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Biosecurity: taking responsibility for our own actions

By Hon. Jim Sutton, Minister for Biosecurity

The administrative structures that control our biosecurity and border control systems are currently being changed, as we continue to roll out the Biosecurity Strategy.

You will have read in the past two issues of this magazine, columns from MAF director-general Murray Sherwin and assistant director-general Larry Ferguson, who was overseeing the implementation of the new structures that set out the processes currently underway.

These new structures are important.

Biosecurity is vital for our country’s continued wellbeing, economically, socially, and environmentally.

Almost 20 percent of our country’s gross domestic product is primary product-based. The slightest hint of any serious plant or animal disease can have material impact on all of our livelihoods. For example, the irregular scares about foot and mouth disease outbreaks have affected our currency. A recent Reserve Bank study shows the impact of a real outbreak would be devastating.

Our summer lifestyle of eating outside around the barbecue could be under threat if nasty biting insects such as the red fire ant became established here, and some of our native species could be wiped out by new aggressive pests.

The Government has responded to this: in the May Budget, baseline biosecurity funding was increased again, so that about 57 percent more is being spent on biosecurity now than was in 1999. We funded extra x-ray machines, detector dogs, and biosecurity staff.

But biosecurity is more than just the officials working at the Biosecurity Authority and in the MAF Quarantine Service: it’s something that all New Zealanders, our visitors, and our trading partners need to be part of too.

The Protect New Zealand campaign has an important part to play in our biosecurity system. It is designed to build public awareness of the importance of protecting New Zealand against economic and social consequences arising from a range of biosecurity threats.

The growing number of travellers, from an increasingly exotic range of countries of origin, and the ever-increasing volume of trade, expose us to increased biosecurity risk. We need to constantly lift our game, to even maintain our present level.

But we are not satisfied with maintaining our present standard.

New Zealand has one of the most comprehensive biosecurity systems in the world, but we must not be complacent. Our objective is continuous improvement.

We all have to take responsibility for our own actions. Following biosecurity rules should be like following traffic rules – we don’t just do the right thing for fear of being caught; we do the right thing because traffic flows better and more safely for all of us if we do.

Following basic biosecurity rules – such as cleaning clothing and shoes before coming back into New Zealand, declaring any risk material to MAF Quarantine Service officials as you come in across the border, or ringing MAF’s 0800 number if you see some weird-looking bug – need to become as ingrained as buckling up a seatbelt when we get in a car. We also have a responsibility to ensure that MAF Quarantine staff are alerted to other passengers who might be high-risk. There is a kiwi tradition of reluctance to “dob people in” but this is about the future of our country, not some schoolyard squabble.

New Zealand is a long, thin country, with a lot of coastline.

Biosecurity incursions aren’t always going to happen just around our cities, or just where MAF officials happen to be. They can happen anywhere.

No matter how good our systems are, there are always going to be some incursions, even if we stopped all trade and travel. Pests and diseases can come in on the wind, or on the tide. We can’t shrink-wrap our whole nation.

That’s why we need the eyes and ears of all New Zealanders working on biosecurity … officials can’t do it on their own, and ultimately, it’s something that affects all of us.

www.protectnz.org.nz
Deciding what the biosecurity system should deliver

New Zealand is under siege from pests, and biosecurity is as strategically important as national security, says the Parliamentary Commissioner for the Environment\(^1\). But how do we tell if we are winning or losing the biosecurity war? One of the first projects for the Biosecurity Strategic Unit has been to clarify and define the outcomes for the biosecurity system. David Wansbrough outlines some of the Unit’s thinking to date.

**Background**

In recent years, the Government has been asking the public sector to focus on ‘Managing for Outcomes’. This programme aims to improve strategy, planning, management, and reporting.

‘Outcomes’ are about changes in the state of the environment, economy or society. ‘Outputs’, in contrast, are the activities and programmes of government agencies. All departments have to publish a statement of intent that describes what changes they are seeking and explains how they are going to achieve them through their outputs.

The Parliamentary Commissioner for the Environment’s report in 2000 and the Auditor-General’s review of biosecurity in 2002 both highlighted that there were no clear goals or outcomes for biosecurity.

Not only did this make it difficult to measure success or failure, it also contributed to unclear accountabilities among agencies and meant that there were many different interpretations about the purpose of biosecurity.

The Biosecurity Strategy team and officials who worked alongside them started clarifying the outcomes and goals for biosecurity, but did not finish in time for the strategy’s release in August 2003. This work became one of the first projects for the new Biosecurity Strategic Unit.

The Biosecurity Strategy’s overall expectation is “that the biosecurity system is fully integrated, operating efficiently and transparently in an environment of continuous improvement (measure, review and refine)”. At least five steps are needed to turn this into reality:

The framework described in this article is part of the first step. It is based on feedback received during three years of

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consultation on the Biosecurity Strategy and work involving several government agencies. The other steps are work in progress. The framework will continue to evolve, taking account of feedback from each of the other steps.

**Two levels of outcomes**

The Biosecurity Strategy said that biosecurity is not an end in itself but contributes to a wide range of economic, environmental and social goals. This meant that we had to distinguish between two levels of outcomes. As well as describing what the biosecurity system needs to achieve, we also needed a higher level of outcomes that described the full range of values that New Zealanders want protected by the biosecurity system.

The higher level lists the outcomes that biosecurity contributes to. When the Biosecurity Strategy was being finalised, people coined the term ‘side-to-side biosecurity’ to refer to the full range of values that biosecurity needed to protect. The second level lists biosecurity system outcomes, which reflect the full range of biosecurity activities and interventions, and which are sometimes called ‘end-to-end biosecurity’. We have not assigned any weighting or order of priority to these lists.

**Side-to-side outcomes**

1. **Increased trade and market access for our products**

Trade has always been a major driver for biosecurity. Some of the most significant biosecurity threats for New Zealand are from diseases that would close overseas markets for our products (e.g. foot and mouth disease).

2. **Economic opportunities, growth and prosperity are maintained and enhanced**

This outcome is directly related to the Government’s goal to return New Zealand’s per capita income to the top half of the OECD. It includes protecting valued native and introduced species and protecting infrastructure (e.g. responding to aquatic weeds that affect electricity generation).

3. **Our natural and historical heritage, the integrity of ecosystems, and the character of New Zealand landscapes are protected and enhanced**

This outcome reflects a very broad definition of the environment that includes biodiversity, historical heritage, whole ecosystems that sustain life and productivity, and both natural and modified landscapes. For example, we expect heritage sites to be protected from exotic insects. It also means protecting the fundamental resources of soil, air and water, ensuring that ecosystems are healthy and sustainable, and preserving the native and natural look and feel of New Zealand (both for cultural reasons and for tourism).

4. **Human health and wellbeing are optimised**

This outcome is about human health and the broader concept of wellbeing. It includes both public and personal health.

5. **Healthy and rewarding lifestyles, freedom and respect for cultural expression, and enjoyment of the recreational value of the natural environment**

New Zealanders expect to be able to enjoy certain cultural and lifestyle freedoms – e.g. customary fishing rights, hunting, and the right to keep certain pets or garden species.

6. **Protect Maori biologically based economic and cultural resources – the relationship of Maori and their culture and traditions with their ancestral lands, waters, sites, waahi tapu, and taonga is maintained**

Maori hold significant economic interests in primary production and tourism, and therefore have an interest in robust biosecurity similar to other producers and land-owners.

In addition, the protection, sustainability and management of taonga for present and future generations are pivotal to any effective relationship between Maori and the biosecurity agencies.

**End-to-end outcomes**

1. **Border: harmful and potentially harmful organisms do not cross New Zealand’s borders and cause unwanted damage**

This outcome is about preventing damage. We subdivided it into exports, access, and border and investigation. We preferred the word “access” rather than “imports” because it highlights that the reason for strict controls on imports is to allow access to people and goods from overseas in a way that minimises damage and manages the risks. If we didn’t want those things, we would simply close the border.

continued on page 6
MAF unveils proposed details for new biosecurity structure

Detailed design proposals are on the table for the structures that will support MAF’s expanded biosecurity mandate.

An organisational design team has been working since May to finalise the details of the previously announced high-level structures (Biosecurity 53:4, 1 August 2004).

The focus of its work has been on functions, job design and job numbers that will exist on ‘Day 1’ of the new biosecurity agency (NBA), which will replace the existing Biosecurity Authority. It has also been testing the previously announced high-level structure to ensure that proposed units are sustainable over time. At the time of writing, MAF was consulting with its staff on the proposals. It expects to confirm any design changes by mid-September.

The MAF Director-General confirmed in May that:

• The new biosecurity agency structure would be based on a points-of-intervention approach.
• A new Biosecurity Strategic Unit would be established within MAF and would report to the MAF Director-General.
• There would be changes required in MAF Policy.

For further information:


Biosecurity People

Biosecurity Strategic Unit

Paul Stocks is the new director of the Biosecurity Strategic Unit.

Paul comes to MAF after 10 years with The Treasury where he held a number of roles, including five years as a member of the management team.

In his new role, Paul will report directly to the MAF Director-General for at least 18 to 24 months.

The Biosecurity Strategic Unit will have 11 staff, including secondees from the Ministry of Health and Department of Conservation. It will be responsible for developing longer-term strategic directions for biosecurity activities, coordinating biosecurity funding, evaluating performance, and servicing the governance bodies established for biosecurity.

These include the Biosecurity Ministers’ Committee, Biosecurity Ministerial Advisory Committee, Chief Executives’ Forum and the Central/Regional Government Forum.

Paul, who started at MAF on 2 August, will work closely with Barry O’Neil, Director of the new biosecurity agency, to ensure successful delivery of the Biosecurity Strategy.

The Government has tasked MAF with leading the implementation of the strategy.

Where to from here?

We used this framework as the starting point for thinking about a new structure to replace the Biosecurity Authority. It has also been used by the Foundation for Research, Science and Technology in its outcomes-based investment process for biosecurity research. These represent some significant changes, though it may take some time for them to really flow through the system.

Developing operational plans and work programmes for the new-look biosecurity agency, which will be launched in November, provides the real opportunity to give meaning to this framework. We have started developing performance measures and indicators, but we can see much more work is needed to develop a comprehensive and logically robust framework of outcomes, objectives, goals, performance measures, outputs and activities for the whole biosecurity system.

We will present some of this work on outcomes at the Biosecurity Summit in November.

David Wansbrough,
Analyst,
Biosecurity Strategic Unit,
phone 04 471 6715,
david.wansbrough@maf.govt.nz
Marine invasions have been documented in all oceans and most regions of the world. However, the extent to which invasions around polar regions (high-latitude waters) have occurred is unknown. This is particularly true for sub-Antarctic islands and Antarctic coastlines, where the potential for the transfer of invasive marine species remains virtually undocumented.

