INTERNATIONAL COLLABORATION

Dealing with didymo
Biosecurity Summit 2006
Imported vehicles and machinery review
Biosecurity magazine
Biosecurity is published six-weekly by Biosecurity New Zealand, with regular input from the Department of Conservation, Ministry of Health, Ministry of Fisheries and regional councils. 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. Animal welfare issues are also covered. The articles in this magazine do not necessarily reflect government policy.

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International connections and relationships are vital for our biosecurity and maximising the very real benefits we gain from our high animal and plant health status.

We have a wide range of international linkages and relationships, both formal and informal.

These connections and networks help in the development of standards and protocols for the safe import and export of risk goods to and from New Zealand, and enable us to influence the development of international protocols and standards to manage the biosecurity risks associated with international movement of people and goods.

With good international communication channels we learn quickly of the emergence of pests and diseases in other parts of the globe (e.g. bovine spongiform encephalopathy, H5N1 avian influenza, carnal bunt in wheat). And, through the same channels, we can promptly inform the international community of emerging or newly recognised pests and diseases in New Zealand.

We also learn through our international connections about what measures are being trialled, and which ones are ultimately effective in managing pests and diseases elsewhere in the world. Likewise, we contribute our knowledge in biosecurity risk management to the international community.

Internationally agreed protocols and standards are a very powerful influence on the biosecurity measures that we apply within New Zealand. These comprise the international consensus of appropriate measures to manage specific risks. As such, any country wishing to apply measures other than those specified in an international standard needs a very compelling scientific argument to justify their position.

Biosecurity New Zealand (BNZ) engages in a number of key international standard or protocol setting bodies, with New Zealand officials taking leadership roles in several key forums:

- The Sanitary and Phytosanitary (Sanitary refers to animal and human health, and phytosanitary refers to plant health) Committee of the World Trade Organisation (SPS Committee). This committee maintains and implements the World Trade Organisation Agreement on the application of sanitary and phytosanitary measures (the SPS Agreement).
- The International Plant Protection Convention (IPPC).
- World Organisation for Animal Health (OIE).
- Codex Alimentarius Commission (Codex). IPPC, OIE and Codex are international standard-setting bodies recognised in the SPS Agreement. BNZ leads New Zealand engagement in IPPC and OIE, and New Zealand Food Safety Authority leads our engagement in Codex.
- The Convention on Biodiversity (CBD, led by the Ministry of Foreign Affairs and Trade). BNZ interests in the CBD focus on invasive alien species management, and the Cartagena Protocol, which seeks to protect biological diversity from the potential risks posed by living modified organisms.
- The Montreal Protocol on substances that deplete the ozone layer (led by the Ministry of Foreign Affairs and Trade). BNZ interest is principally in the regulation of methyl bromide usage.
- The International Maritime Organisation (IMO). BNZ interests in the IMO revolve around preventing the introduction of marine pests via ballast water or bio-fouling on vessel hulls.
- The World Health Organisation (WHO; via the Ministry of Health). BNZ interests in WHO are mainly in the implementation of the International Health Regulations, and risk management programmes for zoonotic disease.

Within these forums, New Zealand argues for standards based on proven science and established risk management principles. This principled approach is well recognised in the international community, and a key strength that we bring to alliances of like-minded countries.

Similarly, when negotiating sanitary and phytosanitary provisions in our trade agreements, we seek facilitation of trade through least trade restrictive measures that have been proven effective in managing recognised biosecurity risks.

New Zealand is party to a number of current trade agreements that include SPS provisions. Our partners in these agreements include Brunei, Chile, Singapore, Thailand, Australia and the European Community.

Trade agreements currently under negotiation with China, Malaysia and the ASEAN group also include SPS provisions.

These agreements provide an ongoing framework that offers opportunities for: strengthening our risk management programme; reciprocal recognition of risk management systems and avoidance of duplication; and greater cooperation and alignment of our input to multi-national forums.

n Derek Belton
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Biosecurity New Zealand
DIDYMOSphenia geminata), the organism is not well known in other countries by either members of the general public or by invasion biologists.

