Protecting our forests
Border standards

Global forest biosecurity threats
Offshore pre-inspection
Airport trials test new approaches
Targeting protected wildlife products
Biosecurity magazine

Biosecurity is published six times per year by MAF Biosecurity New Zealand. It is of special interest to all those with a stake in the protection of New Zealand’s economic, environmental and social assets from the dangers posed by pests and diseases. The articles in this magazine do not necessarily reflect government policy.

For enquiries about specific articles, refer to the contact listed at the end of the article.

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MAF Biosecurity New Zealand (MAFBNZ) operates under a complex mandate that covers facilitating international trade, protecting our economic base and the health of New Zealanders, and ensuring the welfare of our environment, including flora and fauna, marine life, and Māori resources.

To achieve this, our biosecurity system consists of multiple parts working to manage risks posed by pests and diseases entering and establishing in New Zealand, while simultaneously ensuring trade and travel are not unnecessarily restricted.

An important part of MAFBNZ’s role is the protection of New Zealand’s indigenous and exotic forests, as well as our urban parks and gardens. While our exotic forests are worth billions of dollars economically, the value of our indigenous and urban forests is immeasurable.

The introduction of new plant material to New Zealand also falls within MAFBNZ’s mandate, and is an area that has shown significant progress. A recently established Germplasm Advisory Committee incorporates representative industry groups and will take the lead in ensuring high-level principles are balanced with acceptable and manageable levels of risk. Under this core committee, working groups will address particular issues.

In April 2005, the Ministry of Agriculture and Forestry (MAF) obtained Growth and Innovation Framework funding to address shortfalls in quarantine space and testing abilities in post-entry quarantine (PEQ) services. The Plant Health and Environment Laboratory (PHEL) now provides a Level 3 PEQ service for the importation of whole plants, as well as cuttings, tissue culture and seed, for a range of species where these services are not offered by industry.

In December 2008, disease-free clones of a commercial kumara variety became the first plants to be released from PHEL’s PEQ facility and marked the first time in more than 10 years that new germplasm of this crop was available to New Zealand growers.

New strawberry cultivars released from PHEL’s facility last year, together with another cultivar expected to be released in time for Christmas, represent the first new strawberry germplasm to be imported for more than six years.

PHEL is currently providing PEQ space and testing services for new varieties of blackcurrant and potato for release later this year.

In partnership with industry, PHEL is also working to enable the importation of new varieties of apple, blueberry, citrus, hazelnut, kiwifruit, peach, plum and walnut. Like the new varieties of blackcurrant and potato currently being tested, many of these are the first imports in more than 10 years.

While our biosecurity system is often hailed as one of the best in the world, no system is foolproof and MAFBNZ is continually striving to enhance its strategies and front-line functions.

In this edition of Biosecurity magazine, for example, we highlight new initiatives being trialled at Auckland International Airport that focus more on people who do not comply with the rules and more effectively facilitate entry for those who do (see pages 20–22).

We also look at some of the potential threats to our forests, how they are being managed and how scientists at our Crown research institutes work to combat pests and diseases (see pages 4–15).

MAFBNZ is talking with exporters, importers and fumigation treatment suppliers about the potential benefits and costs of adopting a scheme similar to Australia’s pre-border Fumigation Accreditation Scheme (AFAS). Keeping risk offshore is a logical and significant strand in the multi-layered biosecurity system, and it is heartening to see some importers moving towards pre-shipping inspection and treatment (see pages 18–19).

While intervention before and at the border prevents many pests and diseases entering New Zealand, a robust system to detect any that do get through is also needed. Our new Surveillance Strategy 2020 was launched earlier this year, and we are now at the stage of seeking more input from stakeholders (see page 27).

“Biosecurity Systems – Future Directions” is the theme of our Biosecurity Summit to be held in Wellington on 24–25 November. Key speakers will cover topics including Australian and trans-Tasman travel, market access, recent science and research developments, pest management, and biodiversity. Contact details for more information are on page 9. We encourage anyone involved with, or interested in, biosecurity to attend the Summit to learn and contribute to helping us protect New Zealand.

Tim Knox, Director, Border Standards, MAF Biosecurity New Zealand
Global forest biosecurity threats and the risk to New Zealand

The economic value of New Zealand’s exotic forest plantations is in the order of many billions of dollars, and the same holds for the replacement cost of the “urban” forest.

The value of our indigenous forest, on the other hand, is immeasurable – partly because of the high value to tourism but especially because of the strong cultural ties that most New Zealanders have to the natural landscape, including iconic trees such as Tane Mahuta, the giant kauri in Waipoua Forest, Northland.

Protecting all of these forest types from biosecurity threats is of paramount importance to New Zealand, and is why the Government and industry invest so much in keeping unwanted organisms out, maintaining a vigilance to detect those that do sneak in and eradicating the really nasty ones when possible.

New Zealand Forest Owners’ Association Chief Executive David Rhodes believes “we can be justifiably proud of our forest surveillance system, which has been in operation for more than 50 years” and is a model for other industries to follow.

“Why should any industry just rely on MAF [the Ministry of Agriculture and Forestry] to ensure that pests and diseases aren’t spreading through the growing estate?” Mr Rhodes says. “That’s just playing Russian roulette, especially when all sectors have an army of eyes and ears in the field that they can harness!”

However, insect pests and pathogens do manage to get a foothold in New Zealand and have caused serious economic losses, especially to the exotic forest industry but also to our urban forests.
Who protects our trees?

New Zealand has several types of forests, often classified as indigenous, exotic and urban (including every backyard tree).

MAFBNZ’s responsibilities include protecting indigenous forests from biosecurity threats on behalf of the Department of Conservation and the New Zealand public.

Regional and city councils look after urban trees on behalf of ratepayers.

The New Zealand Forest Owners’ Association and New Zealand Farm Forestry Association, with MAFBNZ’s assistance, look after the biosecurity of most exotic plantations.
Concerns are growing internationally as scientists learn more about the increasing number of serious plant and tree diseases found to be caused by *Phytophthora* species.

*Phytophthora* species have been known primarily as soil-inhabiting root-invaders that cause fatal root diseases. Infective spores have flagella (small tails) that enable the organisms to move freely in water and soil. One notable exception to this mode of action included *P. infestans*, the cause of potato blight. Spores of this species are aerially dispersed on moist air currents and infect the leaves and stalks of the potato plant.

However, within the past 15 years, new *Phytophthora* species have been described that have a lifecycle that is part or wholly above-ground, and our concept of the capabilities of *Phytophthora* species has changed. Part of this “new” understanding has been because of the development of molecular techniques for identifying and understanding relationships between species (Romberg, *Biosecurity* No 97, 2010), but a driving factor is the increasing number of serious plant and tree diseases found to be caused by *Phytophthora* species.

One of these new diseases is sudden oak death (SOD) caused by *P. ramorum*, a species of *Phytophthora* that was unknown 10 years ago. *Phytophthora ramorum* has killed millions of trees of many different species in the United States in the past decade and is also invading the United Kingdom and Eastern Europe.

Affected trees do not have root damage but trunk cankers, which may be high above the ground. Infective spores are not formed in the soil but on the foliage and shoots of understorey plants, usually of quite different plant species. These understorey plants often have only minor symptoms, or sometimes none at all.
An even more recent example is the emergence of the needle disease of *Pinus radiata* in Chile caused by *P. pinifolia*, discovered in 2004 and described in 2008. Both of these species of *Phytophthora* are considered to be invaders although their region of origin is not known.

While neither of these species is in New Zealand, MAF Biosecurity New Zealand (MAFBNZ) has specific measures in place to ensure that they do not get here.

Meanwhile, New Zealand kauri trees are under threat from a species of *Phytophthora* (known as “kauri dieback” – see www.arc.govt.nz/environment/biosecurity/kauri-dieback). Although this species has been in New Zealand for many years, it is still not known whether it is native or exotic.