The Ministry of Fisheries’ (MFish) marine biosecurity efforts in New Zealand have largely focused on mainland port environments, especially those with international trade (see Biosecurity 39:17). But, in collaboration with the Department of Conservation (DoC), MFish has developed a Code of Practice to minimise the risk of hull fouling transfer to the sub-Antarctic Islands. In addition, DoC carries out hull inspections as part of the visitation permit process before a vessel can depart from mainland ports. These activities are the first steps in managing biosecurity threats to the ‘pristine’ waters of the sub-Antarctic Islands.

Visit to Auckland Islands

Recently, MFish Marine Biosecurity supported Pat Lewis, a PhD student at the Institute of Antarctic and Southern Ocean Studies in Tasmania, in joining a DoC visit to Auckland Island. Pat has been studying the potential hazard of marine introductions in high-latitude waters by evaluating the hulls and ballast waters of Southern Ocean research supply vessels, and by sampling some sub-Antarctic Island coastlines. The primary intent of the DoC visit was to collect baseline data for the Auckland Island marine reserve. Twelve surveys were completed from the north to the south of the Islands with a range of sheltered to exposed sites.

Pat was contracted to undertake a preliminary evaluation of the inter-tidal and near-shore sub-tidal flora and fauna, specifically looking for recognised non-indigenous species. Earlier work that Pat has undertaken on Macquarie Island identified several species never previously recorded from the island.

In the New Zealand sub-Antarctic islands, surveys focused on shallow sub-tidal communities in sheltered bays historically used by sealers, and some bays still used frequently in association with modern tourism or science activities. Six sites were investigated, including the site of the 1850-1852 Hardwick settlement, the coast-watch stations at Ranui Cove and Tagua Bay, and other anchorages such as Sarah’s Bosom and Waterfall Inlet. An additional component of the research conducted in both Macquarie Island and the Auckland Islands is to examine the population biology of suspected introductions using molecular markers to clarify the transport pathways and timing of potential invasions. Numerous passengers on research vessel’s hull

An evaluation of the organisms growing on the hull of the research vessel Tiama, which carried the research team to the island, identified numerous algae, barnacles and bryozoans. While this is not unexpected (see Biosecurity 43:7), it reinforces the potential for even well-maintained vessels to transport living organisms to these waters. Of particular concern was the association of several species with flaking paint fragments around the rudder of the vessel. Organisms attached to flakes of paint which are subsequently broken off in near-shore sub-Antarctic environments are introduced directly into the biological communities of these regions, and do not require the reproductive event that is normally essential for the liberation of invasive organisms from the attached hull fouling community. Some species are able to re-grow after they have been removed due to mechanical abrasion from the hull. However, individuals attached to paint flakes may be liberated as entire and healthy specimens with an increased probability of founding non-indigenous populations.

The emergence of these issues highlights the threats of biological invasion in high-latitude waters. We now need to identify appropriate management precautions and install monitoring programmes to determine risks.

Patrick Lewis,  
Institute of Antarctic and Southern Ocean Studies (IASOS),  
Private Bag 77,  
Hobart,  
Tasmania, 7001,  
Australia,  
phone 0061 3 6226 7645,  
fax 0061 3 6226 2973,  
plewis@utas.edu.au

Sean Cooper,  
Department of Conservation,  
Southland Conservancy,  
phone 03 214 4589,  
scooper@doc.govt.nz

Franz Smith,  
phone 04 475 5099,  
franzinho@actrix.co.nz

Chad L. Hewitt,  
Chief Technical Officer (Marine Biosecurity),  
Ministry of Fisheries,  
phone 04 494 8201,  
fax 04 494 8208,  
chad.hewitt@fish.govt.nz
Pest management strategy for koi carp in Waikato

Environment Waikato has included koi carp (Cyprinus carpio) in the Waikato Regional Pest Management Strategy (RPMS) for 2002-2007.

This change recognises the threat that koi carp pose to New Zealand’s freshwater ecosystems, the legal status of koi as noxious fish under the Freshwater Fisheries Regulations 1983 and as an unwanted organism under the Biosecurity Act 1993. The management and control of koi carp is important to Environment Waikato because of the Council’s responsibilities for water quality and biodiversity.

Koi carp have been present in the Waikato region for many years and have formed dense populations in some places. Freshwater invasive species such as koi carp are difficult to detect and hard to contain within interconnected water systems. Eradication and control tools are limited.

To assist with the management of koi carp nationally, a carp containment area was established in 1990 with the aim of halting their spread outside the containment zone. The containment zone takes in the middle to lower Waikato River and tributaries but does not cover the entire region.

Environment Waikato has developed two action plans for the control and management of koi carp. One plan runs for the remaining period of the current RPMS (3 years) and the second encompasses a longer, 10-year vision. As the management of koi carp is complicated by different legislative and agency responsibilities, both plans have been based on an inter-agency approach. This will help the parties achieve better coordination, identify common goals and undertake collaborative research, advocacy, eradication and monitoring projects. High value priority areas will be identified and it is likely a surveillance programme will be initiated. The action plans aim to minimise the spread of koi carp within the Waikato Region.

The agencies responsible for the management of koi carp in the Waikato region are attending the inaugural Central North Island interagency meeting in September. Environment Waikato is hosting the meeting. Representatives from the Department of Conservation in Waikato, Bay of Plenty, Taupo and Northern Regional office will be present, along with staff from Environment Bay of Plenty, Auckland Regional Council and Fish and Game (Waikato/Auckland). Links have also been established with relevant national level organisations and Australian agencies to promote research and information sharing.

It is hoped these actions will halt the spread of koi carp within the Waikato and help reduce the risk of its spread outside the region.

Johlene Kelly, Environment Waikato, phone 07 856 7184, johlene.kelly@ew.govt.nz

Award for presentation on willow control

A presentation, “Wild willows and other weeds in Te Henga wetland, Waitakere City” by Waitakere City Council’s Kerry Bodmin won the Rob McGuiness award for the best presentation at the recent New Zealand Biosecurity Institute conference.

As the Parks Ecology and Policy Coordinator for the Waitakere City Council, Kerry’s current work involves combating the problem of invasive willows at Te Henga, Bethells. The Waitakere River Willow Control Project has involved treating all willows from Bethells Bridge down the centre of the river to allow kayak access, with a kilometre already cleared of all willows.

Most willows are treated using a drill and inject system whereby a mix of herbicide and dye is directly injected into each tree, eliminating any spray drift and reducing the amount of herbicide used.

Herbicide is only sprayed on smaller saplings whose trunks are not big enough for the drill and inject technique.

The dead willows are not removed as they provide an ideal habitat for native plants to sprout and grow underneath while keeping invasive weeds at bay.

The progress of the willow programme is not visually apparent at first. However, kayaking down the river reveals the wetland is becoming healthy from the ‘inside out’, from the centre of the river, through the wetland, to the river banks and beyond.

Rachel Blundell, Waitakere City Council, phone 09 836 8000, extn 8461

Native vegetation regains ground as the willows in the Waitakere River die back.
Biting back against the southern saltmarsh mosquito

Eradication of the southern saltmarsh mosquito (*Ochlerotatus camptorhynchus*) has never been successfully achieved overseas. However, eradication programmes in a number of infested areas in the North Island are progressing well, with eradication due to be completed soon in a number of them. But the mosquito is not taking eradication lying down. When duck shooters hunting in the Wairau estuary were plagued by unusually aggressive mosquitoes in May this year, the first South Island infestation of southern saltmarsh mosquito was revealed.

The southern saltmarsh mosquito (SSM) can transmit the Ross River Virus disease. This disease can cause painful aching in muscles and joints and a rash, with serious symptoms lasting up to five or six weeks.

The actual disease is sometimes brought into New Zealand by people who have been in Australia. There is potential for SSM to spread the disease within New Zealand by biting infected travellers and then passing the virus on to the next person it bites. Even without the disease, the mosquito’s bite can be painful.

The Ministry of Health is running eradication programmes in known infested areas, using specialist advice and the services of contractors to carry out the spraying and surveillance. The following is an update on the programmes (see also *Biosecurity* 50:14).

**Napier, Mahia**

The eradication programmes in Napier and Mahia are now completed. Surveillance is continuing but, to date, no more SSM have been found.

**Tairawhiti, Porangahau**

Applications of S-methoprene to both sites were completed last year, and surveillance is continuing. The last detections of SSM at Porangahau and Tairawhiti were made in 2002. If no further finds are made, eradication will be completed later this year.

April 2005, and surveillance for two years beyond the date of the last detection of SSM at the site.

**Wairau incursion**

SSM have been found in lagoons in the Wairau estuarine area near Blenheim. The mosquitoes were found after duck shooters reported being bitten by aggressive mosquitoes.

Nelson Marlborough District Health Board’s Public Health Service and New Zealand BioSecure investigated the area on the seaward side of the Wairau Valley. They found specimens at all stages of the mosquito’s life cycle.

Initial delimiting surveys over about 2500 hectares have identified SSM infestation throughout the lagoon area, south of the Wairau Diversion. Surveillance also identified areas of potential habitat that was dry at the time of the delimiting survey. These areas will be surveyed after heavy rain and/or high tides have encouraged any mosquito eggs to hatch. The upper estimate of infested habitat is around 800 hectares. A small, discrete positive site was also found at Lake Grassmere.

Consultation with landowners, residents, Council staff, iwi, DOC, and other interested parties is ongoing.

Public health services throughout New Zealand are also undertaking enhanced surveillance of SSM habitat within their regions to identify if this mosquito is established anywhere else.

Once the information about the extent of the Wairau infestation, and nationwide surveillance is available, health officials will discuss the information with experts. They will identify a range of possible options to respond to the Wairau incursion (including Lake Grassmere).

Sally Gilbert,
Chief Technical Officer (Health),
Ministry of Health,
phone 04 496 2256,
fax 04 496 2340,
sally_gilbert@moh.govt.nz
Valuable skills gained from suspended Undaria eradication programme

Undaria pinnatifida (Undaria) is a large seaweed native to Japan, China and Korea that was probably introduced into New Zealand in ballast water in the mid to late 1980s. It has since spread around the coast by natural dispersal and human-mediated vectors such as vessel hulls and marine farming equipment. Undaria has recognised impacts on the environmental values that marine biosecurity aims to protect.