Communicating beyond the borders
Didymo has a patchy yet widespread distribution in the Northern Hemisphere, but it took the spread into New Zealand to get didymo officially listed as a global invasive species on the Global Invasive Species Information Network. Didymo investigations by Biosecurity New Zealand (BNZ) have inspired collaborations around the world.

In May 2006, the first international symposium on Didymosphenia was held in the United States in Bozeman, Montana. This special session at an American Fisheries Society meeting was sponsored by the US Federation of Fly Fishers (FFF), Montana Department of Fish, Wildlife and Parks and the US Environmental Protection Agency (EPA).

Dr Sarah Spaulding, a diatomist with the US EPA, and also a member of the BNZ Didymo Technical Advisory Group, was the key organiser of the symposium. New Zealand didymo science featured prominently in the programme. The international audience was startled by photos and video of New Zealand didymo blooms. Apparently the levels of biomass which had passed for nuisance blooms in the Northern Hemisphere wouldn't make a Southlander blink.

Another important outcome was the realisation that didymo has been spreading within the Northern Hemisphere, too, to warmer places that diatomists would not previously have considered suitable.

Piecing together the evidence
Determining management strategies for didymo requires skills that might be used in solving a crime: we need to account for all of the evidence in a coherent, consistent story. It is not entirely clear why the world is suddenly witnessing rapid global spread of didymo coupled with unprecedented biomass levels. Is it simply a function of increased traffic of international vectors, such as globe-trotting freshwater enthusiasts who can zip from Vancouver to Lumsden in less than a day? Or has didymo mutated in a way that allows it to flourish in environments not previously favourable? Could it be a result of climate change? Perhaps it's a combination of factors.

The work done by BNZ is stimulating international interest in combining clues from the global expression of didymo phylogeography, genetics, morphology, geographic distribution, environmental tolerance, and invasiveness. There is much still to be learned about this new invasive species.

An international alert
A positive outcome of the Montana symposium was a call to arms to launch an international effort to educate those who need to know how to prevent the spread of didymo to new regions. This requires a comprehensive education and outreach programme to change user.
An international alert (see previous page) was recently developed to alert others of the potential invasive abilities of didymo and the importance of using the simple decontamination procedures that have been developed.

For a copy of the international flyer:
- www.epa.gov/
- www.fedflyfishers.org/begin.php
- Christina C Vieglais, PhD, Senior Adviser, Post-clearance Response, Biosecurity New Zealand, phone 04 894 0531, christina.vieglais@maf.govt.nz

Biosecurity New Zealand Didymo Technical Advisory Group Member Dr Sarah Spaulding (in waders, back to camera) gives her colleagues from the US Environmental Protection Agency and BNZ Didymo Science Lead Dr Christina Vieglais (left of Dr Spaulding) a first-hand view of didymo in US waters during a visit to Little Boulder Creek, Colorado last year.

Children getting ‘Check, Clean, Dry’ didymo message

The time-proven formula of using the agile minds of children to communicate with the widest possible audience – the general public – is being harnessed by the didymo response team.

Children tend to be more environmentally aware than many adults, and Biosecurity New Zealand (BNZ) has commissioned educational resource specialist Starters and Strategies to create some material that builds on this awareness.

Starters and Strategies creates learning tools for teachers’ use, producing a magazine containing resources which are sent free to 33,000 primary and intermediate teachers, and to secondary teachers of years 9 and 10. The lesson material is also published on the company’s website, which receives up to 12,000 hits a day.

BNZ worked successfully with Starters and Strategies during the painted apple moth eradication, receiving hundreds of requests for material relating to the programme.

The didymo resource will focus on the Check, Clean, Dry message and promote a better understanding of why we need to treat all waterways with more respect. It will also show the damage that aquatic pests can have on our environment.

BNZ is confident that these strategies will help move the public from passive awareness of didymo, to making active behavioural changes to help protect our rivers.

