina and David have travelled extensively, but their numerous visits back to New Zealand to visit family and friends have often been the highlight of their travels. They are avid gardeners, hikers, bikers, and sailors, so they are happy to be finally living in New Zealand.

Timely interception prevents Gypsy moth outbreak in South Island

Quick work by a Christchurch trainee vehicle inspector has prevented a potentially devastating South Island incursion of the Gypsy moth.

The living larvae and egg mass – a significant biosecurity risk – was attached to the wheel of a Japanese import vehicle. The car had been imported directly from Yokohama to Lyttelton inside a container which held five vehicles.

Vehicle inspector Elizabeth Nosegaard was only in her second week of training when she made the find during a routine inspection. The search was carried out within minutes of the container being emptied at a vehicle agent's premises in Christchurch late last month. The car was hoisted up and checked underneath with handheld spotlights. Quarantine Officer John Hinton says the eggs and larvae were

Well spotted! Innocuous to the untrained eye, this egg and larvae mass could have spawned a devastating biosecurity incursion of Gypsy moth.

hidden on the inside of the left rear tyre wall. The entire mass was transferred to a secure bag and transported to the MAF Quarantine Service in Christchurch for overnight fumigation.

The cars and container were immediately sprayed, and then everything that originally came from the container was gathered up and returned to the container where it was fumigated.

MAF's Director of Forest Biosecurity Peter Thomson says it's impossible to underestimate the significance of this find.

"Gypsy moth is one of this country's most-feared moth pests. We are in the middle of a campaign to eradicate it following the discovery of a single male moth in Hamilton last year. It's suited to cool climates and is a voracious consumer of conifers. Its impact on South Island forests could have been devastating," he says.

Director of Border Management, Neil Hyde, says the interception is a good example of how the new inspection system for sea containers is working.

"We rely on people working at the front line to be vigilant and alert to potential biosecurity risks."

www.maf.govt.nz/gypsy-moth

Biosecurity People

Forest Biosecurity group

Barry Wards has recently joined the Forest Biosecurity group in the newly created position of National Adviser, Forest New Organisms. Barry's responsibilities include the management of issues associated with new organisms (including GMOs), containment facilities, conditional and field release, particularly as they relate to forests, and the technical and operational standards associated with these. Barry previously worked as a scientist with AgResearch, at the Wallaceville Animal Research Centre in Upper Hutt, developing improved vaccines for Mycobacterium bovis, the causative agent of bovine tuberculosis. He also managed PC3 containment facilities and assisted with the management and maintenance of the small animal biocontainment facility which housed kiwis and New Zealand bats during the testing of rabbit calicivirus (RCD) prior to its unauthorised release in the South Island in 1997.

Barry has a strong interest in forests and the New Zealand environment and has been chair of the Upper Hutt branch of Forest and Bird for the past decade. He is looking forward to applying his knowledge to protect New Zealand's biosecurity.

The last *Peltoschema*

Sent packing: Peltoschema suturalis *is now officially eradicated but site surveillance will continue.*

Not every eradication programme MAF Forest Biosecurity undertakes receives dramatic press or polarises public opinion. Sometime between 2001 and 2003 the last individual of *Peltoschema suturalis* disappeared from New Zealand as quietly and unobtrusively as it had arrived. This small leaf beetle on *Acacia* species was found in Hataitai, Wellington in 2000 during routine MAF high-risk site surveillance. The response used two ground-based spray programmes (at initial detection and a year later) complemented by frequent site inspections by Vigil over the last three years. The last individual was found in late 2001.

Peltoschema is not considered a serious pest in its native Australia, but detection of the beetle at a low population level occurring on a restricted range of hosts meant that the eradication attempt was both feasible and appropriate. Since *Peltoschema* has not been detected for over two years, this insect is now considered eradicated. The host *Acacia* species will continue to be inspected as part of general surveillance at this site.