Previous editions of Biosecurity (Issue 34: March 2002 and Issue 48: December 2003) have provided updates on the management actions taken with Undaria. These articles explained the Ministry of Fisheries (MFish) work to collect information about vessel movements in and around Fiordland, Abel-Tasman National Park and Stewart, Chatham and sub-Antarctic Islands, and its efforts to disseminate educational material to vessel owners on the threats posed by Undaria. Previous articles also reported on a successful programme to eradicate Undaria from a vessel that sank off the coast of the Chatham Islands and the new treatment methodologies that were developed as part of that programme.

This article provides a further update on two aspects of Undaria management in New Zealand: the future level of central government management/funding and a framework for controlled harvest.

Future funding

In this year’s budget the Government announced a significant boost to marine biosecurity funding to address an acknowledged major weakness in the current biosecurity system. This boost will expand central government marine biosecurity capability and largely focus on keeping potentially damaging new organisms out.

Money invested in prevention is far more cost effective than waiting until a pest has reached our waters. This focus on prevention is a key driver for the new biosecurity system as a whole.

As a result of this shift in focus to prevention, the current nationally led Undaria management programmes will cease – including national funding for the Undaria control at Stewart Island. Aspects of the current programmes that have wider benefits will continue in specific regions, for example, vector management programmes to protect high value sites like the sub-Antarctic and Chatham Islands (see separate article on page 7 of this issue).

Valuable skills and knowledge have been gained from the nationally led Undaria programmes that have occurred to date. These include:

- The development of incursion response tools and methods. These look very promising and have potential application to benthic incursions.
- Information collected on the movement of vessels and equipment to valued areas around the country is valuable for managing human mediated spread of other marine exotic organisms.
- Increased awareness and acceptance of biosecurity responsibilities by marine stakeholders.

The skills and knowledge gained from the nationally led Undaria management programmes will not be lost.

At a national level, Undaria will continue to be listed as an unwanted organism under the Biosecurity Act. This status means that a person is still prohibited from knowingly communicating, causing to communicate, releasing or causing to release, propagating, breeding or selling Undaria under the Biosecurity Act, without the express permission of a Chief Technical Officer.

Controlled harvest

In October 2003, Cabinet directed officials to develop a policy framework to allow limited commercial harvest of Undaria in situations that contribute to the reduction of impact, control or eradication of Undaria. At the time of writing MFish was considering submissions on a draft policy framework consistent with Cabinet’s direction.

Most commercial harvesting of aquatic species is undertaken under the authority of the Fisheries Act 1996. However, as Undaria has been determined an unwanted organism under the Biosecurity Act, authorisation to harvest and sell it under the Fisheries Act will generally not be required.

The draft framework that is being developed to manage controlled harvest of Undaria uses the Biosecurity Act as the primary legislative tool. Under the framework, a person who wants to lawfully harvest and sell Undaria must seek an exemption from the Chief Technical Officer (CTO) under the Biosecurity Act.

MFish believes that the framework being developed for controlled harvest of Undaria is consistent with its status as an unwanted organism. The controlled harvest regime may provide opportunities for regional and local control efforts that may not have been otherwise feasible.

Maria Cassidy, Policy Analyst (Marine Biosecurity), Ministry of Fisheries, phone 04 494 8210, fax 04 494 8208, maria.cassidy@fish.govt.nz
Public submissions on the use of the pest control poison 1080 (sodium monofluoroacetate) have been called for by the Department of Conservation (DOC) and the Animal Health Board (AHB).

The submissions will be included with a joint application by DOC and AHB for a full reassessment of 1080 by the Environmental Risk Management Authority under the Hazardous Substances and New Organisms Act 1996.

The poison is mainly used for possum control by DOC for protection of native flora and fauna and by the AHB to prevent possums from infecting cattle and deer with bovine tuberculosis.

The application for reassessment of 1080 will be the first “major issue application” for a hazardous substance under the HSNO Act.

The grounds for reassessment, which have already been agreed by ERMA, are:
- there is a significant body of new information about 1080
- use of 1080 has increased with expansion of possum control programmes by DOC and AHB
- public interest over the use of 1080, especially in aerial application.

As well as consulting with the public and government agencies, DOC and AHB will undertake a detailed hazard classification of 1080 and an analysis of the risks, costs and benefits of its use.

To help with the consultation process, AHB and DOC have produced a public discussion document. It is available from DOC offices throughout the country and online (see below).

Following consideration of submissions, DOC and AHB expect to submit the reassessment application to ERMA in late 2004 or early 2005.

For discussion document:
- www.1080reassessment.govt.nz
- Harry Broad, Manager Strategic Issues, Department of Conservation, phone 04 471 3050, hbroad@doc.govt.nz
- Nick Hancox, Manager Communications, Animal Health Board (Inc), phone 04 474 7803, hancoxn@ahb.org.nz

Submissions close on 31 October.

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Accredited persons programme paying off

The MAF Accredited Persons (APs) checking low-risk sea containers have reported a substantial number of contaminants in the first half year of operations.

To date, more than 1000 containers with some form of contamination have been reported by APs, with contaminants ranging from minimal risk (spider webs and dead insects) to potentially high-risk items such as soil, seeds and live organisms. The live creatures found so far have included various insects, redback spiders, geckos, giant African snails and a cane toad.

An AP was also responsible for two containers of scaffolding tubing from Port Moresby being fumigated, after finding live spiders in them. Nearly two months later, when the devanned tubing was about to be put to use, contractors reported finding a dead python inside one of the tubes. The state of the dead python suggested it was killed by the fumigation.

The number of contaminated containers reported by APs each month has risen substantially as more APs have been trained. In June, slightly less than 1 percent of loaded containers checked by APs were reported to have some type of contaminant – the flipside of this, of course, is that more than 99 percent of containers were uncontaminated.

The reports from APs will be used by MAF to develop more accurate risk profiles for containers, to help better target inspections. (Finds by APs are over and above those by MAF Quarantine Officers during inspections of high and medium risk containers.)

A website is currently being developed, where APs can enter the results of their container checks directly.

A final release for the container(s) will then be emailed back by a Quarantine Officer, allowing the container to be dehired. This will eliminate the need to fax MAF hard-copy container log sheets, and speed up the turnaround time for container clearance. APs will be told by email when the website is available.

Carolyn Whyte, National Adviser, Border Risk Management, MAF Biosecurity Authority, phone 09 368 5145, fax 09 368 5148, carolyn.whyte@maf.govt.nz
The Import Health Standard (IHS) for Sea Containers came into force at the beginning of 2004. It specifies the requirements to be met for the effective management of biosecurity risks associated with the importation of sea containers and associated packaging of containerised cargo into New Zealand. Under the standard, all sea containers arriving in New Zealand are identified as high or low risk for external contamination.

Sea containers from ports in Papua New Guinea, Vanuatu and other Pacific Islands were classified under the IHS as high risk for giant African snail (GAS) and have since been shown to be high risk for ants.

High risk containers must undergo a six-sided inspection within 14 hours of discharge. However, an importer may propose alternative methods of dealing with the biosecurity risks associated with containers. If the system was judged to provide an equivalent or better standard of risk management as the existing standard, and was documented and auditable; it may be approved for use by the Director, Border Management Group.

One shipping company has been very proactive in developing risk management measures to provide an equivalent system to minimise biosecurity risks, improve the movement of containers and reduce MAF’s involvement.

Chief Container Service (CCS) is managed by the China Navigation Company and is responsible for the importation of empty shipping containers originating from the designated high-risk ports of Papua New Guinea and Vanuatu.

The equivalent system would ensure that empty containers coming from approved ports would be examined and washed off-shore with certification being provided to ensure that containers were internally and externally free of high risk quarantine pests and contamination.

This will allow the 6-sided inspections to be done by MAF-accredited staff at a facility adjacent to the port instead of being done by MAF officers on the wharf itself.

A quality system was submitted by CCS which includes measures such as pre-shipment washing, ant and snail baiting (offshore, ship holds and onshore), auditing by both PNG Quarantine (NAQIA) and New Zealand MAF, and six-sided inspections by MAF-accredited CCS employees within set timeframes.

Visit to PNG and Vanuatu by MAF

Grant Weston (MAF Quarantine Services) and Tariro Mavengere (Biosecurity Border Management Group) visited the export ports of Lae, Lihir and Port Moresby in Papua New Guinea and Vila in Vanuatu to inspect procedures, container storage and cleaning sites see how effective the quality system was.

Some fine tuning is needed but the CCS agents in each of the ports visited showed a genuine enthusiasm to implement system requirements.

No sightings of GAS were made in PNG but inspection of the port areas revealed the presence of unwanted ants, especially where containers which had previously contained food items were being washed. Two species identified were the crazy ant species Anoplolepis gracilipes and Paratrechina longicornis that have been subject to eradication campaigns in New Zealand.

One giant African snail was found in Vila by MAF in an area reserved for clean containers, therefore rendering the preventive measures (the placing of crushed coral around the area) inadequate. In this instance, baiting was recommended as a more effective control measure.

National Plant Protection Organisation (NPPO) staff in each of the ports visited also expressed their willingness to be involved in the monitoring of the performance of CCS staff, the checking of facilities and the verification of quarantine certification.

The system is currently being documented, and was presented to the Director, Border Management, for approval in August 2004.

If the system is approved, imports of containers under this system should start at the beginning of September, with an audit of the PNG and Vanuatu systems and procedures scheduled for early 2005.

The scheme is currently being extended to cover CCS containers from Noumea and the Solomon Islands.

Tariro Mavengere, Container Risk Analyst, Border Management Group, phone 09 368 0292, tariro.mavengere@maf.govt.nz

Grant Weston, Group Leader, Regional Ports (North), MAF Quarantine Services, Tauranga, phone 07 574 6583, grant.weston@maf.govt.nz
Animal welfare advice on marking wildlife

Marking of wildlife has been used by researchers for many decades to find out more about the behaviours and populations of a whole range of species. The motivations for this work can be as varied as the methods used, but the research is often related to conservation. A new guide published by the Department of Conservation will help researchers evaluate the different marking methods and apply the most appropriate method to their research.

Marking can be temporary or permanent

Some methods of wildlife marking, such as clipping of hair or fur can be temporary, while others such as branding or ear notching are permanent. And while some wildlife marking is quite subtle to the untrained eye, other methods – such as the attachment of tracking equipment or use of bright paints or dies – are highly visible.

When marked animals are seen by the public, this can provoke concerns about the welfare of the animals concerned. There are, indeed, welfare issues involved with marking wildlife, but the visibility of the marking is not always a reflection of the welfare impacts.