The Cook Strait ferries are also being targeted in the drive to increase children’s awareness of didymo, with a colouring competition being organised in conjunction with Bluebridge Ferry Company.

n www.teachingonline.org
Waterways users hold key to stopping didymo

Biosecurity New Zealand (BNZ) is using research to understand waterways users in its effort to stem the spread of didymo.

BNZ needs everyone who uses lakes and rivers to ‘Check, Clean, Dry’ when they move between waterways. That means they should thoroughly clean every piece of clothing and equipment that has come into contact with the water or dry it for at least 48 hours.

It’s a big ask for water users, so the starting point for planning a successful campaign is to get the perspectives of the users themselves.

BNZ has employed ACNielsen to do research that helps it to understand the barriers water users have towards ‘Check, Clean, Dry’ and what would motivate them to comply.

MAF’s Biosecurity Communications Manager Jeremy Lambert says the findings are informing planning for BNZ’s communications around didymo, to make the call to action as compelling as possible.

ACNielsen has recently presented to BNZ the findings of focus group research undertaken in both the North Island and South Island with high-risk water-using groups – boaties (pleasure boats and fishing boats), fly fishers, kayakers and jet boaters.

All of the focus group members were regular users of fresh waterways and owned or had access to boats or equipment.

The findings showed that most waterway users know about didymo or ‘rock snot’ and have some awareness of the ‘Check, Clean, Dry’ message.

The focus group research also found that, across the different groups, water users take pleasure in interacting with the natural environment, believe that New Zealand offers world-class water recreation and that clean, clear water is important for both emotional and practical reasons.

However, the different groups were widely disparate in their understanding and acceptance of didymo and the actions they need to take to stop it spreading.

The research shows compliance with ‘Check, Clean, Dry’ is highest in the South Island and among kayakers and fly fishers. Meanwhile, the message hasn’t caught on in the North Island, where didymo is seen as a ‘South Island problem’ across all of the user groups.

The researchers found that kayakers, river jetboaters and fly fishers are the most highly motivated to stop didymo from spreading because it has the potential to impact most heavily on their sports. However, they often feel pessimistic about their ability to stop the spread and question whether cleaning is effective enough.

Pleasure boaties/jet boaters are less likely to be motivated to ‘Check, Clean, Dry’ because they do not believe their sport will be affected much. According to the researchers, boaties and jet boaters need simple rules that they see everyone else is complying with too.

Jeremy Lambert says the focus group findings will enable BNZ to tailor communications to recognise the differences between the groups.

The findings also help BNZ to identify some common needs across all waterways users that the campaign will need to respond to. The campaign will need to show all of the groups that:

- Didymo is a mainstream problem and not just a problem for recreational waterways users – everyone has a role to play.
- The Government acknowledges that didymo is serious and is committed to tackling the problem.
- Didymo will have personal consequences.
- A sensible approach is advocated – it needs to be easy for waterways users to do their bit.
- Together we can make a difference.

According to the researchers, the findings showed that the campaign needs to shift more towards showing the magnitude of the problem through, for example, worst-case scenarios and before-and-after images – and that ultimately all user groups need to see what they have to lose if didymo is not contained.

Jeremy Lambert says that ACNielsen’s conclusions and recommendations will be central to planning the next phases of the didymo campaign, ensuring that BNZ is able to deliver the most effective messages to high-risk groups and ultimately stem didymo’s spread.

www.biosecurity.govt.nz/didymo
Working together

Biosecurity researchers in Australia, the United States and New Zealand are finding new ways to share expertise and solve common problems.

A Memorandum of Understanding is being drafted between New Zealand’s Better Border Biosecurity (B3) research programme* and Australia’s Cooperative Research Centre for National Plant Biosecurity. Those involved say they are keen to learn from each other.

“It’s logical to work together,” says B3 Contract Manager Dr Grant Smith. “If we combine our expertise, we will get better at identifying biosecurity risks and preventing unwanted pests from arriving.”