**Why are these new diseases emerging and where are these new species of *Phytophthora* coming from?**

It is hypothesised that in the ecosystems in which these species evolved they cause little or no damage to the plant communities because of co-evolution with their hosts. They may colonise plant tissues without causing any symptoms of disease or they may live as propagules within the soil without causing root disease. When these species of *Phytophthora* are moved outside their native areas, they can come into contact with new hosts with no co-evolved defence response, therefore resulting in serious disease outbreaks.

In the northern hemisphere, the nursery trade has been implicated as the primary pathway for the spread of *Phytophthora* spp. across Europe and between continents. There are few restrictions on the movement of healthy plants and there has been little legislative recognition of the probability that such plant material is likely to carry unseen micro-organisms. The use of chemical control measures that can suppress disease symptoms may also facilitate the acceptance in trade of plant material bearing unseen plant pathogens.

**Future risks**

A further alarming prospect with the introduction of new species to a new environment is the potential for hybrid species of *Phytophthora* to form. *Phytophthora alni* and its varieties are thought to be the result of such an event. This hybrid species is killing millions of alders, which are a major component of riparian systems across Europe.

With expanding globalisation, there is an expectation that many more diseases caused by *Phytophthora* species will be discovered as new plant/microbe and microbe/microbe associations are facilitated by trade. Some experts predict that several hundred species of *Phytophthora* are yet to be described.

The protection of New Zealand’s biota from species of *Phytophthora* is a key part of MAFBNZ’s mandate, and import health standards consider the risks posed by *Phytophthora* spp.

**International *Phytophthora* conference in New Zealand**

The International Union of Forest Research Organisations (IUFRO) has a working party devoted to diseases of forests and natural ecosystems caused by species of *Phytophthora*. This is an active working party that meets every second year, most recently hosted by Scion and Landcare Research in Rotorua in March.

The meeting was attended by more than 90 delegates from 14 countries, and topics ranged from *Phytophthora* biology to management and control. Sponsors of the conference included MAFBNZ, the Auckland Regional Council, Scion, Landcare Research and New Zealand Plant Protection Society. The next IUFRO meeting will be held in Eastern Europe in 2012.

**Margaret Dick, Forest Science Group, Scion, margaret.dick@scionresearch.com**
KAWAKAKA TREE DECLINE

Phytophthora species have been associated with kawakawa tree decline and death in Auckland and Northland.

Kawakawa (Macropiper excelsum; family: Piperaceae) is a native shrub found from the north of the North Island to as far south as Canterbury. It is easily identified by its unique heart-shaped leaves and jointed stems.

The shrub is important to New Zealand’s ecology and Māori custom. The name “kawakawa” refers to the bitter taste of the leaves, and it has been used traditionally for medicinal purposes (to treat boils and bruises, relieve pain and toothache, or as a general tonic), for ceremonies and as a symbol of death. It is also used for coastal restoration planting.

Since spring 2008, a large number of kawakawa trees in Auckland and Northland have exhibited symptoms typical for vascular or root diseases, including leaf yellowing, branch wilt and sudden collapse.

Tree deaths were brought to the attention of the North Shore City Council’s Peter Anderson and Auckland Regional Council’s Nick Waipara, who initiated an investigation of this abnormal tree decline by monitoring the severity of symptoms and sending plant samples to the Ministry of Agriculture and Forestry (MAF) Plant Health and Environment Laboratory (PHEL) for disease diagnosis. No pathogens were found consistently on the aerial part of the plants but different Phytophthora species were isolated from root and soil samples.

Phytophthora is a group of microscopic fungus-like plant pathogens that are known to occur on New Zealand.
native plants and cause severe diseases, including “kauri dieback” caused by *Phytophthora* taxon Agathis (commonly known as PTA).

Four isolates of *Phytophthora* species were detected from dying kawakawa collected in the Auckland suburbs of Mount Wellington and Takapuna, on Waiheke Island and in Whangarei, Northland. These *Phytophthora* isolates were identified as *P. cryptogea*, *P. citricola*, *P. citrophthora* and *P. multivora*, based on morphological characters and DNA sequence analysis.

Trees in Oratia, West Auckland, which showed symptoms of decline during the investigation period, have subsequently all died. In Whangarei, 77 percent of 31 kawakawa trees growing in poorly drained soils and 58 percent of 50 trees growing in well drained soils have died.

This is the first report of *Phytophthora* species associated with kawakawa tree decline. Inoculation tests are required to determine which *Phytophthora* species are contributing to the symptoms observed. Development of disease management strategies is also needed to establish effective disease control for declining kawakawa trees.


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“The shrub is important to the New Zealand’s ecology and Maori custom. The name “kawakawa” refers to the bitter taste of the leaves, and it has been used traditionally for medicinal purposes”
Researchers worldwide are looking at innovative methods for alternative and sustainable control of urban tree diseases. In New Zealand, Dutch elm disease is being used as a test system.

Dutch elm disease has destroyed more than 100 million elms worldwide in the past century, indelibly altering the rural and urban landscape in many parts of Europe and North America. Caused by the pathogen *Ophiostoma novo-ulmi*, the disease is now present in the greater Auckland area and could wipe out more than 90 percent of elms in New Zealand if control efforts are not successful.

The disease was first discovered in New Zealand in December 1989 in an Auckland inner-city park, and an eradication campaign was begun immediately by MAF. Initially, the eradication campaign looked promising. However, following consultation with local authorities about 20 of the worst pests established in New Zealand to decide which could and should be eradicated or contained to localised areas, responsibility for the disease was handed over to local authorities. The control programme is focused on identifying and removing infected elm material, and on restricting the movement of elm produce in Auckland to prevent the disease from spreading.

Crown research institute Scion is also working on a project to reduce the number of dead elms and slow disease spread to other parts of New Zealand through the development of
a virus-based biological control system. Specifically, the plan is to introduce a virus (d-factor virus specific to Ophiostoma novo-ulmi) into New Zealand’s pathogen population to reduce the pathogen’s virulence.

New Zealand is uniquely situated to use this form of biological control because it has a small population of the Dutch elm disease pathogen with low genetic diversity. It is expected that a genetically uniform pathogen population will be more susceptible to viral biological control agents than a genetically diverse population.

The first phase of the project demonstrated that the pathogen population was genetically uniform and free of viruses. Now, New Zealand isolates infected with specific viruses will be imported into quarantine facilities at Scion. This second phase of the project involves testing the growth rate, viability and survival of virus-infected O. novo-ulmi isolates, and undertaking studies to investigate the transmission, retention and competition of the viruses in infected O. novo-ulmi isolates.

Data obtained from these experiments will be used to select the most effective viruses for biological control of this pathogen and are a necessary component for any subsequent Environmental Risk Management Authority (ERMA) field release approval applications.

A team of national and international experts on Dutch elm disease and forest pathology from Scion and Forest Research, United Kingdom, is undertaking the research. Success with this research project will change the way in which newly established pathogens of trees are treated, and provide alternative and sustainable methods to deal with diseases that threaten our urban landscapes. It also has the potential to protect commercial and indigenous tree species.

Dr Rebecca Ganley, Plant Pathologist, Scion, rebecca.ganley@scionresearch.com

“The disease was first discovered in New Zealand in December 1989 in an Auckland inner-city park, and an eradication campaign was begun immediately by MAF.”

D-virus strains. Photo courtesy: Scion.
Controlling plant disease without pesticides

Researchers are investigating a new way of helping to manage foliar diseases that threaten New Zealand *Pinus radiata* plantations. “Fungal endophyte-mediated resistance” is a sustainable mechanism for increasing resistance in forest systems that can be used as an alternative to fungicide sprays.

Fungal endophytes are fungi that live within their host without causing any disease symptoms, and are present throughout the host from the roots through to seed. Unlike the well-understood grass system, where the host is usually dominated by one endophyte that grows throughout the plant, in trees there are thousands of combinations of fungal endophytes that occupy small, discrete areas within the host.