Some marking methods cause pain and distress at the time, and there can also be ongoing effects. For example there could be persistent infection or slow healing where tissue damage is involved. Changed appearance could have a detrimental effect on the animal’s social interactions and survival. A marked predator could be less effective as a hunter – and if it is a prey species, the marking could make it an easier target.

There are ethical considerations whenever wildlife is studied, and the welfare impacts of marking are especially relevant. Each marking method has its advantages and disadvantages, in both science and welfare terms. Scientists must weigh the benefits of their research against the possible adverse effects on individual animals, populations and ecosystems.

New guide available

Wildlife researchers and managers, and animal ethics committees reviewing their proposals, now have access to published advice on the animal welfare implications of various methods used for marking wild animals, especially amphibians, reptiles and marine mammals (cetaceans and pinnipeds).

Two volumes, commissioned and published by the Department of Conservation (DOC), have been prepared by the Animal Welfare Science and Bioethics Centre at Massey University. In part stimulated by public concern expressed about hot branding of seals in New Zealand, this venture demonstrates DOC’s desire to highlight the ethical and practical responsibilities of wildlife scientists, and the organisation’s commitment to safeguarding the welfare of New Zealand’s wild animals.

Although the titles refer to New Zealand wildlife, the information is derived from international literature and is therefore more generally relevant to research on wild animals.

Ethical and scientific responsibilities

The first volume, by David Mellor, Ngaio Beausoleil and Kevin Stafford, is

Marking amphibians, reptiles and marine mammals: animal welfare, practicalities and public perceptions in New Zealand. The 55-page booklet outlines the ethical and scientific responsibilities of researchers proposing to mark wild animals, the general considerations for wildlife marking and the importance of perceptions in maintaining public support for wildlife research.

Different methods available for marking amphibians, reptiles and marine mammals are then presented, with an explanation of specific advantages, disadvantages and safeguards for their use. The acceptability of the method in practical, biological and animal welfare terms is presented, along with the likely public perceptions of marking animals using that method.

The second volume, by the same authors, is Methods for marking New Zealand wildlife: amphibians, reptiles and marine mammals. This much larger companion book will be published shortly. It reviews, in detail, the methods outlined in the booklet.

These publications present wildlife scientists with information on the range of options available for marking animals, and also provide advice on objectively selecting the most appropriate method for a species or population. They will be of great value to any scientist considering, or actively involved in, wildlife research. They will also be of use to animal ethics committees considering applications to undertake studies that involve marking of wildlife.

Ngaio Beausoleil, David Mellor and Kevin Stafford, Animal Welfare Science and Bioethics Centre, Massey University, Palmerston North

http://animalwelfare.massey.ac.nz
Epidemiology and live exports highlighted at Australian veterinary science conference

The Animal Welfare Chapter of the Australian College of Veterinary Scientists held its 4th conference in July 2004, in association with the College Science Week, in Surfers Paradise, Australia. Dr Wayne Ricketts, who attended from MAF Biosecurity Authority’s Animal Welfare group, reports on this year’s scientific programme.

The Australian College of Veterinary Scientists provides an opportunity for recognition of advanced professional skills and proficiency for veterinarians. The College conducts post-graduate examinations in a range of subjects, including animal welfare.

The Chapter’s scientific programme this year included presentations on:

- advances in animal welfare in New Zealand
- assessment and alleviation of distress from disbudding and dehorning in cattle
- a perspective from ‘Animals Australia’
- Australia’s new National Animal Welfare Strategy
- welfare of livestock during export
- definition and measurement of animal welfare; and
- the use of epidemiology to assess animal welfare.

The use of epidemiology in welfare

Dr Laura Green, from the University of Warwick, UK, presented two papers on the application of epidemiology to measuring animal welfare. How we measure welfare remains problematic. While there are a number of different measures currently used, interpretation of results may vary.

Epidemiology can be defined as the study of welfare in populations. It has appeal in that it has both ethical and practical advantages. While epidemiology cannot identify the causal factors for abnormal behaviours, it can identify relevant risk factors. For example, straw and low stocking densities reduce the occurrence of tail biting in pigs.

Epidemiology also has an advantage when studying a condition which has a relatively low prevalence and for which developmental studies would require large numbers of experimental animals, or where it might be considered unethical to induce a behaviour experimentally, e.g. feather pecking in hens.

Cross-sectional studies may lead to the identification of previously unsuspected associations and be used to provide advice to farmers. For example, from the results of a feather pecking cross-sectional study indicating that a change in diet increased feather pecking in hens, advice might be given to increase trough space, provide more food, encourage exploratory pecking elsewhere or mask novel diets with familiar odorants.

While assessment of welfare per se is not epidemiology, it is a useful adjunct to the process and worth incorporating into a multidisciplinary approach to the measurement of animal welfare.

The export of livestock by sea

Professor Clive Philips, the newly appointed Chair of Animal Welfare at the University of Queensland, presented a number of initial findings from a current study on the welfare of sheep and cattle during export by sea.

There are a large number of stressors for stock throughout live export. During the preloading period, animals need to become acclimatised to the stocking density, which is greater than normally experienced on farm. They may be subject to rough handling and cold weather during this period, which is believed to predispose animals to salmonellosis.

During the voyage, animals may suffer from heat stress, especially if they depart during winter. This can be exacerbated if animals are travelling in enclosed decks, which most of the ships now have. Stocking densities on board may contribute to less time being spent lying down because of a fear of being trampled. The amount of time lying down will also be affected by the presence of the ship’s crew and stockmen, although animals generally become acclimatised by the first week.

Professor Philips is using this study to develop a system of objective ways of measuring the welfare of livestock being exported by sea.
New Zealander appointed to Board of world animal protection charity

Royal New Zealand Society for the Prevention of Cruelty to Animals (SPCA) president Peter Mason was elected to the international Board of Directors of the World Society for the Protection of Animals (WSPA) in London during June.

WSPA is the world’s largest federation of animal protection organisations, and is recognised by the United Nations. It works to raise the standards of animal welfare throughout the world, and develops animal welfare programmes in partnership with over 450 member societies in more than 115 countries. WSPA’s animal welfare programmes include a mix of direct field work, campaigning, education and training, and member society development.

WSPA’s international Board of Directors is largely composed of representatives from the world’s largest and most influential animal welfare organisations. At a time when New Zealand is well represented in international animal welfare circles, such as in animal welfare research, veterinary science and government policy, it augurs well for New Zealand to also be represented on a major international animal welfare NGO.

The board confirmed four specific areas of priority for WSPA’s activities during 2004 – 2008:

- **Companion animals:** responsible pet ownership, humane stray management and preventing cruelty.
- **Commercial exploitation of wildlife:** intensive farming, and cruel management and killing of wild animals for food or products.
- **Farm animals:** intensive farming, long distance transportation and slaughter of domestic animals for food.
- **Disaster relief:** providing relief to animals in distress from man-made and natural disasters.

Attendees also discussed WSPA’s global campaigns, such as that opposing whaling. This campaign is a direct response to intense pressure from pro-whaling nations to overturn the current moratorium protecting whales.

The issue was discussed at the recent International Whaling Commission (IWC) meeting in Sorrento, Italy. WSPA worked closely with those governments committed to retaining the moratorium, and in particular with New Zealand’s Whaling Commissioner, Sir Geoffrey Palmer. Sir Geoffrey was successful in putting whale welfare back on the agenda at the IWC after it had been dramatically dropped at the previous year’s meeting. This was an important victory for whale welfare, and one which was championed by New Zealand with the support of international NGOs such as WSPA.

Peter joins the Board under the leadership of Dr Hugh Wirth, president of RSPCA Australia, who was elected international president of WSPA at the meeting.

Peter Mason, President, Royal New Zealand Society for the Prevention of Cruelty to Animals, Wellington, president@rnzspca.org.nz

Animal welfare leaders honoured

MAF Biosecurity Authority offers its congratulations to the chairs of the National Animal Ethics Advisory Committee and the National Animal Welfare Advisory Committee, and to the chair of the UK Farm Animal Welfare Council, on their recent honours for services in their respective fields.

**Wyn Hoadley QSO, chair of the National Animal Ethics Advisory Committee**

Mrs Wyn Hoadley, who is completing her second term as chair of the National Animal Ethics Advisory Committee (NAEAC), was appointed a Companion of the Queen’s Service Order, for Public Services, in the 2004 Queen’s Birthday Honours announced on 7 June.

Mrs Hoadley is a North Shore city councillor and a practising barrister. She is the Chancellor at Auckland University of Technology and chairperson of the Comprehensive Health Charitable Trust. She was also chairperson of the Trustees of the National Library of New Zealand, from 1989 to 2000.

Under Mrs Hoadley’s chairmanship, NAEAC has made significant contributions to improving the welfare of animals used in research, testing and teaching. This work has included making recommendations for legislative change and the introduction in New Zealand of the Three Rs Award (reduction, refinement and replacement of the use of live animals) for excellence in the humane use of animals in science.

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A recent trip to the Central Science Laboratory in York, Great Britain was a worthwhile experience for Kathryn Hurr from the Plants Biosecurity group.

Two days were spent working with scientists in the GMO (genetically modified organism) detection laboratory, using advanced real-time polymerase chain reaction (PCR) technology. Kathryn also spent two days with the GM Inspectorate, the delegated statutory authority for enforcement of the Deliberate Release legislation in England and Wales. One day was spent conducting field inspections of wheat, barley and oilseed rape.

“Britain doesn’t grow a lot of sweet corn or maize,” says Kathryn. “Oilseed rape (Brassica napus var. oleifera) tends to be the crop most likely to contain a GM presence.”

The GM Inspectorate has built up a comprehensive seed auditing programme, to ensure that seed companies are exercising due diligence in minimising the risk of adventitious (unexpected) presence in conventional seed.

“The Inspectorate relies heavily on production history records and quality assurance documentation, and not so much on PCR testing,” says Kathryn. “This is partly because they don’t use a network of competent accredited laboratories, so the reliability of the PCR testing certificates they receive is often a bit questionable.”

The Inspectorate is very interested in the New Zealand system of accredited laboratories, and is investigating whether it could adopt a similar system.

“In Europe however, much of the marketed seed is first exported to and then re-distributed from Holland, and this could create a burden of testing costs for Dutch seed companies,” Kathryn notes.

Kathryn Hurr, MAF Plants Biosecurity, phone 04 474 4157, kathryn.hurr@maf.govt.nz

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Professor David Mellor, chair of the National Animal Welfare Advisory Committee

Professor David Mellor was awarded the New Zealand Veterinary Association’s 2004 President’s Award, at the NZVA’s annual conference in June 2004. The Award was made in recognition of Professor Mellor’s contribution to the New Zealand veterinary profession, through his research, scholarship, teaching and his advisory role and international promotion of the humane and responsible treatment of animals.