He says the quadrilateral biosecurity agreement between New Zealand, the United States, Canada and Australia has created a framework within which more specific research collaborations can occur.

This year, members of the USDA’s Centre for Plant Health Science and Technology visited Australia to attend a biosecurity symposium run by the Cooperative Research Centre for National Plant Biosecurity. They also visited New Zealand, and Biosecurity New Zealand arranged for them to visit B3 as part of their itinerary. This provided an insight into a significant part of the research underway in this country. Grant says these types of face-to-face meetings are extremely useful for establishing contacts and becoming familiar with each other’s work. The Americans, like the Australians, have expressed their willingness to share information and explore joint project ideas.

B3 Science Leader Dr Craig Phillips says it is essential to work with our foreign trading partners. “If they become better at keeping pests out, then New Zealand will also benefit because there will be less risk of us catching pests from them. Rather than work in an isolated fashion and accidentally duplicate each other’s efforts, it makes sense to coordinate and contribute different pieces to the puzzle.”

He says some of the identification and data processing systems being developed in Australia and the United States look impressive.

“The Americans have developed an automated insect sorting system using robotics and image analysis. The robot will hold and rotate an insect under a microscope for a distant observer to identify. This could integrate well with Australian research that is developing a system to enable experts in one country to identify organisms in another country via their computer and the internet.”

Craig says such tools become extremely important in an international environment where taxonomists are thin on the ground. “It takes time to send specimens to taxonomists on the other side of the world, and there is a risk they can become damaged or lost. If taxonomists can identify organisms via the internet, then their skills will be more widely and readily available.”

He says the New Zealanders will benefit from the experience of their Australian counterparts, who are streamlining their data gathering capabilities through new hand-held computing technologies.

In return, New Zealand is offering its own expertise. A B3 project attracting overseas interest is researching if New Zealand native plants can be used as sentinels. The aim is to see if monitoring the pests and diseases that are attacking our native plants abroad, can help to predict and prevent such attacks at home.

B3 and its international collaborators are contributing to joint databases for diagnostic work, Craig says. “It is all about making the most of our collaborations to ensure every dollar we spend on biosecurity goes as far as it can.”

*The Better Border Biosecurity, or B3, programme is a multi-million dollar research endeavour involving Crop & Food Research, AgResearch, HortResearch, Scion (via the Ensis joint venture), the National Centre for Advanced Bio-Protection Technologies, the Ministry of Agriculture and Forestry, the Department of Conservation, the Environmental Risk Management Agency and the Forest Biosecurity Research Council, and is supported by the Foundation for Research, Science and Technology. www.b3nz.org/
‘Capital Quake’ great shakes

In November 2005 the Government approved the National Civil Defence Emergency Management (CDEM) Plan, to come into effect 1 July 2006. At that time, the Government directed that there be a national level CDEM exercise for the Wellington region, engaging central government and relevant elements of local government.

Capital Quake 06 was a national disaster preparedness exercise based on a severe earthquake in Wellington. The exercise was jointly led by the Wellington CDEM Group and the Ministry of Civil Defence and Emergency Management (MCDEM). Its aim was to test New Zealand’s all-of-nation arrangements for responding to a major disaster resulting from an earthquake in Wellington.

About 50 local, national and international agencies were directly involved in the exercise, which was run during 14–15 November 2006 and based on the following scenario:

At 5:30 am on 14 November 2006, a major earthquake hits Wellington measuring 7.6 on the Richter scale. The epicentre is at Petone. This generates a 75km long surface rupture, with a peak horizontal displacement along the fault of 4 to 5m, and a vertical displacement of up to 1m. Damage is experienced as widely as Christchurch and Taupo. There are continuing aftershocks, with some as large as magnitude 6.0 to 6.5.

MAF participated in the exercise as a member of the National Welfare Recovery Coordination Group (NWRCG). It was required to support the Wellington regional CDEM group in its efforts to manage animal welfare issues that arose during the two days. MAF was assisted in this role by representatives from the Society for the Prevention of Cruelty to Animals, New Zealand Veterinary Association and Federated Farmers New Zealand, who were convened for a conference call during the second day of the exercise.