So far, more than 65 species of fungal endophytes have been isolated from *P. radiata* needle tissue. The function of these endophytes is not well known.
However, previous work has shown that fungal endophytes are able to increase resistance in *P. monticola* (western white pine) against the pathogen *Cronartium ribicola* (white pine blister rust). In some cases, the level of resistance was equivalent to that seen in traditional breeding programmes. It is hypothesised that fungal endophytes in New Zealand’s forests could function in a similar fashion. So, induced resistance from endophytes may form an important component of an integrated pest management strategy. This could lead to significant financial advantages for the forest industry through reduction in costs of pesticides, increased tree growth and maintenance of market access.

Several research projects have been undertaken to explore whether fungal endophytes present in *P. radiata* could mediate resistance against a number of its serious needle diseases.

First, fungal endophytes were isolated and identified from diseased foliage of *P. radiata* trees and compared with those present in healthy trees in the same stands. The aim was to find endophytes in the healthy trees with potential to increase resistance of diseased trees. A selection of these fungal endophytes is currently being screened and tested for their ability to increase resistance in *P. radiata*. Some of the screening is being done in collaboration with Plant and Food Research’s Dr Tony Reglinski. Once the screening trials have been completed, fungal endophytes with potential will be trialled in the field.

Scion researchers are working with Dr Rosie Bradshaw’s group at Massey University investigating the effect of fungal biological control agents against the foliar disease *Dothistroma* needle blight. The loss caused to the New Zealand forest industry by *Dothistroma* needle blight is estimated to be around $23 million a year, with the cost of control about $2 million and the remainder a result of reduced tree growth.

Scion and Landcare Research researchers are also looking at the impacts of fungal endophytes on the efficacy and effectiveness of mycoherbicides for controlling *Cirsium arvense* (California thistle).

The long-term goal of these projects is to find fungal endophytes that could provide effective resistance in commercial forests. International collaborative links between Scion, several researchers from the Australian Commonwealth Scientific and Research Organisation (CSIRO) and University of Tasmania, and Dr Enrico Bonello from Ohio State University, resulted in the publication in *New Phytologist* of a review article focused on induced resistance mechanisms in forest trees. This collaboration was established as part of Scion’s endophyte research programme.

“The long-term goal of these projects is to find fungal endophytes that could provide effective resistance in commercial forests.”

Dr Rebecca Ganley, Plant Pathologist, Scion, rebecca.ganley@scionresearch.com
Nectria flute canker demonstrates just how difficult and complex biosecurity problems can be — and the value of science in helping find solutions.

In the mid-1990s, reports started to be heard about significant stem damage on pine trees growing in the southern part of New Zealand. The damage was primarily large flutes or depressions formed above pruned stubs, resulting in poor stem form and sometimes entry points for decay fungi.

By 2002, Crown research institute Scion had determined that a fungus named *Neonectria fuckeliana* was associated with the damage. The reason identification took so long was because of a series of interacting and complicating factors.

First, the disease symptoms were very similar to those caused by Diplodia whorl canker, a common disease of pines in New Zealand. Second, there are many *Nectria* and *Neonectria* species and the taxonomy is very confused. A sample sent to another laboratory was misidentified as *Nectria pinea*, a common and harmless fungus on pines. Finally, *Neonectria fuckeliana* was completely new to the southern hemisphere and had

Nectria flute canker.
never been recorded before on *Pinus radiata* anywhere in the world. It had previously only been known as a wound invader of spruce and fir trees in the northern hemisphere, demonstrating just how fickle pathogens can be once they start to move into new environments.

So, there was a new fungus in a new part of the world causing new damage on a new host. Overseas research on the fungus was not relevant and researchers had to start from scratch. The response was to go back to basics and start a research programme to examine the ecology of the fungus and its host in order to understand what factors influenced disease development. But that takes time, and the researchers took a punt and established an operational trial designed to determine the influence of season on pruning and pruned-stub treatment on disease development.

A focus group was formed comprising forest growers, MAF Biosecurity New Zealand (MAFBNZ) and researchers, and this group was influential in supporting Scion’s negotiation with the Foundation for Research, Science and Technology (FRST) to divert funding to *Neonectria* ecology research. Soon after, a four-year funding bid to the Ministry of Agriculture and Forestry (MAF)-administered Forest Industry Development Agenda, to examine the influence of silviculture on disease, wound treatment and disease spread, was successful.

After six years of ecological and operational research, we now have an excellent understanding of the disease’s development, behaviour of the fungus and, most importantly, how to manage trees at risk to reduce the impact of the disease. It was found that:

- fluting was more common in the pruned treatment than the unpruned treatment;
- pruning in winter resulted in more disease than summer pruning;
- disease increased for about a year after pruning, decreased over the following three years and then stabilised;
- nearly all flutes associated with pruned branches 60 millimetres or smaller had disappeared, and the tree’s growth had occluded the damage.

The significance of the findings was that the disease can be managed by avoiding winter pruning where possible and changing silvicultural regimes to achieve small pruned-branch stub size.

With a targeted research programme guided and supported by local forest growers, and with the assistance from MAF, the New Zealand Forest Owners’ Association (NZFOA) and FRST, a solution to a potentially serious new biosecurity threat has been found. The example of *Neonectria fuckeliana* in New Zealand demonstrates the value of science in helping to solve the unique problems that are constantly present within the biosecurity sector.

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Nursery sector working with MAFBNZ

Biosecurity magazine asked the Nursery and Garden Industry Association (NGIA) for its views on the importance of protecting New Zealand from pests and diseases, the challenges ahead and how the industry is working to manage those challenges. Chief Executive John Liddle responds.

Plants are the key building block for a diverse range of crops in the horticultural and forestry sectors. The nursery sector, which supplies plants for commercial horticulturists and a wide range of domestic users, is well aware of the important role it plays in preventing the import and spread of pests and diseases into and within New Zealand. The NGIA sees its relationship with MAF Biosecurity New Zealand (MAFBNZ) as key to fulfilling this responsibility.

The nursery industry
The industry is made up of numerous small to medium-sized businesses, many owner operated, and produces a wide range of plants for both domestic and export markets. While the majority of green goods produced are purchased by local businesses, many of the products from those plants produce valuable exports. It is estimated that New Zealand’s horticultural and forestry exports of plant-derived products are worth about $5.5 billion annually.

The NGIA represents a large proportion of New Zealand’s plant producers. Its 420 members include a diverse mix of growers, retailers and suppliers of dry and green goods.

In addition to plant producers, New Zealand has successful professional and amateur plant breeding programmes that provide new plants for horticulturists, ensuring our horticultural products are cutting edge and continue to command higher than average prices in many overseas markets. New kiwifruit, apple and zantadesca (calla lily) varieties are particularly important to their respective sectors. The intellectual property rights associated with some cut flowers and garden plants are another important source of export earnings, for example, agapanthus, daffodil, dahlia, dianthus, hebe, manuka, magnolia, rose and sweet pea.

The challenges
New Zealand’s economy relies heavily on primary production and the sale of products to overseas markets. Our comparatively low number of pests and diseases is important in maintaining overseas market access for many of our products.

Importing plant material carries with it the risk of inadvertently introducing pests and diseases. This risk is compounded by New Zealand’s wide climate range and generally good growing conditions that make it susceptible to potential pests.

Lowlands Nursery. Photo by Kerry Johnstone.

Nursery and Garden Industry Association Chief Executive John Liddle.
However, it is crucial that new plant material is allowed to enter New Zealand. Without new material, New Zealand's horticultural growers would soon fall behind competitors. Our viticulture and summer fruit industries, for instance, are largely reliant on sourcing new cultivars from overseas breeding programmes.

The proposed government–industry agreements, which are designed to strengthen the biosecurity system, will present particular challenges for the nursery industry. The NGIA represents a diverse range of businesses dispersed throughout New Zealand, which, together, handle a large range of plant species that may host an even broader pest and disease spectrum. The disparate nature of the industry means that achieving a consensus is difficult and funding to do so is limited.

Meeting the challenge
The NGIA is well aware of these risks and challenges, and is working closely with MAFBNZ and the Environmental Risk Management Authority (ERMA) to ensure the risks are managed appropriately.