Professor Mellor is the founder and director of the Animal Welfare Science and Bioethics Centre at Massey University, and was appointed as Professor of Animal Welfare Science and Professor of Applied Physiology and Bioethics at the University in 1998. His research areas include perinatal and stress physiology and numerous aspects of animal welfare science. International activities include membership of the Office International des Epizooties (OIE) 6-member Working Group on Humane Livestock Slaughter.

Professor Mellor is currently chair of the National Animal Welfare Advisory Committee and is a former member of the National Animal Ethics Advisory Committee.

Dr Judy MacArthur Clark CBE, Chair of UK Farm Animal Welfare Council

Dr Judy MacArthur Clark has been a frequent visitor to New Zealand during recent years in her role as chair of the UK Farm Animal Welfare Council, the body which advises the UK Government on all matters relating to farm animal welfare. In the Queen’s Birthday Honours List in June 2004, Dr MacArthur Clark was appointed a Commander of the Order of the British Empire (CBE), in recognition of her services to animal welfare.

After graduating from Glasgow University Veterinary School, Dr MacArthur Clark worked for the Universities Federation for Animal Welfare (UFAW) for two years and then for 16 years in the area of research animal welfare.

In 1991, she set up her own consultancy, providing advice on animal welfare and ethics in a wide range of fields. Nowadays, in addition to her role on FAWC, she is a member and Past-President of the Council of the Royal College of Veterinary Surgeons (RCVS). Dr MacArthur Clark has also played a pivotal role in the development of the UK Animal Health and Welfare Strategy.
Mosaic virus detected in Canterbury wheat field

Soil-borne wheat mosaic virus (SBWMV) was detected in a Canterbury winter-wheat field in December 2003. MAF’s investigation has not been able to establish how SBWMV entered New Zealand and it is likely that it has been present but undetected for a number of years.

The disease was identified by MAF after industry submitted samples for diagnosis of unusual symptoms. As a result, presence of this potentially significant disease has been recorded in time for future management arrangements to be formulated and implemented. These will principally involve research and extension.

**Significant yield losses possible**

SBWMV can affect wheat, barley and rye. Symptoms of the disease include pale green-yellow streaking on leaves and leaf sheaths, differing degrees of stunting and increased tillering and rosetting. The disease can result in significant reductions in grain yields in susceptible varieties. Occurrence tends to be patchy in crops, with percentage incidence increasing with time if successive susceptible crops continue to be planted. Symptoms of the disease are often most noticeable in the spring and may fade as air temperature increases. The disease is often associated with damper areas of fields, and may be confused with other diseases and conditions of wheat.

The virus is spread by the spores of the fungus *Polymyxa graminis*, which is present in pastures in the central and lower North Island, Westland, Canterbury and Southland. The fungus has a wide host range and the resilient spores can survive in the soil for at least 20 years. These spores enable the fungus and potentially any associated SBWMV particles to be spread in soil, for example on machinery, footwear, wind-blow and surface water. Wheat seed is not known to spread the virus.

**Hygiene best control option**

Plants infected by the virus cannot be cured. Containment of the virus via chemical control of its fungal vector is not practical due to the long periods of time that elapse between the first arrival of the virus in a field and its detection, and the wide range of problems and expense associated with chemically treating large volumes of soil. Eradication in the field has not been achieved overseas. The most effective method of control is to reduce the rate of spread of infected soil through use of hygiene measures when moving between fields or properties. Planting cereal varieties resistant to the disease will reduce grain yield losses.

MAF has been consulting with the Foundation for Arable Research, Crop and Food Research Ltd and affected growers on management of this virus.

**Biosecurity People**

**International Animal Trade**

**Wendy Newsham** joined Animal Biosecurity’s International Animal Trade (IAT) team as a technical adviser in July.

Wendy graduated from Massey University with a Bachelor of Education in 1991 and taught for almost 10 years. For the last four years she has been working as a small animal veterinary nurse while completing her Certificate in Veterinary Nursing. The IAT team is responsible for the negotiation and communication of animal health conditions for international trade. Wendy will provide administrative and technical support for various animal portfolios.

Wendy replaces **Paul Berentson** who resigned to commence sound engineering studies in Auckland.

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Vaccination of livestock in the event of a serious exotic disease outbreak is gaining favour over the traditional strategy of mass slaughter. Photo by Bill Gibson.

Exotic disease vaccines in spotlight as mass slaughter loses favour

Vaccination is one of the tools available to respond to an outbreak of an animal exotic disease. Although the details of decisions are specific to each response, MAF is ensuring that vaccination is an available option against key exotic animal diseases.

Internationally, the mass slaughter of animals to control and eradicate animal exotic disease outbreaks is becoming increasingly unacceptable. This trend is driven by ethical, ecological and economic considerations. A recent OIE (Organisation International des Epizooties, World Animal Health Organisation) conference on the control of infectious diseases by vaccination has also added weight to this view. Two key recommendations were that the OIE develop vaccination policies as an alternative to the mass slaughtering of animals and that vaccines should be manufactured, tested and approved to OIE standards.

In New Zealand, the development of technical response plans against exotic animal diseases has also increasingly reflected this view. Since 2001, New Zealand’s policy has been that any exotic disease vaccines should be registered for use in New Zealand. MAF would be the registrant, and the chief technical officer would control use of the vaccine under section 123 of the Biosecurity Act.

MAF has identified three exotic diseases for which vaccines will be pre-registered and arrangements made for access to an adequate supply for use during an exotic disease outbreak. The diseases are anthrax, equine influenza and foot and mouth disease.

Anthrax

MAF Biosecurity submitted a registration application to the Agricultural Compounds and Veterinary Medicines (ACVM) Group of the New Zealand Food Safety Authority in May 2004, to fully license Anthrax Vaccine (Living Spore Sterne Strain) manufactured by the Colorado Serum Company, United States. The objective of the draft anthrax technical response plan is to break the cycle of anthrax infection with a combination of vaccination, antibiotic therapy, vector control and the isolation of herbivores from infected sites. Vaccine is necessary to reduce the number of anthrax spores produced and thus potentially remaining for years in the environment.

Equine influenza

MAF Biosecurity filed a second application to ACVM in June 2004, to fully register Equilis IPA influenza vaccine. The equine influenza technical plan recommends that all horses on infected places be vaccinated using an approved inactivated multivalent vaccine if a suitable vaccine is available. Currently three strains of equine influenza virus are considered essential: equine-1 (H7N7); European equine-2 (H3N8) and American equine-2 (H3N8). There are four manufacturers of such vaccines. It seems likely that several products may need to be registered in order to guarantee sufficient supply for an emergency suppressive vaccination policy during an incursion response.

Foot and mouth disease (FMD)

As previously reported (Biosecurity 50:9, 15 March 2004) the FMD International Vaccine Bank, of which New Zealand was a member, closed on 30 June 2004. The European Community has granted New Zealand temporary and conditional access to its reserves of foot and mouth disease virus antigens until 31 December 2004, by which time New Zealand’s own arrangements for reserves of foot and mouth disease virus antigens should be in place.

A request for tender for the establishment of a New Zealand FMD vaccine bank was sent to qualified FMD vaccine manufacturers in August 2004. Technical specifications require registration with ACVM, allowing New Zealand the full scope of options for a response: vaccinate-to-live, vaccinate-to-salvage or vaccinate-to-slaughter.

However, a revamped FMD international vaccine bank has also been proposed and New Zealand must consider the benefits of becoming a member, to complement its own bank arrangements. A working group has been established to revamp the bank in a corporate manner. New Zealand will meet with other potential members in October 2004 to review the proposed new treaty.

If it is decided to go ahead with the revamped bank, parliamentary processes for member countries are expected to take up to two years to complete.

Dorothy Geale, Programme Coordinator, Animal Exotic Disease Response, phone 04 498 9884, gealed@maf.govt.nz
Better animal and animal product traceability is being demanded both in New Zealand and by international trading partners. A new working party, led by industry and including New Zealand Food Safety Authority and MAF representatives, has set out to develop a collective way forward for New Zealand.

Improved traceability an international trend

The trend is for tracing systems increasingly to be mandated in international trade and for farms, distributors and processors to adopt more integrated management information systems. The foot and mouth disease response in the United Kingdom in 2001, concerns over bovine spongiform encephalopathy (BSE) and issues of residues in meat have led a number of countries to look more closely at their systems for tracing livestock and their associated products. Australia is adopting a National Livestock Identification System (NLIS) using radio tagging of stock and tag readers to track movements. The United States is investing heavily in the USA Animal Identification Plan. Japan, Uruguay, the European Union, Brazil and Canada all have various forms of traceability systems in place.

The New Zealand situation

New Zealand already has a number of independent systems that have been developed by Government and private industry to enable the tracking of an animal or a product batch back through the production chain for reasons of biosecurity, food safety or productivity. Examples of this include the ear tagging system for cattle and deer used by the Animal Health Board for the national pest management strategy against bovine tuberculosis, and the more comprehensive MINDA system administered by the Livestock Improvement Corporation to track genetics and milk production in the dairy sector.

MAF and the New Zealand Food Safety Authority have particular interests in the protection of animal and human health and being able to provide official assurances in trade. They also want to work with industry to facilitate common standards for issues such as specific market access and on-farm benefits. Many of the benefits from tracing systems principally accrue back to the owners of stock and products. An example of this is the growing consumer preference for organically grown produce.

Discussion paper

MAF and the New Zealand Food Safety Authority jointly commissioned David Moore of LECG Asia Pacific and John Hellström of Biosecurity Limited to develop a discussion paper that explored current and future issues for traceability in New Zealand.

The discussion paper, Support information systems for animal tracing, was distributed in March 2004. Twenty three submissions were received and a Review of position post submissions, 30 June 2004, has now been published. Although there was a divergence of views on many matters, there was general agreement on the need to work together to move animal and animal product tracing in New Zealand forward.

Where to now?

A consortium of interested organisations and sector representatives including the Meat Industry Association, Meat and Wool New Zealand, Federated Farmers, Dairy Insight, Deer Industry New Zealand, Pork Industry Board and Fonterra have come together with representatives from MAF and the New Zealand Food Safety Authority to form an Animal Identification and Traceability Working Group.

This working group is developing strategies to improve animal and animal product tracing in New Zealand. They have recognised the divergence of views in submissions and decided, as their first step, to develop an overarching set of principles that are acceptable to all the interested parties, before addressing details for any particular industry. They have noted that New Zealand’s way forward must be flexible enough to cope with different industries’ farming systems, cost and benefit structures, market pressures and willingness to engage on this issue. The first species to be addressed in detail are cattle and deer but traceability and animal identification needs for sheep, pigs, horses and goats will also be taken into account.