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Trans-Tasman animal welfare group meets

Snags with the uneven implementation of Australia's proposed national ban on the docking of dogs' tails was one of the issues discussed on a busy agenda of the recent meeting of the trans-Tasman Animal Welfare Working Group.

The first biannual meeting for 2004 took place in Hobart on 11 and 12 February. The group comprises representatives of all Australian states and territories, the Federal Government, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and New Zealand.

The group provides advice on welfare issues of national significance, identifies areas for research and develops national animal welfare standards through model codes of welfare. Members meet face to face twice a year, and by teleconference four times during the year.

New Zealand has participated in the working group and its predecessors since the late 1980s and shares a number of common technical areas and general policy issues, including the development of codes of welfare.

As well as the implementation of the tail docking ban, other issues on the agenda included:

- the Keniry review on the live export of animals (see below)
- the National Animal Welfare Strategy
- national collection of statistics of animals used in research, testing and teaching
- the OIE animal welfare strategic initiative and global conference
- model codes of practice: emu, camels, deer, cattle, pigs, destruction of feral animals, land transport of poultry, sheep, goats and cattle
- religious slaughter
- veterinary biologicals testing
- fish welfare
- layer hen research
- the welfare of genetically modified and cloned animals
- vertebrate pest control
- a proposed co-operative research centre for animal welfare research.

The recent Keniry review on the live export of animals, following the last year's *Cormo Express* incident, was discussed at length. One recommendation of the review was that the trans-Tasman group will have a major role in the development of a national standard for livestock exports.

New Zealand's experiences of the recent development of the code of welfare for pigs were shared as the group is about to embark on an Australian code. The next meeting will be held in June 2004.

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Cruelty to animals clue for social agencies

***First Strike,* an American campaign that aims to raise society's awareness of the links between animal cruelty and adult violence, has been established in New Zealand (*Biosecurity* 41, February 2003). The following is adapted from an article by Catriona MacLennan[1], an Auckland barrister and member of the New Zealand First Strike umbrella group. The article explains the basis of the campaign and recent steps taken to implement it.**

A strong correlation between youthful abuse of animals and adult violence has been established by more than 25 years of research in the United States. Studies have demonstrated that violent offenders frequently have childhood and adolescent histories of serious and repeated animal cruelty. Research also indicates that:

- early intervention is more likely to reduce adult crime than criminal sanctions applied later in life
- childhood behaviour is more important than teenage behaviour in predicting future violence.

In 1997, as a result of the American research, the Humane Society of the United States created the *First Strike* campaign. The campaign involves co-operation and reciprocal reporting between child protection, domestic violence and animal welfare groups in the United States. The object of coordinating the agencies' efforts is to better protect victims of violence, deal with offenders and prevent future violence through early identification of people with violent tendencies.

The American *First Strike* campaign also operates in Scotland. New Zealand has now been authorised to develop its own version to encourage inter-agency co-operation.

First Strike *New Zealand logo adapted with kind permission of* First Strike *Scotland, Scottish SPCA and printed courtesy of* First Strike *New Zealand campaign organisers.*

An umbrella group comprising representatives from Child, Youth and Family Services (CYFS), the Royal New Zealand Society for the Prevention of Cruelty to Animals (SPCA), Plunket, the Police, Women's Refuge, local councils, the New Zealand Veterinary Association and animal management services was formed in Auckland in November 2002, to explore how the organisations can co-operate.

CYFS and the SPCA are working on a protocol for co-operation and reciprocal reporting of abuse.

Moves are also underway to provide temporary shelters for the animals of domestic violence victims. Women may

[1] *New Zealand Herald,* 25 February 2003

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Update

Draft import health standards for consultation – Animals

The following draft import health standards (IHSs) have been developed by MAF Biosecurity Authority and are available for public consultation.

Submissions are subject to release under the Official Information Act (OIA). If any information in your submission is commercially sensitive or if you do not wish it to be released to other interested parties, please state this clearly with relevant reasoning for assessment in the event of an OIA request.