To help manage biosecurity risks, the NGIA:
- Has entered into a co-operative agreement in the National Plant Pest Accord with regional councils and government departments

with biosecurity responsibilities. The accord involves the partners in determining which plants are unwanted organisms under the Biosecurity Act 1993. These plants cannot be sold, propagated or distributed in New Zealand.

- Sits on the recently formed Germplasm Advisory Committee (GERMAC), which is a consultative forum between the plant germplasm import industry and MAFBNZ. GERMAC provides industry leadership, analysis and advice that contributes to the development of cost-effective standards and strategies that achieve and maintain a viable international trade in plant germplasm.

- Is engaged with MAFBNZ on the government–industry agreements for biosecurity readiness and response proposed by MAFBNZ. The agreements will provide an opportunity for the sector to identify the biosecurity risks of greatest concern and foster joint decision making and cost-sharing agreements for preparedness and response activities.

- Plans to develop an “on-farm” programme that will provide a process for managing the biosecurity risks on plant nurseries. The NGIA intends to gain support for, and recognition of, the programme from MAFBNZ. This will help to ensure rigorous processes are put in place that will protect enterprises from internal and external biosecurity threats.

- Will be working with MAFBNZ to review the post-entry quarantine standard.

The NGIA is working closely with MAFBNZ to ensure New Zealand has an effective biosecurity system that will encourage the growth of the primary sector and facilitate trade.
A forestry and sawmill company importing used equipment chose offshore pre-shipping inspection to eliminate the risk of bringing pests or diseases into New Zealand, and to speed up biosecurity clearance on arrival.

Nelson Forests Ltd recently chose to contract a MAF Biosecurity New Zealand (MAFBNZ) quarantine inspector to pre-inspect used sawmilling equipment on site in the United States.

Based on reports from other companies with experience in importing similar used sawmilling equipment, Nelson Forests felt the pre-inspection approach was its best option to minimise the risk of holdups at the port when the equipment arrived, thus reducing potential costs of devanning, cleaning and reloading containers at the port.

It also believed the approach could assist in setting a cleanliness benchmark to meet New Zealand biosecurity requirements for any remaining equipment not pre-inspected offshore in the given timeframe.

Nelson Forests owns about 67 000 hectares of plantation forest in the Nelson and Marlborough regions as well as the Kaituna Sawmill near Renwick in Marlborough. The company is in the first stage of a major technology upgrade to its sawmill that involves automating the back end of the mill. As part of this project, the company purchased used sawmill equipment from Weyerhaeuser’s Aberdeen (United States) sawmill, which closed in 2005. It also purchased new equipment from USNR, a major sawmill equipment supplier in the United States.

Nelson Forests engaged a Skookum Technology contracting engineer to provide independent engineering and design services, and manage the project. (Skookum is a supplier of new and used sawmilling equipment, and provides professional engineering services.) The project manager supervised the dismantling of the equipment and will also supervise its remantling at the Marlborough site. This stage of the upgrade project is due to be completed in early March next year.

MAFBNZ Quarantine Inspector Gary Skerten, based in the Christchurch cargo office, completed the offshore pre-shipment inspection of the specialised sawmilling equipment in Aberdeen.

On arrival at the site, he first familiarised himself with the occupational health and safety requirements, then began work determining exactly which equipment was to be exported. For this shipment, it was a bin sorter and stacker, a trimmer and planer-out feed, and associated equipment.

Mr Skerten’s next step was to look over the site for any possible areas of contamination that might affect subsequent loading, for example, muddy areas or plants that might be seeding. All the equipment was
inspected after steam cleaning, or, in the case of electrical boxes, compressed air cleaning.

The timber being used as dunnage to brace and secure the cargo in transit was inspected before loading to ensure it met the ISPM 15 wood packaging certification scheme standard, which is considered to significantly reduce the spread of timber pests in international trade. Compliant timber is either heat treated or fumigated at prescribed rates and then stamped with an international symbol for shipping.

The shipping containers were inspected for biosecurity contaminants as they arrived into the yard. A six-sided inspection was required to ensure the containers were not damaged and had been thoroughly cleaned.

Persistent rain during loading meant some of the machinery needed to be towelled down and excess water wiped away so that no pooling water was present that could potentially host mosquito eggs.

When each of the containers was fully loaded and had been over the weighbridge, the container vents were taped and, as an extra precaution, a fogging fumigant was discharged to kill any hidden insects. MAFBNZ then used numbered bolt seals, which are reconciled at the port of arrival to ensure the integrity of the pre-inspected freight.

MAFBNZ thanks Skookum Technology on-site Project Manager Len Macaw, who has the expertise and freight knowledge for packing these containers, for ensuring this particular offshore pre-inspection went smoothly.

Sue Gould, Team Manager Border Operations Central and Offshore, MAFBNZ, sue.gould@maf.govt.nz
Airport trials help MAF Biosecurity New Zealand (MAFBNZ) test alternative approaches to the traditional way of operating and answering questions that cannot be addressed through existing data.

Over the past year, several initiatives have been trialled at Auckland International Airport (AIA). These include changing the way passengers move through the biosecurity system, giving passengers the opportunity to ask questions at an information desk, considering different deployment locations for dog handler teams (DHTs), and considering which passengers are more likely to use amnesty bins and how to optimise amnesty bin location.

This article looks at trials held at AIA in July and August last year on the deployment of DHTs and a passenger information desk.

Trial of dog handler teams

Traditionally, DHTs have operated around luggage carousels in the baggage hall. In this environment, they are able to screen both hold-stowed luggage and hand luggage.

In future, where hold-stowed luggage has been x-rayed before arrival, it may be more efficient to focus the DHTs on hand luggage only. Screening of hand luggage can happen at multiple points in the airport and can be readily targeted towards particular flights or groups of passengers.

To determine whether DHTs can operate effectively in different parts of the airport, a trial was conducted in July 2009. Three different locations were chosen to compare:

- the arrivals gates – the DHTs were located on the piers between the airline gates and the duty free store;
- the primary area – immediately behind the customs booths before passengers reach the baggage hall;
- the carousels (where DHTs traditionally operate – as a control) – in the baggage hall around the luggage carousels.
DHTs were deployed at each of the different locations between 2pm and midnight on consecutive days for a total of 42 days (14 days in each location). The feasibility of using DHTs at each location was assessed, as was the impact of the DHT deployment location on seizures. The indirect effects on passenger behaviour were also considered (including changes in declaration rates, amnesty bin usage and observations of DHTs.

Although the project showed that the location where DHTs were deployed made little difference to the quantity of hand luggage or amnesty bin risk seized per month, it showed that the DHTs are potentially able to operate in different locations at AIA.

It also highlighted the advantages and disadvantages of working in each location. For example, the arrivals gate was a difficult work area because of the fast pace and lack of spatial awareness by passengers. DHT feedback identified an increased risk of injury to both the DHTs and passengers unless modifications were made to suit the location.

The information gathered in the DHT location trial will be used when making decisions about deployment locations and detector dog training.

Biosecurity Information Desk trial

In future, low-risk passengers may have less contact with quarantine inspectors as they pass through the airport than they do at present. Under this scenario, it is important to provide passengers with opportunities to address any questions they might have about biosecurity, particularly given that the infringement fine recently increased from $200 to $400. One means of providing this opportunity is to staff a Biosecurity Information Desk.

The feasibility and usefulness of a Biosecurity Information Desk was trialled at AIA for one continuous week. The desk was located immediately after the customs primary booths and staffed by quarantine inspectors. Signage for the booth was borrowed from displays that are normally used to promote biosecurity to members of the public.

Through the trial, a record of the number and types of questions asked by passengers was kept. It was found that almost 4 percent of arriving passengers used the information desk over the trial period, with 85 percent of the questions being biosecurity related.