Susan Keenan, National Adviser, Biosecurity Coordination, phone 04 470 2745, susan.keenan@maf.govt.nz

For the original discussion document and post-submission review:

www.maf.govt.nz/biosecurity/consultation.htm#review
Scientists working with Crown Research Institutes (CRI) and other science organisations are often the first to discover a new biosecurity incursion. Reporting the find to MAF quickly can greatly increase the chance that the pest can be controlled or eradicated before it has the opportunity to significantly affect New Zealand’s flora and fauna.

A good example of this advice in action was the recent discovery of Florida red scale (Chrysomphalus aonidum) in the Auckland Domain Gardens. Florida red scale is a citrus pest, and is found on the leaves, stems, fruits or pods of affected plants. It is a small insect up to 2mm in diameter, hidden under a conspicuous dark purplish brown circular cover with a paler margin and a chestnut brown central spot.

It was perhaps fortunate for New Zealand biosecurity that Rosa Henderson of Landcare Research in Auckland decided to visit the Auckland Domain recently. Rosa works in the New Zealand Arthropod Collection (NZAC), New Zealand’s largest collection of insects and other land invertebrates as a curator and taxonomist for scale insects, aphids and whiteflies. With a sharper eye than most for the unusual in the insect world, Rosa noticed a plant covered in armoured scale insects.

“I guess it’s my curiosity and having my ‘eye in’ for scales that made me home in on the infestation,” says Rosa. “Four days later, with the leaves under the microscope, alarm bells rang in my head. These scales looked like some I have had from the Pacific Islands and not anything recorded for New Zealand.”

Rosa reported the find to MAF’s National Pest Plant Reference Laboratory (NPPRL) when she had checked the species identification by slide-mounting some specimens for examination under the compound microscope. She was then asked to help show the MAF staff the Florida red scale in the Domain nursery and survey other plants in the glasshouses.

After the find, MAF implemented containment measures and an insecticide treatment programme for the site. MAF’s investigation concentrated on tracing the most likely sources of the infestation, which turned out to be Draecena plants purchased from a nursery also operating as an importer. Analysis of information shows that there has been an association of scale insects with this pathway and MAF is reviewing the insecticide and inspection requirements for imported plants as a result.

Rosa says she reported the Florida red scale for several reasons. “I know it’s a legal responsibility to report and also Florida red scale is a pest scale with a wide host range including citrus. I would also not be able to subsequently publish this species in a checklist as present in New Zealand without telling MAF about it.”

Barney Stephenson, of MAF’s Plants Biosecurity team, says a recent amendment to the Biosecurity Act places legal obligation on people to report suspect cases of new exotic pests to MAF.

“Early reporting by an extremely well tuned, astute network of observers who are able to let MAF know of any unusual sightings of a pest increases the chance that MAF’s follow-up efforts will result in containment of an early detection,” Barney says.

Rosa concludes: “I think common sense has to be uppermost. A known pest must be reported, directly and promptly. If nothing else, if MAF can prevent further border incursions because of this find, then that’s all good.”

Biosecurity People

Peter Webb was recently appointed National Programme Manager, Post Border. This is a new role, which pulls together all the MAFQS post-border activities, including the implementation of grain processing, bulk fertiliser and the new treatment standards as well as managing all transitional and containment facilities. Peter is a former sheep and beef farmer from the Taranaki hill country. He joined MAF Quarantine Service as a Quarantine Officer at Auckland International Airport in 1997 and has been a Biosecurity Officer for the last five years, auditing animal containment facilities in the Auckland and Waikato region.

Peter manages his nationwide team of 13 Biosecurity Officers from his base at Ruakura.
Dr Mike Ormsby, National Adviser, Forest Biosecurity, visited Delhi recently to discuss with Ministry of Agriculture officials India’s acceptance of phosphine as an alternative fumigant for Pinus radiata logs exported from New Zealand to India. The visit, funded jointly by industry and government, also provided an opportunity for a first-hand look at the Mumbai-based manufacturing facility for phosphine.

New phytosanitary requirement

The visit was prompted by India’s surprise introduction of new phytosanitary measures for imported logs. Initially introduced on 1 January 2004, but subsequently delayed until 1 April, the new measures required all imported logs to arrive in India already treated by methyl-bromide fumigation. Prior to 2004, New Zealand logs going to India did not require fumigation. In the year to March 2003, New Zealand exported just over SNZ27 million worth of Pinus radiata logs to India.

Methyl bromide is an ozone-depleting gas and under the Montréal protocol non-quarantine use in developed countries has been banned and/or severely restricted from 2005 and quarantine use capped to 1991 levels. About 40 percent of New Zealand’s consumption of methyl bromide is used for the pre-shipment treatment of forestry products to meet quarantine requirements.

Methyl-bromide fumigation currently costs about SNZ3 per m³ fumigated. The alternative, and equally effective fumigant, phosphine, can cost as little as 10 percent of this. The Ministry of Agriculture in India has refused to accept phosphine fumigation as being equivalent to methyl-bromide fumigation for New Zealand exported Pinus logs until sufficient evidence has been provided that demonstrates phosphine would protect as well as methyl bromide.

Research of the efficacy of phosphine fumigation

The New Zealand forestry industry, through the Forest Produce Exports Committee and the Forest Owners’ Association, has undertaken considerable research in recent years to verify the efficacy of phosphine fumigation on New Zealand Pinus radiata logs. Results of this and related work completed to date have demonstrated with considerable confidence that phosphine is an effective log fumigant and is as effective as – and possibly more effective than – methyl-bromide fumigation.

Results have shown that phosphine gas, when applied at a minimum of 200 parts per million (ppm) for 10 days at greater than 15ºC, will kill all life stages of pests not already present in India and likely to be associated with Pinus radiata logs exported from New Zealand within 6 weeks of harvest. The list of pests considered by MAF to require treatment include: Arhopalus ferus (burnt pine longhorn beetle), Prionus reticularis (huhu beetle), Hylastes ater (black pine bark beetle), and Hylobius abietis (bark beetle). Exposure of egg, larvae, pupae and adult life stages of all of these pests either directly or in-situ (in logs) to phosphine gas at 200 ppm resulted in death, often within 48 hours of exposure. A report was prepared by MAF in association with Frontline Biosecurity Ltd, detailing the research findings and presented to the Ministry of Agriculture in India.

Outcomes of visit to India

The meeting at the Ministry of Agriculture in Delhi was attended by Mr Ashish Bahuguna, Joint Secretary, and Mr Amand Shah, Deputy Secretary, Department of Agriculture and Cooperation, Ministry of Agriculture; Dr OR Reddy, Joint Director, Dr Chandurkar, Plant Protection Adviser, and Mr Ansari, entomologist, Directorate of Plant Protection, Quarantine and Storage.

Mr Ashish Bahuguna set a positive tone for the meeting expressing India’s need to import logs and describing their position as open to alternative treatment methods if they met India’s requirements. Much of the meeting was devoted to a technical exchange between the Indian scientists and Dr Ormsby. The meeting provided for New Zealand the opportunity to demonstrate that we were considering India’s requirements carefully and taking considerable steps to provide valid and comprehensive evidence supporting our suggested alternative treatment.

The participants indicated that they had considerable support for the acceptance in principle of alternative treatments and appreciated the efforts New Zealand had made to validate this proposal.

Opportunity to maintain dialogue

The opportunity open for New Zealand now is to maintain the dialogue with Indian officials to ensure that the momentum provided by the visit of Dr Ormsby is not lost.

To this end, MAF and MFAT will continue encourage the relevant Ministry of Agriculture officials in India to provide New Zealand the opportunity to answer any remaining queries they may have on the suitability of phosphine as an alternative to methyl-bromide fumigation.

The visit by Dr Ormsby to the phosphine-related research laboratories (United Phosphorus Ltd and Jai

continued on page 22
Suppose a lion escapes from the zoo. Keepers, police, animal control and others are mobilised to recapture the beast and that’s the end of the story, right? Well, not quite.

Within 24 hours, a Biosecurity Officer from the MAF Quarantine Service Post Border Group will begin an investigation to find out how the escape happened and what needs to be changed to prevent a repeat occurrence.

A zoo is an animal containment facility. Most of the animals in the zoo are classified as ‘new organisms’ by MAF Biosecurity import health standards, and as such, are required to be strictly contained within the facility while they are in New Zealand. Animal containment facilities are audited annually by a MAFQS Biosecurity Officer. This involves an overview of the whole system, including keeper training, procedures and internal audits, and overall security, followed by verification that procedures are working by a physical audit.

As well as zoos, aquariums and wildlife parks, MAFQS Biosecurity Officers audit laboratories at universities and other research facilities and supervise all genetic modification work performed in New Zealand, ensuring it is carried out under a valid ERMA approval and the appropriate controls. The MAFQS Post Border Group reports to ERMA through the MAF Biosecurity Authority, and comments on all ERMA new organism applications. Compliance Auditors for transitional and sea container facilities and Plant Quarantine Inspectors are also part of the Post Border Group.

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Research Foundation) and the United Phosphorus Ltd chemical manufacturing plant at Vapi north of Mumbai was both interesting and informative. The Ministry of Agriculture officials in Delhi where made aware of the use by New Zealand of phosphine supplied by a company in India and the important role United Phosphorus Ltd was playing in researching the interaction between phosphine and Pinus radiata logs. Special thanks to the following for their support of the visit to India:

- New Zealand Ministry of Foreign Affairs and Trade, Trade Access Support Programme
- New Zealand Forest Industries Council, Wood Processing Strategy Trade Advisory Group
- Dr Gordon Hosking of Frontline Biosecurity Ltd
- United Phosphorus Ltd (Mumbai and New Delhi offices)

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: Nil
Transfers of code of ethical conduct approved: Nil
Amendments to codes of ethical conduct approved: Nil
Notifications to MAF of minor amendments to codes of ethical conduct: Nil
Notifications to MAF of arrangements to use an existing code of ethical conduct:
- Bomac Research Ltd (to use PharmVet Solutions code and AEC)
- Elanco Animal Health (to use PharmVet Solutions code and AEC)
- Neuren Pharmaceuticals Ltd (to use the University of Auckland’s code and AEC).