Malayan Sun Bears (*Helarctos malayanus*) from Australia

This is a new standard for the importation of Malayan Sun Bears into New Zealand zoological facilities from Australia. It is restricted to sun bears born and raised in Australian zoos.

Your comments on this draft import health standard are welcome and should be received in writing by **Friday 26 March 2004.**

Bovine and buffalo (*Bubalus bubalis*) embryos from Australia

The import health standard for bovine embryos from Australia has been revised to include buffalo (*Bubalus bubalis*). There is a lack of specific information about the ability of buffalo embryos to transmit bluetongue and about the effectiveness of standard embryo washing methods. The standard requires donor buffalo to be resident in a bluetongue-free area for at least 100 days prior to, and during, collection of the embryos as specified by OIE *Code*, 'Article 2.1.9.14 for *in vivo* derived embryos of ruminants other than bovine' from infected countries.

Your comments on this draft import health standard are welcome and should be received in writing by **Friday 2 April 2004.** Comments for both import health standards should be addressed to:

Jennie Brunton, International Animal Trade, Animal Biosecurity
MAF Biosecurity Authority, PO Box 2526, Wellington
fax 04 474 4227, jennie.brunton@maf.govt.nz

www.maf.govt.nz/biosecurity/consultation.htm#draft-ihs

A copy of the background paper is also available on request.

Amended import health standards for consultation – Animals

Scoured wool from all countries
Scoured and carded wool all countries
Unprocessed fibre all countries

These standards have been amended to include yak fibre. This addition is based on a background paper, which is available on request. Your comments on these draft import health standards are welcome and should be received in writing by **Friday 16 April 2004** addressed to:

Paul Berentson, International Animal Trade, Animal Biosecurity
MAF Biosecurity Authority, PO Box 2526, Wellington
fax 04 474 4227, paul.berentson@maf.govt.nz

www.maf.govt.nz/biosecurity/consultation.htm#draft-ihs

New and amended import health standards issued – Animals

The following import health standards (IHSs) have been issued by the Director, Animal Biosecurity and are available for use:

Bovine embryos from Canada and the United States

The standard has been amended to remove the following clauses regarding freedom from bovine spongiform encephalopathy (BSE):

'The donor animals must have been resident only in countries that are officially free of bovine spongiform encephalopathy'.

Both Canada and the United States are officially free from BSE.

Bovine embryos may still be imported from the United States and Canada as BSE is not transmitted in embryos.

This standard is now dated 26 January 2004 and replaces that dated 8 January 2004.

Bovine products from the United States

The following standards have been amended so that the clause relating to BSE is only relevant to bovine products:

- Dried bovine/porcine blood for human consumption from Canada and the United States
- Spray-dried bovine and porcine blood products for further processing into animal food from the United States

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Photo courtesy of the Delta Society www.deltasociety.org and First Strike *New Zealand campaign organisers.*

often be reluctant to go to refuges because they fear what will happen to pets that are left behind.

CYFS Otara office supervisor Briar Humphrey is urging training for frontline social work staff and animal welfare inspectors, and inclusion of information about the treatment of animals in the social work risk assessment carried out by social workers.

While most of these moves have so far taken place in Auckland, campaign coordinators are keen to see the programme extended throughout New Zealand.

For more information about the *First Strike* campaign in New Zealand, contact:

First Strike Campaign Coordinator, School of Natural Sciences, UNITEC, Private Bag, Auckland,
phone 09 815 4321 extn 7875,
fax 09 815 3010.

Joanna Tuckwell,
Policy Adviser Animal Welfare,
phone 04 474 4296, fax 04 498 9888,
joanna.tuckwell@maf.govt.nz

- Sausage casings for human consumption from Canada and the United States

The standards are now dated 12 January 2004 and replace those dated 12 March 2001 (EDIBLOIC.NAM & FOBLOIC.USA) and 22 May 2001(MEACASIC.ALL).