All passengers using the information desk were asked to voluntarily provide an email address so that they could be sent a questionnaire about their experience. The response from those passengers was positive, and indicated that interaction with the information desk led to changes in passenger behaviour and increased confidence about their understanding of biosecurity requirements. The majority of passengers using the information desk used it to clarify declaration requirements for specific items they were carrying.

continued on next page >
NEW PASSENGER ARRIVAL CARD

Every year, about 4.6 million passengers enter New Zealand. Every one of them is required to fill in the New Zealand Passenger Arrival Card (PAC).

Since the end of June, passengers have begun to see a new version of the PAC. It is a much smaller, streamlined card than the previous version and no longer includes the notes section but still collects all essential passenger information. The recent H1N1 (swine 'flu) outbreak also brought up the need to add extra questions to facilitate responses to future potential pandemics.

The information collected from the cards is used by nine different agencies: the Ministry of Agriculture and Forestry (MAF), New Zealand Customs Service, Immigration New Zealand, Statistics New Zealand, New Zealand Police and Ministries of Health, Justice, Tourism and Transport. The data plays a vital role in border security, but is also used for data matching, statistics and other purposes authorised by law.

Reducing the size of the card has brought it more in line with the Australian arrival card, and has resulted in a significant reduction in printing costs (around 40 percent).

Operational trials such as the DHT deployment and Biosecurity Information Desk are useful for making future decisions. They give the information needed to consider feasibility and usefulness. Further trials at AIA will be held in future to inform options available to MAFBNZ.

- Anthea Craighead, Data Analysis, MAFBNZ, anthea.craighead@maf.govt.nz; Paul Gibb, Air Passenger Clearance, MAFBNZ, paul.gibb@maf.govt.nz; Craig Hughes, Detector Dog Programme, MAFBNZ, craig.hughes@maf.govt.nz; Kathy Dyer, Communications and Marketing Adviser, MAFBNZ, kathy.dyer@maf.govt.nz

Passenger information and signage will be updated, and translations of the card will be placed on both the MAF Biosecurity New Zealand (www.biosecurity.govt.nz) and Customs (www.customs.govt.nz) websites.

- Kathy Dyer, Communications and Marketing Adviser, MAFBNZ, kathy.dyer@maf.govt.nz
Fruit fly eggs highlight multi-layered biosecurity system

New Zealand’s biosecurity system has multiple parts that work together to ensure the risk of pests and diseases is managed sufficiently without unnecessarily restricting trade. An example of these multiple parts working together can be seen with two recent interceptions of suspected fruit fly eggs at the border.

Suspected fruit fly eggs were detected at the New Zealand border by MAF Biosecurity New Zealand (MAFBNZ) staff during inspection of two separate consignments of fresh produce on 18 and 19 of May. The first egg mass was detected on oranges from the United States and the second on rock melons from Australia. Both were sent to the Investigation and Diagnostic Centre (IDC) in Tamaki and initial identifications returned as Diptera Tephritidae, a potentially high-impact exotic fruit fly species.

A rapid assessment was conducted by the MAFBNZ Fresh Produce Imports team (FPIT) and all consignments of fruit fly host material from the United States and Australia imported under the dimethoate (insecticide) post-harvest treatment pathway were suspended by the Chief Technical Officer (CTO).

The FPIT contacted affected stakeholders, including authorities in the exporting countries, while the MAFBNZ Border Standards Quality Team supplied updates and communicated with quarantine inspectors at the border regarding the pathway suspensions.

Throughout this process, the MAFBNZ Post Border Team was also involved in evaluating the post-border risk and preparing for a response if it was determined to be necessary. The FPIT requested authorities in the exporting countries to conduct trace-backs to identify which orchards and packhouses were involved in these consignments in preparation for any subsequent action deemed necessary.

The MAFBNZ Communications Group prepared information to keep stakeholders and media informed of the interceptions and actions taken. Using DNA sequencing, the MAFBNZ Plant Health and Environment Laboratory (PHEL) was able to confirm the egg from United States was not a fruit fly of economic importance. As it was not possible to determine the exact species, the fly was treated as a regulated pest and the consignment directed for treatment by the CTO.

Further discussions were held between PHEL, FPIT and the United States authorities to try to identify the species and obtain any other information that could be used as part of the assessment. Following these discussions and a full assessment of the interception by the FPIT, the suspension of consignments from the United States was lifted and trade was able to continue.

PHEL was able to identify the eggs from Australia as Bactrocera cucumis (cucumber fruit fly), an economically important fruit fly in Australia. The FPIT informed the Australian Quarantine and Inspection Service (AQIS) as soon as the identification was confirmed, and emergency measures suspending the option for dimethoate post-harvest treatment for fruit flies were put in place. The consignment of infested rock melons was directed for reshipment or destruction by the CTO.

The FPIT continued to discuss the suspension conditions with AQIS and, as more information became available (through trace-backs), it was possible to reduce the suspension to one commercial pathway (treatment centre, exporter and freight forwarder). AQIS conducted an audit of the commercial pathway and implemented corrective actions that enabled FPIT to authorise it to be re-opened. The FPIT will conduct a further audit to ensure compliance with the post-harvest treatment programme.

The biosecurity system is multi-layered, with components that work at all parts of the supply chain including off-shore (exporting country authority), in transit (on-board treatments where applicable), on arrival (inspections of produce and documents), identification (laboratories), risk assessment and standard setting, post-arrival (surveillance and response) and communications.

These recent fruit fly interceptions are an excellent example of the multiple parts of the biosecurity system working together effectively to manage the risk from pests associated with imported goods and keep New Zealand safe, while, at the same time, fulfilling international obligations and facilitating trade.

Nicola Johnston, Adviser, Fresh Produce Imports Team (and colleagues), MAFBNZ, nicola.johnston@maf.govt.nz
International operation targets illegal trade in protected wildlife products

The International Criminal Police Organization (INTERPOL) Wildlife Crime Working Group meeting in Manaus, Brazil, in September last year decided the Group should be more operationally focused to enhance its role in global law enforcement of environmental crime.

New Zealand was one of 18 countries that took part in a month-long international operation co-ordinated by INTERPOL targeting the illegal trade in traditional medicines containing protected wildlife products, such as tiger, bear and rhinoceros.

“Operation Tram” was the first of its type for INTERPOL and the first multi-agency operation held in New Zealand targeting traditional medicines (TMs). It demonstrates INTERPOL and its member countries’ commitment to fighting this type of crime, which is a threat to our planet’s biodiversity.

It was co-ordinated here from the New Zealand Customs Service (NZCS) National Targeting Centre by a Wildlife Enforcement Group representative, with a MAF Biosecurity New Zealand (MAFBNZ) intelligence analyst taking the lead intelligence role. Other agencies involved were the Ministry of Health, New Zealand Food Safety Authority, Ministry of Fisheries, Department of Conservation and INTERPOL National Central Bureau (NCB) New Zealand.

The operation was held in February, and three pathways were involved: cargo/trade, international mail/express freight and international air passengers. Internationally, it resulted in a series of arrests worldwide and the seizure of thousands of illegal medicines worth more than about $20 million.

In New Zealand, 232 traditional medicine seizures were reported for the operation period, with an average of about eight seizures a day. This included 182 seizures from the international air passenger pathway and 46 from the international mail/express freight pathway. Two post-border inspections organised by the Operation Tram team netted two seizures of 31 boxes (89 kilograms) of herbal jelly containing tortoise (Testudinidae) and five packets of powdered pangolin scale (Manis spp.) seized at the New Zealand International Mail Centre during Operation Tram.
MAFBNZ at forefront of x-ray training

MAF Biosecurity New Zealand (MAFBNZ) is one of only two organisations in the country that has achieved accreditation for training people to use x-ray for security and inspection purposes.

The National Radiation Laboratory recently accredited MAFBNZ for x-ray training, allowing it to now issue a Certificate of one. There were five seizures with no record of the country of export.

The operation was deemed a success and demonstrated the benefits of closer collaboration between different government agencies.

INTERPOL has initiated a second operation, "Operation Ramp", to be held in September this year focusing on reptiles and amphibians.

Mr Stratton said that working closely with Dr Murray Bartle, from GNS Science, on some of the technical accuracy components of the course was "a fantastic experience and opportunity to learn".