Codes of ethical conduct revoked or expired or arrangements terminated:
- Bomac Laboratories Ltd
- Neuronz 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
New import health standards

Surgical catgut from all countries

This import health standard has been amended so that it does not refer to the list of countries that are free from bovine spongiform encephalopathy (BSE) and scrapie. However, the government veterinarian must certify that the importing country is free from BSE and scrapie according to the OIE Terrestrial Animal Health Code. The requirement for the notarisation of the manufacturer’s declaration has now been removed. Catgut of all sizes now requires certification. This new standard is dated 5 July 2004 and replaces that dated 19 January 1998.

Camel meat and meat products for human consumption from Australia

The requirement for veterinary certification has been removed following clarification that the “Australian Standard for Hygienic Production of Meat for Human Consumption” applies to meat and meat products for human consumption that are derived from camelid animals (as well as bovine, bubaline, caprine, cervidae, ovine, porcine and soliped species) slaughtered other than in a wild state. Adoption of the Australian Standard is a mandatory requirement for establishment registration/licensing/accreditation of a meat producing establishment and must appear on the meat packages exported to New Zealand. Following discussions with the New Zealand Food Safety Authority, Appendix One: “Requirements under the Animal Products Act 1999 with regard to imports of meat products or meat by-products” has been removed and replaced with a clause referring the user to the NZFSA website for relevant information. The new standard is dated 6 July 2004 and replaces that dated 13 March 2003.

Canine semen from Australia

The space for an import permit number in the model zoosanitary certificate has been removed as it is not required. Minor editorial changes have also been made. This new standard is dated 6 July 2004, replacing that dated 12 May 2004.

Commercial consignments of dairy products for human consumption from Australia

The Eligibility section has been amended to include the importation of dairy products into New Zealand originating from a third country imported via Australia as long as they are accompanied by an AQIS quarantine clearance. This new standard is dated 7 July 2004 and replaces that dated 28 September 1998.

Commercial consignments of dairy products for human consumption from specified countries

Clause 8.4 covering the importation of dairy products into New Zealand originating from a third country imported via Australia has been removed and is now part of the IHS for dairy products from Australia. This new standard is dated 7 July 2004, replacing that dated 28 June 2004.

Embryos from cattle and buffalo from Australia

This import health standard was notified for consultation in Biosecurity 50:19. Following consultation, only minor editorial changes have been made for clarification. This new standard is dated 9 July 2004 and replaces that dated 1 December 2003.

Alpacas and llamas from Australia

The following minor changes for clarification have been made:
- Some changes in the timing of ectoparasite and endoparasite treatment times before and during pre-export isolation.
- Only one ectoparasite wash of animals 2 days prior to pre-export isolation (unless it is not effective, in which case it must be repeated).
- Removal of bedding only once, 10 days after the ectoparasite wash.
- Type of flooring has been clarified as being a “hard standing area” which is free of grass or other pasture. The standing area can be concrete or a compacted gravel surface or slat flooring.

This new standard is dated 16 July 2004 and replaces that dated 14 May 2004.

Chicken and turkey hatching eggs

Alternative methods of hatching egg sanitisation have been added in accordance with OIE Terrestrial Animal Health Code recommendations that reflect a decrease in the international poultry industries’ use of formaldehyde fumigation. The affected standards are Chicken hatching eggs from Australia, Great Britain, Canada and the United States and turkey hatching eggs from Australia, Canada, Northern Ireland and the UK. The new standards are all dated 22 July 2004 and replace ones dated 5 July 2004.

Kerry Mulqueen, National Adviser, Animal Imports and Exports, phone 04 498 9624, kerry.mulqueen@maf.govt.nz

Import risk analysis

Passerines from the United Kingdom

An import risk analysis for passerines from the United Kingdom is currently underway. The term passerine encompasses, among other birds, finches, robins, waxbills, siskins and firetails.

If you would like to receive a copy of the risk analysis once it has been completed please contact:

Martin Van Ginkel, Technical Adviser, Risk Analysis, phone 04 470 2781, martin.vanginkel@maf.govt.nz

Draft plant nursery stock import health standards for consultation

Vitis nursery stock

As part of the consultative process in the development of the import health standard for nursery stock of Vitis (grapevine)
MAF has distributed the following draft documents for public consultation and comment:

- Draft Vitis Import Health Schedule – Nursery Stock
- Proposed Changes to IHS for Vitis Species from New Zealand Winegrowers, 31 March 2004
- New Zealand Winegrowers-Commissioned Review of Vitis IHS by Dr Golino
- New Zealand Winegrowers-Commissioned Review of Vitis IHS by Professor Martelli.

These documents are available on MAF’s website:

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

The revisions in the draft Vitis import health schedule were developed in response to a proposal from New Zealand Winegrowers on behalf of the grapevine industry. The proposal (Proposed changes to IHS for Vitis species from New Zealand Winegrowers, 31 March 2004) requested changes including the removal of some pests, the addition of some new pests and diseases and a review of some of the existing measures. The proposal was based on reviews commissioned from two internationally recognised experts on diseases of grapevine, Drs Golino and Martelli.

Comments on these draft documents should be forwarded to MAF by close of business on 15 September 2004. Depending on the results of consultation, it is anticipated that the new requirements will be in place by October 2004. MAF encourages respondents to forward comments electronically to the email address below. However, should you wish to forward submissions in writing, please send them to:

plantimports@maf.govt.nz

**Persea nursery stock**

As part of the consultative process in the development of the import health standard for nursery stock of Persea (avocado) MAF has distributed the following draft documents for public consultation and comment:

- Draft Persea Import Health Schedule – Nursery Stock
- Persea Pest Risk Assessment Spreadsheet – Nursery Stock
- Datasheets for Regulated Pests of Persea

These documents are available on MAF’s website:

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

The draft Persea import health schedule is based on MAF’s import risk assessment, from which phytosanitary measures were developed commensurate with the risk posed by each pest. Comments on these draft documents should be forwarded to MAF by close of business on 8 October 2004. Depending on the results of consultation, it is anticipated that the new requirements will be in place by November 2004. MAF encourages respondents to forward comments electronically to the email address below. However, should you wish to forward submissions in writing, please send them to:

plantimports@maf.govt.nz

**Prunus nursery stock**

As part of the consultative process in the development of the import health standard for nursery stock of Prunus (almond, apricot, cherry plum, peach) MAF has distributed the following draft documents for public consultation and comment:

- Draft Prunus Import Health Schedule – Nursery Stock
- Prunus Pest Risk Assessment Spreadsheet – Nursery Stock
- Datasheets for Regulated Pests of Prunus

These documents are available on MAF’s website:

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

The current import requirements were developed in 1998 and are only available in paper form. Moreover there are currently five import health standards for Prunus, one each for *P. armeniaca* (apricot), *P. avium* (cherry), *P. domestica* (plum), *P. persica* (peach) and *P. salicina* (plum). MAF has consolidated the requirements into one standard and transferred them into an electronic format which is intended to form a schedule of MAF Standard 155.02.06


From research published since the previous requirements were developed, MAF has identified a number of additional pests (1 bacteria, 43 diseases of unknown aetiology, 7 phytoplasmas and 9 viruses) not previously identified as being associated with Prunus nursery stock. The risks posed by these pests has been assessed (see “Prunus Pest Risk Assessment Spreadsheet – Nursery Stock” and “Datasheets for Regulated Pests of Prunus”) and appropriate measures developed (see “Draft Prunus Import Health Schedule – Nursery Stock”).

Comments on these draft documents should be forwarded to MAF by close of business on 8 October 2004. Depending on the results of consultation, it is anticipated that the new requirements will be in place by November 2004. MAF encourages respondents to forward comments electronically to the email address below. However, should you wish to forward submissions in writing, please send them to:

plantimports@maf.govt.nz

**Amended import health standards issued**

Mandatory fungicide, insecticide and miticide treatments for nursery stock

The mandatory fungicide, insecticide and miticide treatments for nursery stock were amended in July 2004. The new
requirements can now be found in sections 2.2.1.5 - 2.2.1.7 of the revised version of MAF’s import health standard “155.02.06 Importation of nursery stock”:


Plant Imports, Plants Biosecurity, MAF Biosecurity Authority, PO Box 2526, Wellington, New Zealand, phone +64 4 498 9843, fax +64 4 474 4257, plantimports@maf.govt.nz

**Amendment of entry conditions**

**Olea** nursery stock

The import health schedule of entry conditions for *Olea* (olive) nursery stock were amended on 30 July 2004. The previous requirements were only available in a paper form and these have been transferred into an electronic format which now forms a schedule of MAF Standard 155.02.06. During this transfer it was noted that some regulated pests were established in New Zealand and *vice versa*. A number of additional pests not been previously identified were also noted for which there had been no measures to prevent their entry. It is intended that there should be a full review of the import risk analysis for *Olea* nursery stock during the coming year. The new requirements can now be found in the revised version of MAF’s import health standard “155.02.06 Importation of nursery stock”:


Plant Imports, Plants Biosecurity, MAF Biosecurity Authority, PO Box 2526, Wellington, New Zealand, phone +64 4 498 9843, fax +64 4 474 4257, plantimports@maf.govt.nz

**Import health standards issued**

**Nursery stock import health standard for specified fresh and frozen Tuber species (truffles)**

The following import health standard has been issued by MAF Biosecurity Authority, Plant Imports:

Specified Fresh and Frozen *Tuber* Species (truffles) was issued on 22 July 2004. The IHS is available on the MAF website:


Plant Imports, Plants Biosecurity, MAF Biosecurity Authority, PO Box 2526, Wellington, New Zealand, phone +64 4 498 9843, fax +64 4 474 4257, plantimports@maf.govt.nz

**Breadfruit from Samoa**

The import health standard for breadfruit from Samoa was issued on 30 July 2004. It is available on MAF’s website:


**Standard re-issued**

**Seeds for processing and consumption (grain)**

On 16 August 2004 MAF Biosecurity Authority re-issued MAF Biosecurity Authority Standard PIT-GFP-PHR: Grain for Processing, Plant Health Requirements to include a revised import schedule for *Secale cereale* (Rye) grains for consumption or processing. This schedule has been redeveloped providing import requirements that are consistent with the schedules for *Avena* spp. (oat grains), *Hordeum* spp. (barley grains), *Sorghum* spp. (sorghum grains), *Triticum* spp. (wheat grains) and *Zea mays* (maize, popcorn, sweetcorn grains). Minor amendments have also been made to the import schedules for *Cicer* (Chickpea), *Medicago* (Alfalfa), *Phaseolus* (Green bean), *Pisum* (Pea) and *Vigna* (Mung bean/cowpea).