Inedible tallow from the United States

The clause requiring BSE freedom has been removed as this standard already has a statement about level of impurities including protein. The new standard replaces that dated 22 May 2001.

Shelf-stable pet foods containing bovine ingredients from specified countries

The United States has been added to the specified countries list. The new standard replaces that dated 26 August 2003.

Shelf-stable pet foods containing animal products

Under the Eligibility section, the United States has been added to the notes (NB1-5) indicating that specific standards should be used for certain products including: *Cooked pet foods, Cooked pet food ingredients containing animal products, Dry dog and cat pet foods, Dried pelleted pet foods for pets other than cats and dogs.* The new standard replaces that dated 26 August 2003.

Specified products for human consumption containing dairy products, eggs or meat

Pre-cooked heat-and-eat meals containing animal products for human consumption from Canada, European Community and the United States

Canada and the United States have been added to the clauses advising that importation of commercial consignments of beef products are subject to approval from the New Zealand Food Safety Authority (NZFSA). An additional clause states that all edible animal products must also comply with the Food Act 1981. Importers are advised to check with NZFSA prior to importation for details of the restrictions.

The standards are dated 11 February 2004 and replace those dated 20 August 2003 (EDIPROIC.ALL) and 1 November 2001 (HEAMEAIC.ALL).

Kerry Mulqueen, National Adviser,
Animals Imports and Exports, Animal Biosecurity,
phone 04 498 9625, fax 04 474 4132,
kerry.mulqueen@maf.govt.nz

www.maf.govt.nz/animal-imports

Guide for Approval of Semen Storage Centres Exporting Ruminant Semen from NZ

This document sets out the guidelines for official veterinarians when inspecting and approving semen storage centres that propose to re-export imported ruminant semen or semen that has been collected and processed at a MAF approved ruminant semen collection centre.

The Guide can be found on the MAF website:

www.maf.govt.nz/animal-exports

The consultation notice appeared in *Biosecurity* 48, 15 December 2003.

Import health standards for re-evaluation

During 2004 the MAF Biosecurity Authority proposes to review the following import health standards:

- Camelids from the UK
- Camelids from the United States

These standards will be amended to be consistent with the new standard for camelids from Australia.

- Cervine germplasm from Ireland

Import health standards revoked

Cattle from the United States dated 19 August 2002

Llamas and alpacas from the United States dated 4 September 2002

These import health standards are to be withdrawn following the detection of bovine spongiform encephalopathy (BSE) in the United States.

Codes of ethical conduct – approvals, notifications and revocations since the last issue of *Biosecurity*

All organisations involved in the use of live animals for research, testing or teaching are required to adhere to an approved code of ethical conduct.

Codes of ethical conduct approved

- AgResearch Ltd (expiry 31 December 2008)
- Ambreed New Zealand Ltd (Expiry 31 December 2008)
- Ancare New Zealand Ltd (expiry 31 December 2008)
- Auckland Zoological Park (expiry 31 December 2008)
- Bay of Plenty Polytechnic (expiry 31 December 2008)
- HyClone New Zealand (expiry 31 December 2008)
- Landcare Research New Zealand Ltd (expiry 31 December 2008)
- Massey University (expiry 31 December 2008)
- Schering-Plough Animal Health Ltd (expiry 31 December 2008).

Transfers of codes of ethical conduct approved: Nil

Amendments to codes of ethical conduct approved: Nil

Notifications to MAF of minor amendments to codes of ethical conduct

- PharmVet Solutions

Notifications to MAF of arrangements to use an existing code of ethical conduct

- Abacus Biotech Ltd (to use AgResearch Ltd's code and Invermay AEC) (renewal – code expired)
- AgriQuality NZ Ltd (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- AgVax Developments Ltd (to use AgResearch Ltd's code and Wallaceville AEC) (renewal – code expired)