The final, 264-page submission covered topics ranging from atom construction to the management of an x-ray system.

American ginseng (*Panax quinquefolius*). With a search warrant, teams searched two premises and seized 300 grams of Agarwood (*Aquilaria* spp.).

Based on the seizures recorded from all three pathways, China was the country of export for 69 percent of total seizures, followed by Hong Kong at 10 percent. Malaysia was the country of export for 13 of the seizures, Singapore nine, South Korea five, Australia and the United States four each, Canada three, South Africa two and the United Kingdom one. There were five seizures with no record of the country of export.

The operation was deemed a success and demonstrated the benefits of closer collaboration between different government agencies.

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The final, 264-page submission covered topics ranging from atom construction to the management of an x-ray system.
New Zealand has become the first country in the world to successfully eradicate a saltmarsh mosquito, with the declaration on 1 July that the southern saltmarsh mosquito has been eradicated following an 11-year programme.

Mr Yard says MAFBNZ was confident treatment had been successful in an area when no adults or larvae were found following a time period of two years and at least three water events (rain and/or very high tides that raise the level of water in the salt marshes and facilitate hatching). MAFBNZ has now taken responsibility from the Ministry of Health for the surveillance of mosquitoes that may be found in salt marshes around New Zealand. The programme will ensure that any new invasions of saltmarsh mosquito species are detected quickly. Early detection means eradication is more feasible because it can be carried out before any populations can become established, meaning the cost of eradication is kept as low as possible. The Ministry of Health remains responsible for mosquito surveillance at New Zealand’s ports and airports.

Full information about the southern saltmarsh mosquito eradication is at: www.biosecurity.govt.nz/pests/southern-saltmarsh-mosquito

David Yard, Response Manager, MAFBNZ, david.yard@maf.govt.nz
**BIOSECURITY SURVEILLANCE STRATEGY**

MAF Biosecurity New Zealand (MAFBNZ) is leading the implementation of the Biosecurity Surveillance Strategy 2020 that will change the way surveillance is led, planned, delivered and communicated.

### Surveillance needs, prioritisation and decision making

Following on from the launch of the Biosecurity Surveillance Strategy in February 2010, the project team has completed a series of stakeholder workshops in Christchurch, Wellington and Auckland to determine what biosecurity surveillance needs are not currently being met.

Around 50 people, representing a wide range of interests, attended the workshops and some useful ideas came out of the sessions. MAFBNZ will be analysing and reporting back on the work later this year.

The sessions included a presentation on the Readiness Prioritisation System being developed by MAFBNZ. This system consists of three components: people, a process and a tool. It has been designed to improve how MAFBNZ allocates limited resources to achieve a balanced work plan by targeting the most important work first but allowing opportunities for other discretionary work to be included.

Workshop attendees were asked to comment on the criteria used to underpin the tool component and this feedback will be used to adapt the system. Longer term, it is intended that this system will be useful not only for MAFBNZ but to support anyone working in the biosecurity system to make decisions.

The “surveillance needs, prioritisation and decision making” work is part of Actions 1 and 5 of the Biosecurity Surveillance Strategy. The Prioritisation System is also being adopted for use by the Readiness Programme, which is responsible for delivering biosecurity preparedness for the MAFBNZ Post Border Directorate.

### Governance

Two advisory groups have been established as part of a coalition responsible for guiding the Biosecurity Surveillance Strategy implementation to ensure the vision is achieved and change is implemented. The “internal group” represents MAFBNZ business groups and includes members responsible for aligning project outcomes with strategic goals and managing resources to successfully realise the benefits into the surveillance and biosecurity systems. The external advisory group, known as the Biosecurity Surveillance Committee, provides broad representation across the sectors involved or affected by biosecurity, and focuses on implementation of the strategy within the biosecurity system. Both advisory groups will support the project management team, which is responsible for delivering the work.

### Biosecurity Surveillance Committee members

<table>
<thead>
<tr>
<th>Name</th>
<th>Representative of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard Witehira</td>
<td>Maori interests</td>
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<tr>
<td>Anthony Olsen</td>
<td>Maori interests</td>
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<tr>
<td>Eric Hillerton</td>
<td>Industry – animals</td>
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<tr>
<td>John Simmons</td>
<td>Regional councils</td>
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<tr>
<td>Doug Lush</td>
<td>Government – health</td>
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<tr>
<td>Erik Van Eyndhoven</td>
<td>Government – environment/conservation</td>
</tr>
<tr>
<td>Katherine Clift</td>
<td>Government – project sponsor</td>
</tr>
<tr>
<td>Peter Thomson</td>
<td>Government – project owner</td>
</tr>
<tr>
<td>Sara Khaling-Rai</td>
<td>Government – project manager</td>
</tr>
<tr>
<td>Glen Mackie</td>
<td>Industry – plants (forests/horticulture)</td>
</tr>
<tr>
<td>Graeme Inglis</td>
<td>Science and marine</td>
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</tbody>
</table>

A biography and contact details of the committee members is available at: www.biosecurity.govt.nz/surveillancestrategy

### Work progress to date

<table>
<thead>
<tr>
<th>Biosecurity Surveillance Strategy implementation actions</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 New Zealand’s needs for biosecurity surveillance will be identified.</td>
<td>Under way</td>
</tr>
<tr>
<td>2 Performance monitoring and reporting will be enhanced across the biosecurity surveillance system.</td>
<td>Next to start</td>
</tr>
<tr>
<td>3 New Zealand will increase the benefit obtained from involvement in the global biosecurity community.</td>
<td>Next to start</td>
</tr>
<tr>
<td>4 Participation in the biosecurity surveillance system will be improved.</td>
<td>Under way</td>
</tr>
<tr>
<td>5 Transparent criteria will be determined and applied in biosecurity decision making amongst surveillance participants and partners.</td>
<td>Under way</td>
</tr>
<tr>
<td>6 Opportunities for improving the management of biosecurity surveillance information will be investigated and implemented where appropriate.</td>
<td>Starting late 2011</td>
</tr>
<tr>
<td>7 Appropriate governance arrangements to drive, guide and monitor the implementation of the Biosecurity Surveillance Strategy will be established.</td>
<td>Completed</td>
</tr>
</tbody>
</table>

### Key documents – available from the MAFBNZ website (www.biosecurity.govt.nz/surveillancestrategy)

- Biosecurity Surveillance Committee biography document
- Biosecurity Surveillance Strategy 2020
- Limited release of the review of the Current State of Biosecurity Surveillance for comment and validation by key external experts

For more information, email: NZBiosecuritySurveillance@maf.govt.nz
The right fit for managing biosecurity risk at the border

Changes are being made to the Places of First Arrival (PoFA) Standard that will give MAF Biosecurity New Zealand (MAFBNZ) the ability to better respond to alterations in biosecurity risk profiles.

There are more than 30 sea ports and airports approved to receive biosecurity risk materials. These ports cater for a wide range of craft and volumes and type of goods, which means MAFBNZ has to be responsive to changes in risk profiles.

To meet this requirement, MAFBNZ has been reviewing the PoFA standard with the aim of identifying the facilities, arrangements and systems that should be in place to effectively manage biosecurity risk.

For example, why require every port or airport to have a live animal facility if not all receive live animals or, where it is a rare occurrence, if arrangements can be made for animals to be transferred to a designated facility. Any changes to the standard will ensure the correct system is in place for the type of commodity that is imported.

The port or airport operator will also be able to vary the approval should the risk profile, type or volume change without going through a long drawn out re-approval process. A simple variation change will ensure an approved system will be available in a timely fashion that reduces time and effort.

What will these changes mean to port and airport operators? There should be very little noticeable change. Operators will maintain their current approval status and each port and airport will be assessed to make sure the correct facilities, arrangements and systems are in place to receive the nominated biosecurity risk material.

A copy of the assessment requirements is available on the MAFBNZ website so operators can complete an internal audit before being formally assessed.


How does this change what MAFBNZ inspectors do now?