MAF intends PIT-GFP-PHR to be used in conjunction with the operational information that is held in MAF Operational Standard – PIT-GFP-ISR (first issued on 25 August 2003). Both standards may be found on MAF’s website:

www.maf.govt.nz/biosecurity/imports/plants/seeds-processing-consumption.htm

Dr. Dave Nendick, National Adviser – Grain for Processing, Plants Biosecurity, MAF Biosecurity Authority, PO Box 2526, Wellington, New Zealand, phone +64 4 474 4200, fax +64 4 474 4257

**Entry conditions reviewed**

**Avena (oat), Hordeum (barley), Phaseolus (green bean), Pisum (pea), Triticum (wheat) and Vicia (broad bean) seeds for sowing**

The import health schedules of entry conditions for *Avena*, *Hordeum*, *Phaseolus*, *Pisum*, *Triticum* and *Vicia* seeds for sowing have been reviewed. However, implementation of the new requirements will not come into force until 1 December 2004. This is to allow sufficient time for importers and overseas national plant protection organisations to adapt to the new import requirements. This information is available on MAF’s website under “Specific Import Health Standards” at:

www.maf.govt.nz/biosecurity/imports/plants/seeds-sowing.htm

These import health schedules were released for public consultation on 29 November 2002 and MAF’s response to the submissions made during consultation is available on the MAF website under “Review and analysis of submissions” at:

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

Plant Imports, Plants Biosecurity, MAF Biosecurity Authority, PO Box 2526, Wellington, New Zealand, phone +64 4 498 9843, fax +64 4 474 4257, plantimports@maf.govt.nz
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, MAF Plants Biosecurity and MAF Animal Biosecurity during 28/06/04 – 06/08/04, and held in the Plant Pest Information Network (PPIN) database. Wherever possible, common names have been included.

### PLANTS BIOSECURITY RECORDS 28/06/2004 – 06/08/2004

#### Validated new to New Zealand reports

<table>
<thead>
<tr>
<th>Organism</th>
<th>Host</th>
<th>Location</th>
<th>Submitted by</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furchadaspis zamiae (zamia scale)</td>
<td>Cycas revoluta (Japanese fern palm, Japanese sago cycad, sago palm)</td>
<td>Auckland</td>
<td>National Plant Pest Reference Laboratory (NPPRL)</td>
<td>The introduction of this scale to New Zealand is currently being investigated by MAF. Zamia scale is an unwanted organism under the Biosecurity Act.</td>
</tr>
</tbody>
</table>

#### New host reports

<table>
<thead>
<tr>
<th>Organism</th>
<th>Host</th>
<th>Location</th>
<th>Submitted by</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrysomphalus aonidum (Florida red scale)</td>
<td>Jasminum sambac (Arabian jasmine)</td>
<td>Auckland</td>
<td>NPPRL</td>
<td>Other PPIN hosts include Gnetum pendulum, Dendrobium kingianum cv. ‘Pauline’ and dracaena.</td>
</tr>
<tr>
<td>Scaptomyza flavia (brassica leaf miner, pea leaf miner)</td>
<td>Allium cepa (onion)</td>
<td>Auckland</td>
<td>Crop and Food Research</td>
<td>Other PPIN hosts include pea, wheat, calla lily, scarlet runner bean, perennial ryegrass, gypsophila, Dame’s violet and rocket.</td>
</tr>
<tr>
<td>Fusarium sporotrichioides (phytophthora root rot)</td>
<td>Iris sibirica (Siberian iris)</td>
<td>South Canterbury</td>
<td>NPPRL</td>
<td>This fungus has a wide host range.</td>
</tr>
<tr>
<td>Phoma plurivora (no common name)</td>
<td>Strelitzia regiae (crane flower)</td>
<td>Northland</td>
<td>NPPRL</td>
<td>Other PPIN hosts include Douglas fir, verbena, banana and Easter lily cactus.</td>
</tr>
<tr>
<td>Coniothyrium concentricum (brown leaf spot, Coniothyrium leaf spot)</td>
<td>Dracaena sp. (dragon tree)</td>
<td>Northland</td>
<td>NPPRL</td>
<td>Other PPIN hosts include Yucca and Furcraea bedinghamii.</td>
</tr>
<tr>
<td>Pleospora tarda (sooty mould)</td>
<td>Brassica oleracea ssp. botrytis subgroup cymosa (broccoli)</td>
<td>Mid Canterbury</td>
<td>NPPRL</td>
<td>Other PPIN hosts include tomato, tare, parsley, olive, oriental lily, cabbage, passionfruit, feijoa, statice, asparagus, nectarine, peony, chicory, Paterson’s curse, daphne, spinach, verbena and custard apple.</td>
</tr>
<tr>
<td>Gibberella baccata (canker, false coral spot, stem dieback)</td>
<td>Cynose sp. (cycad)</td>
<td>Northland</td>
<td>NPPRL</td>
<td>This fungus has a very wide host range.</td>
</tr>
<tr>
<td>Glomerella cingulata (anthracnose, bitter rot)</td>
<td>Dracaena hookeriana (dracaena)</td>
<td>Northland</td>
<td>NPPRL</td>
<td>This fungus has a very wide host range.</td>
</tr>
<tr>
<td>Botryosphaeria parva (botryosphaeria rot)</td>
<td>Sansevieria sp. (sansevieria)</td>
<td>Northland</td>
<td>NPPRL</td>
<td>Other PPIN hosts include Citrus spp., agave, grape, tangerine, avocado, apple, kiwifruit, pear, Nashi, Prunus spp., Puka, feijoa, Rhododendron, Papamau, blueberry, tamarillo, poplar, Silver tree and Yarrow.</td>
</tr>
<tr>
<td>Microsphaeropsis olivacea (fungus)</td>
<td>Dracaena hookeriana (dracaena)</td>
<td>Northland</td>
<td>NPPRL</td>
<td>Other PPIN hosts include European plum, apricot, cherry and grape.</td>
</tr>
</tbody>
</table>
PLANTS BIOSECURITY RECORDS 28/06/2004 – 06/08/2004

New host reports continued

<table>
<thead>
<tr>
<th>Organism</th>
<th>Host</th>
<th>Location</th>
<th>Submitted by</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pestalotiopsis versicolor (pestalotiopsis)</td>
<td>Archontophoenix cunninghamiana (bangalow palm)</td>
<td>Northland</td>
<td>NPPRL</td>
<td>Other PPIN hosts include kiwifruit, feijoa, passionfruit, avocado, radiata pine, olive, blueberry, black currant, Kaki, grape, Phoenix palm, yellow guava, beech, and Eucalyptus sp.</td>
</tr>
<tr>
<td></td>
<td>Lepidozamia peroffskyana (scaly zamia)</td>
<td>Northland</td>
<td>NPPRL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Caryota sp. (fishtail palm)</td>
<td>Northland</td>
<td>NPPRL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strelitzia reginae (crane flower)</td>
<td>Northland</td>
<td>NPPRL</td>
<td>Other PPIN hosts include broad bean, kiwifruit, tamarillo, strawberry, arrowwood, viburnum and hydrangea.</td>
</tr>
</tbody>
</table>

Hydrangea sp. (hydrangea) | North Canterbury | NPPRL | Other PPIN hosts include broad bean, kiwifruit, tamarillo, strawberry, arrowwood, viburnum and hydrangea. | Other PPIN hosts include broad bean, kiwifruit, tamarillo, strawberry, arrowwood, viburnum and hydrangea. |

Extension to distribution reports: No extension to distribution records reported for this period.

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 28/06/2004 – 06/08/2004

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

Organism Host Location Submitted by Comment

<table>
<thead>
<tr>
<th>Ceroplastes sinensis (Chinese wax scale)</th>
<th>Alectryon excelsus (titoki)</th>
<th>Hawke’s Bay</th>
<th>Forest Research</th>
<th>This scale has a wide host range.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olearia paniculata (Akiraho)</td>
<td></td>
<td>Auckland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euonymus japonicus (Japanese spindle tree)</td>
<td></td>
<td>Auckland</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Acrocercops laciniella (black butt leaf miner) | Angophora costata (rusty gum, smooth-barked apple, Sydney red gum) | Auckland | Forest Research | This moth has been found on a wide range of Eucalyptus species. |

Uraba lugens (gum leaf skeletoniser) | Angophora costata (rusty gum, smooth-barked apple, Sydney red gum) | Auckland | Forest Research | This moth has been found on a wide range of Eucalyptus species as well as pohutukawa, pin oak, brush cherry, apple gum, scarlet oak and ash. |

Phyllosticta spinarum (no common name) | Agathis australis (Kauri) | Bay of Plenty | Forest Research | This organism has a wide host range. |

Nectria radicicola (cylindrocarpon root rot) | Protea sp. (protea) | Bay of Plenty | NPPRL         | This organism has a very wide host range. |

Gibberella zeae (basal rot, ear blight, fusarium rot) | Protea sp. (protea) | Nelson      | NPPRL        | This organism has a very wide host range. |

Pestalotiopsis versicolor (pestalotiopsis) | Protea sp. (protea) | Nelson      | NPPRL        | This organism has a very wide host range. |

Dryocora howitti (Prostomid beetle) | Pinus radiata (Monterey pine, pine, radiata pine) | Bay of Plenty | Forest Research | Other recorded hosts are rimu, totara and hinau |

Extension to distribution reports

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Acrocercops laciniella (black butt leaf miner)</td>
<td>Eucalyptus leucoxylon</td>
<td>Nelson</td>
<td>Forest Research</td>
<td>Other PPIN distributions include Auckland, Bay of Plenty, Waikato, Coromandel, Hawke’s Bay, Northland, Taupo and Wanganui.</td>
</tr>
</tbody>
</table>

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

ANIMALS BIOSECURITY RECORDS 28/06/2004 – 06/08/2004

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

New host reports: No new host records reported for this period.

Extension to distribution reports: No extension to distribution 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
## 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pig Code</td>
<td>Final code presented to Minister of Agriculture on 25 November 2003</td>
</tr>
<tr>
<td>Rodeo Code</td>
<td>Final code issued by Minister of Agriculture on 4 December 2003</td>
</tr>
<tr>
<td>Layer Hen Code</td>
<td>Final code presented to Minister of Agriculture on 3 September 2004</td>
</tr>
<tr>
<td>Zoo Code</td>
<td>Final code presented to Minister of Agriculture on 26 August 2004</td>
</tr>
<tr>
<td>Circus Code</td>
<td>Final code presented to Minister of Agriculture on 26 August 2004</td>
</tr>
<tr>
<td>Commercial Slaughter Code</td>
<td>Public consultation completed. Final code to be presented to Minister of Agriculture last quarter 2004</td>
</tr>
</tbody>
</table>

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