- Animal Health Centre (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- Central Southland Veterinary Services Ltd (to use AgResearch Ltd's code and Invermay AEC) (renewal – code expired)
- Dairy Production Systems Ltd (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- Dexcel Ltd (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- Duirs New Zealand Ltd (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- Fort Dodge New Zealand Ltd (to use PharmVet Solutions' code)
- Horticulture & Food Research Institute of New Zealand Ltd (to use AgResearch Ltd's code and animal ethics committees) (renewal – code expired)
- InterAg (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- Kotare Bioethics Ltd (to use AgResearch Ltd's code and Grasslands AEC) (renewal – code expired)
- Livestock Improvement Corporation Ltd (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- New Zealand Institute for Crop & Food Research Ltd (to use AgResearch Ltd's code and Grasslands AEC)
- New Zealand Leather & Shoe Research Association (Inc) (to use AgResearch Ltd's code and Grasslands AEC)
- On-Farm Research Ltd (to use AgResearch Ltd's code and Grasslands AEC) (renewal – code expired)
- Parnell Laboratories New Zealand Ltd (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- PPL Therapeutics (New Zealand) Ltd (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- Suta Export Ltd (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)
- Virionyx Corporation Ltd (to use HyClone New Zealand's code) (renewal – code expired)
- Wanganui Veterinary Services Ltd (to use AgResearch Ltd's code and Grasslands AEC) (renewal – code expired)
- Xcluder Pest Proof Fencing Company Ltd (to use AgResearch Ltd's code and Ruakura AEC) (renewal – code expired)

Codes of ethical conduct revoked or expired or arrangements terminated

- Agri-Feeds Ltd
- Diverse Animal Holdings
- Elanco Animal Health
- Fort Dodge New Zealand Ltd
- Impian Technologies Ltd
- New Zealand Trade and Enterprise
- Novartis New Zealand Ltd (with AgResearch Ltd)
- PA Biologicals New Zealand
- Slacek, Dr Brigitte
- Tompkins, Dr Daniel
- Woodland Goats Ltd

Approvals by the Director-General of MAF for the use of non-human hominids: Nil

Approvals by the Minister of Agriculture of research or testing in the national interest: Nil

Linda Carsons, Senior Policy Adviser, Animal Welfare,
phone 04 470 2746, fax 04 498 9888,
linda.carsons@maf.govt.nz

Introductory period for grain operational standard ends

On 25 August 2003 MAF Operational Standard MAF Operational Standard *PIT-GFP-ISR – Grain for Processing, Import System Requirements* was approved to hold operational requirements for the management of grain before and after importation into New Zealand.

This standard is available on the MAF website at:

www.maf.govt.nz/biosecurity/imports/plants/standards/pit-gfp-isr.pdf

Importers of the main types of grains (barley, maize/sweet corn, oats, sorghum, and wheat) may only bring viable grain into New Zealand if they provide a written grain importation system (GIS) that MAF approves. Under this system of importation, grain may only enter New Zealand if mandatory requirements are met that are specified in the operational standard.

Examples of mandatory operational requirements

Transport operators who are approved by MAF may only transport imported grains from the point of arrival (entry port). Additionally, the grain may only be transported to MAF-approved transitional facilities for processing (milling) or for treatment to ensure that the grains (and any contaminants) are not viable (cannot be grown as seed for sowing). Once milling or approved treatments occur, the material is not regarded as being a biosecurity risk.

From 25 August 2003, MAF provided importers with a 6-month introductory period so that GISs could be provided to MAF for approval and importers could align their businesses with the operational standard. The period ended on 25 February 2004 but PIT-GFP-ISR provides a temporary import option for current import permit holders. Under this option, importation may continue for 3 months under strict compliance agreement conditions and total MAF supervision. However, all new importers must provide a GIS for approval before importation is allowed and an import permit is provided by MAF. Phytosanitary requirements for grains and seeds for consumption and processing must also be met and these requirements are found in the complementary phytosanitary standard:

www.maf.govt.nz/biosecurity/imports/plants/standards/pit-gfp-phr.pdf

Dave Nendick, National Adviser – Grain for Processing,
Plants Biosecurity, MAF Biosecurity Authority,
PO Box 2526, Wellington,
ph 04 474 4200, fax 04 474 4257, dave.nendick@maf.govt.nz