There will be a formalised annual review of facilities, arrangements and systems the operator has in place for any specified type of import. The initial assessment will be carried out by MAFBNZ staff not located at the port or airport, so that a fresh look can be taken at the facilities and to reduce demands on the staff located there. There should not be any obvious change noticeable – just a different face doing the check.

Jo-Anne Stokes, Senior Adviser, MAFBNZ, jo-anne.stokes@maf.govt.nz

Roger Cook has joined MAF Biosecurity New Zealand (MAFBNZ) on a six-month secondment as Group Manager, Analysis and Profiling Group. He has previously worked for MAF as a quarantine inspector and more recently as a Team Manager at the Auckland airport international terminal building. Roger has a BSc (Hons) in agricultural business management from London University.

Mark Mirkin has joined the Animal Imports Group as a senior adviser working on the ruminants and bee portfolio. He gained a BVSc from the University of Pretoria, South Africa, in 1990, and has lived in New Zealand since 2001. He has since worked mainly as a New Zealand Food Safety Authority veterinarian at various freezing works, and also had a stint as an official veterinarian – involved in inspection and certification of imported and exported animals.

Jane Hedley-Stevens has joined the Business Support Group as an executive co-ordinator for the Plant Imports and Exports Group Manager, Animal Imports and Exports Group Manager and Business Support Group Manager in the Border Standards Directorate. Jane had been with the MAFBNZ Post Border Directorate where she worked as a team support officer for the Plants Response team.

Damian Clarke has joined the Plant Exports team as a forestry adviser. He has previously worked as a protection/quarantine officer for MAF, as a forestry auditor with AsureQuality, a science and geography teacher, and, more recently, as a researcher for the Ministry of Justice and Department of Labour. Damian has a BSc (Hons) and a Diploma of Teaching.

Bernd Hey has joined the Animal Exports team as a senior adviser in the Border Standards Directorate. He is a recent immigrant to New Zealand, having worked previously for Veterinary Services in Gauteng, South Africa, as an official veterinarian in the export section. Before that, he was active in a small animal veterinary practice, and was also involved in the 2001 foot and mouth disease outbreak work in the United Kingdom. He gained a BVSc from the University of Pretoria, South Africa, in 1998.

Bas Verhagen has joined the Fresh Produce Imports Group as an adviser in the Border Standards Directorate. He previously worked as a risk analyst in the Policy and Risk Directorate for two years. Bas came to MAFBNZ in 2008 from the University of Reims, France, where he was a post-doctoral fellow on induced resistance in grapes. Bas did his PhD on rhizobacteria-induced systemic resistance at the Utrecht University Molecular Plant-Microbe Interactions Group in the Netherlands.
Biosecurity Costs Recovery Review completed

The new Biosecurity (Costs) Regulations 2010 and Biosecurity (System Entry Levy) Order 2010 came into effect on 1 July 2010.

The Biosecurity Costs Recovery review has led to significant changes in the structure of charges paid by importers to the Ministry of Agriculture and Forestry (MAF) for biosecurity clearance of imported goods and other related activities at the border.

The levy and fees within the Regulations are now linked to the activities undertaken by MAF to clear imported goods.

Given the significance of the changes, MAF is working in close partnership with importers and supply chain industries. These groups are taking greater biosecurity responsibility in varying degrees, and MAF needs to be able to identify and plan its resource requirements to meet the demand for import clearances.

The new costs structure allows for importers who require fewer MAF resources than previously to pay only for the resources required. Where MAF has to provide resources to achieve the compliance levels required, the costs of these activities will be fully recovered in all cases.

The most significant changes are as follows.

- All off-shore goods clearance activities are fully cost recovered on a contractual basis, and do not have an effect on the levy and fees.
- All live animals and animal products imported directly from a European Community member country will be charged at the applicable agreement rates. All other live animal and animal product imports will be charged at the standard rates.
- All used-vehicle inspections and clearances undertaken at approved places of first arrival (ports and airports) will be charged at the fixed rates. All others will be charged at the hourly rate plus zone and other applicable fees.
- The MAF Biosecurity New Zealand and New Zealand Customs (NZCS) costs recovery are now more aligned, and the NZCS now collects the biosecurity levy on behalf of MAF.
- The Biosecurity Risk Screening, Shipping Container and Gypsy Moth Levies ceased on 30 June 2010.

For more information see: www.biosecurity.govt.nz/regs/cont-carg/costs-regs-levy-orders-project

Carolyn Whyte has rejoined MAFBNZ as a special adviser in the Border Standards Directorate. Based in Darwin, Australia, she is also seconded half time to the Australian Quarantine and Inspection Service (AQIS) Passengers and Mail Branch. Carolyn is working on several projects associated with MAFBNZ’s new border system, including a sampling and inspection programme for empty sea containers, and a rationale for using compliance history as a measure of confidence that cargo meets biosecurity requirements on arrival. For AQIS, Carolyn is helping to establish a team of passenger profilers to work with the Australian Customs and Border Protection Service Passenger Analysis Unit, and assisting with a strategy to maximise the amount of biosecurity risk detected at airports.

Blair Cooper has joined the Analysis and Profiling Group, Border Standards Directorate, as a cargo risk profiler at the Auckland Biosecurity Centre. Before this appointment, he worked in the Auckland Air Cargo site for five years as a quarantine officer. Blair spent 10 years in the United Kingdom and Ireland working in agriculture and forestry before moving back to New Zealand in 2004.

Brad Chandler has joined MAFBNZ as a technical support officer for the Plant Exports and Imports Group, supporting the Plants Team. He has a BSc in biology and an MSc in ecology from the University of Canterbury, where he investigated various pathways (including forest canopy gaps and red deer (Cervus elaphus scoticus)) that may increase the establishment and spread of invasive plants in to New Zealand’s native beech forests. He comes to MAFBNZ from the Department of Conservation where he was extensively involved in biodiversity threats management.

Charlotte Richmond has joined the MAFBNZ Business Support Team as a team support officer for the Animal Imports and Exports Group. She has previously had experience in the co-ordination of various responsibilities within a freight company.

Russell Kilgour has joined the Analysis and Profiling Group, Border Standards Directorate, as a cargo risk profiler at the MAFBNZ Auckland Biosecurity Centre. He has transferred from the Cargo Directorate, where he was based at the Auckland wharf doing the full range of wharf duties with a particular interest in vessel clearances and ballast water. Before joining MAFBNZ, Russell was employed by the New Zealand Police. He has a BSc from the University of Waikato.

For more information see: www.biosecurity.govt.nz/regs/cont-carg/costs-regs-levy-orders-project
Pest watch: 20 April 2010 – 23 June 2010

Biosecurity is about managing risks — protecting the New Zealand environment and economy from exotic pests and diseases. MAF Biosecurity New Zealand devotes much of its time to ensuring that new organism records come to its attention, to follow up as appropriate. The tables here list new organisms that have become established, new hosts for existing pests and diseases, and extensions to distribution of existing pests. The information was collated between 20 April and 23 June 2010. The plant information is held in the Plant Pest Information Network (PPIN) database. Wherever possible, common names have been included.

ANIMAL KINGDOM RECORDS

Validated new to New Zealand reports

No validated new to New Zealand records during this period.

Significant find reports

No significant find records during this period.

New host reports

No new host records during this period.

New distribution reports

No new distribution records during this period.

If you have any enquiries regarding this information please email surveillance@maf.govt.nz

Reissue of IHS for milk and milk products for human consumption from the European Union and Switzerland

This import health standard (IHS) has been reissued and is now dated 19 July 2010. It replaces the previous version for milk and milk products from the EU dated 23 November 2007 and follows consultation on 17 February 2010.


Amended IHS: Importing laboratory animals from all countries

This import health standard (IHS) is now dated 3 May 2010 and replaces that dated 13 March 2005. It has been changed to allow import permits to be issued for multiple entry for a period of six months. Other generic formatting issues and definitions have been updated.


Amended IHS: Importing new organism invertebrates into containment from all countries

This import health standard (IHS) is now dated 3 May 2010 and replaces that dated 3 March 2004. It has been changed to allow import permits to be issued for multiple entry for a period of six months. Other generic formatting issues and definitions have been updated.