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Directory New organism records: 15/12/03 – 13/02/04

Biosecurity is about managing risks – protecting the New Zealand environment and economy from exotic pests and diseases. MAF Biosecurity Authority devotes much of its time to ensuring that new organism records come to its attention, to follow up as appropriate. The tables below list new organisms that have become established, new hosts for existing pests and extension to distribution for existing pests. The information was collated by MAF Forest Biosecurity and MAF Plants Biosecurity during 15/12/03 – 13/02/04, and held in the Plant Pest Information Network (PPIN) database. Wherever possible, common names have been included.

PLANTS BIOSECURITY RECORDS 15/12/2003 – 13/02/2004

Validated new to New Zealand reports

Organism	Host	Location	Submitted by	Comment
Ramularia armoraciae (no common name)	*Barbarea verna* (winter cress)	Auckland	National Plant Pest Reference Laboratory (NPPRL)	A leaf spot fungus detected in a public park. DoC has been informed of this detection.
Cercospora erysimi (no common name)	*Erysimum* sp. (wallflower)	Auckland	NPPRL	This leaf spot fungus was detected by chance in a public park. DoC has been informed of the detection.
Naohidemyces vaccinii (Hemlock – Blueberry Rust)	*Vaccinium ashei* cv. Woodard (blueberry, rabbit eye blueberry)	Waikato	NPPRL	Blueberry rust has been found extensively in the Waikato. Rust fungi are readily distributed on wind currents. DoC has been informed of this detection.

New host reports

Organism	Host	Location	Submitted by	Comment
Cercospora apii (cercospora leaf spot)	*Fuchsia procumbens* (climbing fuchsia; creeping fuchsia)	Auckland	NPPRL	Other PPIN hosts include several weed species, corn marigold, blue statice, strawberry blite, annual chrysanthemum and Bells of Ireland.
	Deutzia crenata (Deutzia)			
	Gaura lindheimeri (butterly plant)			
Pseudocercospora oleariae (no common name)	*Olearia furfuracea* (no common name)	Auckland	NPPRL	No other hosts recorded in PPIN.
Phytophthora cryptogea (phytophthora root rot)	*Verbena* sp. (verbena)	Central Otago	NPPRL	This fungus has a wide host range.
Fusarium sporotrichioides (no common name)	*Verbena* sp. (verbena)	Central Otago	NPPRL	Other PPIN hosts include banana and Douglas fir.
Gibberella avenacea (foot rot, root rot)	*Verbena* sp. (verbena)	Central Otago	NPPRL	This fungus has a very wide host range.
Phoma sp. (phoma leaf spot, phoma rot)	*Verbena* sp. (verbena)	Central Otago	NPPRL	Other PPIN hosts include tare, pear, kiwifruit, date plum, wheat, rhododendron, nectarine, onion, capsicum, asparagus, blueberry, olive, Kalgan boronia, soft tree fern, maize, Phoenix palm, *Dracaena* sp., yucca, and kawakawa.
Pleospora tarda (sooty mould)	*Verbena* sp. (verbena)	Central Otago	NPPRL	Other PPIN hosts include tomato, tare, parsley, oriental lily, cabbage, passionfruit, feijoa, asparagus, nectarine, statice, peony, chicory, Paterson's curse, Daphne, olive, spinach and custard apple.
Erwinia herbicola (bacterial rot, bacterial soft rot)	*Daucus carota* ssp. *sativus* (carrot)	Central Otago	NPPRL	Other PPIN hosts include grape, passionfruit, kiwifruit, feijoa, avocado, apricot and pumpkin.
Alternaria dianthicola (alternaria leaf spot)	*Dianthus zeyheri* (Dianthus)	Auckland	NPPRL	Other PPIN hosts include gypsophila and carnation.
Botryotinia fuckeliana (botrytis blight, grey mould, stem blight)	*Dianthus zeyheri* (Dianthus)	Auckland	NPPRL	This fungus has a very wide host range.
Fusarium anthophilum (fusarium)	*Parajubaea cocoides* (Andean coconut)	Auckland	Forest Research	Other PPIN hosts include canna lily.
Naohidemyces vaccinii (Hemlock – Blueberry Rust)	*Vaccinium corymbosum* (blueberry, highbush blueberry)	Waikato	NPPRL	Other PPIN hosts include rabbit eye blueberry.
Pseudocercospora ocimicola (Pseudocercospora leaf spot)	Glechoma hederacea (ground ivy)	Auckland	NPPRL	Other PPIN hosts include basil.
Nectria radicicola (cylindrocarpon root rot)	*Ribes nigrum* (black currant)	Dunedin	NPPRL	Other PPIN hosts include kiwifruit, capsicum, rose, olive, chrysanthemum, cabbage tree, cymbidium orchid, carrot, yam, persimmon, strawberry, tomato, apple, banana, narcissus, peony rose, avocado, *Prunus* spp., potato, wheat, blueberry, grape, arum and calla lily.
Platypus apicalis (pinhole borer)	*Diospyros kaki* (persimmon)	Auckland	NPPRL	Other PPIN hosts include river peppermint, shining gum, Spanish oak, English oak and *Eucalyptus* sp.

PLANTS BIOSECURITY RECORDS CONTINUED 15/12/03 – 13/02/04

Extension to distribution reports

Organism	Host	Location	Submitted by	Comment
Pseudocercospora oleariae (no common name)	*Olearia furfuracea* (no common name)	Auckland	National Plant Pest Reference Laboratory (NPPRL)	No other distributions recorded in PPIN.
Fusarium sporotrichioides (no common name)	*Verbena* sp. (verbena)	Central Otago	NPPRL	Other PPIN distributions include Northland and North Canterbury.
Epyaxa rosearia (common looper)	Inanimate host (packaging)	Nelson	NPPRL	Other PPIN distributions include Waikato.
Fusarium anthophilum (fusarium)	*Parajubaea cocoides* (Andean coconut)	Auckland	Forest Research	Other PPIN distributions include Northland.
Mycosphaerella ribis (septoria leaf spot)	*Ribes nigrum* (black currant)	Dunedin	NPPRL	Other PPIN distributions include North Canterbury.

Plants records: George Gill, Technical Adviser, Pest Management, MAF Plants Biosecurity, phone 04 470 2742, fax 04 474 4257, george.gill@maf.govt.nz

FOREST BIOSECURITY RECORDS 15/12/2003 – 13/02/2004

Validated new to New Zealand reports

Organism	Host	Location	Submitted by	Comment
Nambouria xanthops (no common name)	*Eucalyptus cephalocarpa* (eucalypt)	Auckland	Forest Research	Other PPIN hosts include blue gum, ribbon gum, southern mahogany, candle-bark gum, and Camden woolly-butt.
Saissetia oleae (black scale, olive scale)	*Asclepias physocarpa* (swan plant)	Auckland	Forest Research	Other PPIN hosts include squash, sweet orange, navel orange, mandarin, lemon, Meyer lemon, tangelo, grape, kiwifruit, Litchi, nashi, pear, *Cymbidium* sp., Rosa sp. and heather.
Saissetia coffeae (hemispherical scale)	*Casimiroa edulis* (white sapote)	Bay of Plenty	Forest Research	Other PPIN hosts include quince, nectarine, Japanese plum, avocado, feijoa, sweet orange, navel orange, mandarin, lemon, Meyer lemon, tangelo, grape, kiwifruit, yew and capsicum.
Dicarpella dryina (no common name)	*Quercus robur* (English oak, truffle oak)	Auckland	National Plant Pest Reference Library (NPPRL)	No other hosts recorded in PPIN.
Oemona hirta (lemon tree borer)	*Syringa vulgaris* (lilac)	Hawke's Bay	Forest Research	This insect has a wide host range.