Amended IHS: Importing non-exotic invertebrates from all countries

This import health standard (IHS) is now dated 3 May 2010 and replaces that dated 3 March 2004. It has been changed to allow import permits to be issued for multiple entry for a period of six months. Other generic formatting issues and definitions have been updated.


Amended IHS for importation of nursery stock

The import health standard (IHS) 155.02.06: Importation of Nursery Stock was amended to include changes to the schedules for Prunus, Solanum tuberosum, and Vaccinium macrocarpon.

The standard is dated 6 July 2010 and replaces that dated 18 January 2010. It can be viewed at: www.biosecurity.govt.nz/files/ihs/155-02-06.pdf

For further information, email plantimports@maf.govt.nz or phone 04 894 0862.

IHS minor amendment – 152.02: Importation and clearance of fresh fruit and vegetables into New Zealand

This import health standard (IHS) is dated 29 July 2010. It replaces the version dated 18 June 2010, and includes a minor editorial change to the standard. The following is a summary of the change:

- list of approved “processed” commodities
  (see www.biosecurity.govt.nz/files/ihs/152-02-approved-commodities.pdf);
- addition of “Matsuri” Processed Young Coconuts.


IHS for importation of laboratory animals from all countries

This import health standard (IHS) is now dated 6 July 2010 and replaces that dated 18 January 2010. It can be viewed at: www.biosecurity.govt.nz/files/ihs/155-02-06.pdf

For further information, email surveillance@maf.govt.nz

UPDATES

IHS for importation of nursery stock

The import health standard (IHS) 155.02.06: Importation of Nursery Stock was amended to include changes to the schedules for Prunus, Solanum tuberosum, and Vaccinium macrocarpon.

The standard is dated 6 July 2010 and replaces that dated 18 January 2010. It can be viewed at: www.biosecurity.govt.nz/files/ihs/155-02-06.pdf

For further information, email plantimports@maf.govt.nz or phone 04 894 0862.

Amended IHS for poultry feathermeal and products containing poultry feathermeal for animal feeding into New Zealand from Australia

This import health standard (IHS) is now dated 9 July 2010 and replaces that dated 15 January 1998.

The amendment updates time and temperature requirements to mitigate the risk of introducing Infectious Bursal Disease. Other generic formatting issues and definitions have also been updated.


Amended IHS: Importing laboratory animals from all countries

This import health standard (IHS) is now dated 3 May 2010 and replaces that dated 13 March 2005. It has been changed to allow import permits to be issued for multiple entry for a period of six months. Other generic formatting issues and definitions have been updated.


Amended IHS: Importing new organism invertebrates into containment from all countries

This import health standard (IHS) is now dated 3 May 2010 and replaces that dated 3 March 2004. It has been changed to allow import permits to be issued for multiple entry for a period of six months. Other generic formatting issues and definitions have been updated.


Amended IHS: Importing non-exotic invertebrates from all countries

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IHS minor amendment – 152.02: Importation and clearance of fresh fruit and vegetables into New Zealand

This import health standard (IHS) is dated 29 July 2010. It replaces the version dated 18 June 2010, and includes a minor editorial change to the standard. The following is a summary of the change:

- list of approved “processed” commodities
  (see www.biosecurity.govt.nz/files/ihs/152-02-approved-commodities.pdf);
- addition of “Matsuri” Processed Young Coconuts.


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# PLANT KINGDOM RECORDS

## Validated new to New Zealand reports

<table>
<thead>
<tr>
<th>Organism</th>
<th>Host</th>
<th>Location</th>
<th>Submitted by</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sapintus argenteofasciatus (insect: beetle, no common name)</td>
<td>Cortaderia selloana (pampas grass)</td>
<td>Nelson</td>
<td>IDC</td>
<td>(General surveillance)</td>
</tr>
<tr>
<td>Badnavirus Bougainvillea spectabilis chlorotic vein-banding virus (virus: BsCVBV)</td>
<td>Bougainvillea glabra (bougainvillea)</td>
<td>Auckland</td>
<td>IDC</td>
<td>(General surveillance)</td>
</tr>
</tbody>
</table>

## Significant find reports

No significant find records during this period.

## New host reports

<table>
<thead>
<tr>
<th>Organism</th>
<th>Host</th>
<th>Location</th>
<th>Submitted by</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acanthuchus trispinifer (insect: no common name)</td>
<td>Paraserianthes lophantha (brush wattle)</td>
<td>Auckland</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Pseudaulacaspis eugeniae (insect: white palm scale)</td>
<td>Melaleuca hypericifolia (bottlebrush)</td>
<td>Auckland</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Uraba lugens (insect: gum leaf skeletoniser)</td>
<td>Quercus robur (English oak, truffle oak)</td>
<td>Waikato</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Heliophina haemorrhoidalis (insect: greenhouse thrips)</td>
<td>Viction vinus (laurel)</td>
<td>Nelson</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Icerya purchasi (insect: cottony cushion scale)</td>
<td>Coprosma sp. (coprosma)</td>
<td>Nelson</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Caulimovirus indet. (virus: no common name)</td>
<td>Clematis viticella (clematis)</td>
<td>Auckland</td>
<td>IDC</td>
<td>(General surveillance)</td>
</tr>
<tr>
<td>Ceroplastes destructor (insect: soft wax scale, white wax scale)</td>
<td>Dracaena draco (dragon tree)</td>
<td>Bay of Plenty</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Ceroplastes sinensis (insect: Chinese wax scale)</td>
<td>Notothagus solandri (black beech, tawhai rauriki)</td>
<td>Auckland</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Ceroplastes sinensis (insect: Chinese wax scale)</td>
<td>Cırakia sp. (plant: no common name)</td>
<td>Auckland</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Ceroplastes sinensis (insect: Chinese wax scale)</td>
<td>Melaleuca hypericifolia (bottlebrush)</td>
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<td>Scion</td>
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</tr>
<tr>
<td>Ceroplastes sinensis (insect: Chinese wax scale)</td>
<td>Entelea arborescens (whau)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceroplastes sinensis (insect: Chinese wax scale)</td>
<td>Melicope ternata (wharangi)</td>
<td>Waikato</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Hemiberlesia rapat (insect: greedy scale)</td>
<td>Citrus purpureus (plant: no common name)</td>
<td>Auckland</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Lindingasias rosii (insect: Ross's black scale)</td>
<td>Olearia paniculata (akepiro)</td>
<td>Wellington</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Poliiaspis media (insect: scale insect, no common name)</td>
<td>Mysis divaricata (weeping mapou)</td>
<td>Wairarapa</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Stenosceis hylastoides (insect: weevil, no common name)</td>
<td>Liquidambar sp. (liquidambar)</td>
<td>Auckland</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Hybolasius vegetus (insect: beetle, no common name)</td>
<td>Idesia polycarpa (wonder tree)</td>
<td>Whanganui</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Calotropis cerasi (insect: cherry slug, cherry slug sawfly)</td>
<td>Ameleschier sp. (serviceberry)</td>
<td>Whanganui</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
</tbody>
</table>

## Extension to distribution reports

<table>
<thead>
<tr>
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<th>Host</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Scytoryx multiflorus (European elm bark beetle)</td>
<td>Ulmus sp. (elm)</td>
<td>Whanganui</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Hybolasius vegetus (insect: beetle, no common name)</td>
<td>Idesia polycarpa (wonder tree)</td>
<td>Whanganui</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
<tr>
<td>Dialectica scalariella (Echium leaf miner moth)</td>
<td>Echium sp. (echium)</td>
<td>Kaikoura</td>
<td>Scion</td>
<td>(MAF high-risk site survey)</td>
</tr>
</tbody>
</table>

If you have any enquiries regarding this information please email surveillance@maf.govt.nz
MAF general enquiries: 0800 00 83 33
Exotic disease and pest emergency hotline: 0800 80 99 66
www.biosecurity.govt.nz