Extension to distribution reports

Organism	Host	Location	Submitted by	Comment
Holocola sp. cf. *triangulana* (pink blackwood leaftyer, pink wattle gouger)	*Acacia longifolia* (Sydney golden wattle)	Hawke's Bay	Forest Research	Other PPIN distributions include Auckland, Bay of Plenty, Gisborne, Wanganui, Waikato and Nelson.
Nematus oligospilus (willow sawfly?)	*Salix babylonica* (weeping willow)	Kaikoura	Forest Research	Other PPIN distributions include Auckland, Gisborne, Waikato, Mid Canterbury, Dunedin, Marlborough and Buller.
	Salix fragilis (crack willow)	Marlborough Sounds		
Uromycladium alpinum (acacia rust)	*Acacia mearnsii* (black wattle)	Marlborough Sounds	Forest Research	Other PPIN distributions include Hawke's Bay and Rangitikei.
Stegommata sulfuratella (banksia leaf miner)	*Banksia integrifolia* (coastal banksia)	Marlborough Sounds	Forest Research	Other PPIN distributions include Coromandel, Bay of Plenty, Wellington, Hawke's Bay, Gisborne, Marlborough, Nelson, Northland, Taupo, Taranaki and Wanganui.

Forest records: Peter Thomson, Director MAF Forest Biosecurity, phone 04 498 9639, fax 04 498 9888, thomsonp@maf.govt.nz

ANIMALS BIOSECURITY RECORDS 15/12/2003 – 13/02/2004

Validated new to New Zealand reports: No new to New Zealand records reported for this period

Animals records: Amelia Pascoe, Programme Coordinator, Exotic Animal response, Animal Biosecurity, ph 04 470 2785, fax 04 474 4133, amelia.pascoe@maf.govt.nz

Update

Draft code of welfare for zoos

The National Animal Welfare Advisory Committee (NAWAC) wishes to advise that a code of welfare for zoos has been drafted to replace the *Code of Recommendations for the Welfare of Exhibit Animals and Information for Animal Exhibit Operators,* which was deemed as a code of welfare under the Animal Welfare Act 1999.

The draft code was released for public consultation on 25 February 2004. The draft code is available on the MAF website:

www.maf.govt.nz/animal-welfare

It may also be inspected at MAF, ASB Bank House, 101-103 The Terrace, Wellington.

The closing date for submissions is 8 April 2004. Submissions on the draft code can be made in writing to NAWAC at:

Animal Welfare Group,
MAF Biosecurity Authority
MAF, PO Box 2526, Wellington
animalwelfare@maf.govt.nz

Directory

CODES OF WELFARE – Animal Welfare Act Update	
The table below is a quick guide as to the status of the various codes of welfare as they are developed under the Animal Welfare Act 1999.	
Code	**Status**
Broiler Code	Final code issued by Minister of Agriculture on 26 June 2003
Pig Code	Final code presented to Minister of Agriculture on 25 November 2003
Rodeo Code	Final code issued by Minister of Agriculture on 4 December 2003
Layer Hen Code	Final code presented to Minister of Agriculture end of March 2004
Zoo Code	Pre-notification consultation closed on 12 December 2003. Final code to be presented to Minister of Agriculture mid 2004
Circus Code	Public consultation completed on 14 November 2003. Final code to be presented to Minister of Agriculture early–mid 2004
Commercial Slaughter Code	Public consultation completed. Final Code to be presented to Minister of Agriculture mid 2004
i Wayne Ricketts, Programme Manager Animal Welfare, phone 04 474 4276, fax 04 498 9888, wayne.ricketts@maf.govt.nz	

Exotic disease and pest emergency hotline: 0800 809 966

Animal welfare complaint hotline: 0800 327 027

www.maf.govt.nz/biosecurity