Capital Quake 06 was rated a big success by the participants in that it was a useful exercise in meeting the three core objectives:

- to understand, develop, and practise the respective roles and responsibilities of local, regional and national agencies in such an event;
- to embed planning arrangements in standard processes for all participating agencies; and
- to confirm the connections between local, regional, national and international agencies.

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Successful handover of mosquito eradication programme

October marked the handover of the southern saltmarsh mosquito (Ochlerotatus camptorhynchus) eradication programme from the Ministry of Health to Biosecurity New Zealand (BNZ).

The passing of responsibilities was marked when JR Gardner, the Ministry of Health’s Senior Adviser for Biosecurity, passed on the ‘offi cial mozzie dipper’ to Don Hammond, Biosecurity New Zealand’s new Programme Operations Controller, at the Wairau Lagoons in early October.

The programme transfer fulfilled the Government’s Biosecurity Strategy of having BNZ accountable for all eradication programmes.

The southern saltmarsh mosquito (SSM) programme began in 1999, and the mosquito has been successfully eradicated from locations at Napier, Haumoana, Porangahau, Mahia, Gisborne, Whitford, Mangawhai and Whangaparaoa. These successes are significant in that SSM eradication had never been attempted in any other part of the world. Eradication programmes are continuing in the Kaipara, Lake Grassmere and the Wairau Lagoons.

Following the discovery of SSM in the Coromandel in April this year, the Government has approved funding for an eradication programme there. This activity will be reviewed at the end of the 2006–2007 financial year.

The eradication utilises S-methoprene, an insect growth regulator to which SSM is ultra sensitive. The compound is delivered as a coated granule of sand, dispersed onto the SSM habitat using aerial (helicopter) and ground delivery (backpacking and quad bikes). In the water column, the concentration of S-methoprene is less than one part per billion.

Used this way, the product does not affect non-target species. It interferes with the mosquito’s pupa development so adults do not emerge.

Southern Monitoring Services, trading as New Zealand BioSecure, is the primary contractor. The company has the resources to support the operations and over the past six years has acquired extensive experience in conducting mosquito surveillance and eradication programmes.

Don Hammond, Biosecurity New Zealand’s operations manager for the programme, has also had extensive experience in dealing with invertebrate and other biosecurity pests.

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‘JR’ Gardner (Ministry of Health), passes on the ‘mozzie dipper’ to Don Hammond (Biosecurity New Zealand).
Centre of attention was the horse Amagh, which had become stuck down a steep hillside at his Palmerston North home. Coordinating the rescue and wrangling the horse – along with firefighters, helicopter crew and vets – was Dr Kirstie Dacre, Senior Lecturer in Equine Medicine at Massey University.

An elderly 27-year-old, Amagh had fallen down a steep scrubby gully and had to be airlifted to safety. Luckily for him, Kirstie had recently attended a rescue training exercise run by the Disaster and Emergency Response Centre at the University of California in Davis, and Massey University Veterinary Teaching Hospital had purchased a large animal lift sling for use in equine anaesthesia recovery and horse rescues in New Zealand. Unlike most slings that support the horse using the abdomen – often causing them to panic – the large animal lift sling uniquely uses the skeletal system and is extremely well tolerated by horses.

In the wake of a number of serious widespread catastrophes (the 2004 Boxing Day tsunami and the 2005 New Orleans flood, to name but two), there has been increasing demand for better across-country and across-agency coordination of responses to emergencies.

Thanks to Kirstie Dacre’s foresight in establishing a link with the Centre at UC Davis, seeing a need for specialist equipment in New Zealand and gaining competency in its use, Amagh and other horses yet to be rescued, can live to graze another day.

While on the subject of animal rescue and international relationships, a New Zealand horse was recently rescued in the first successful use of a piece of innovative equipment from California.

Amagh, wondering what all the fuss was about, enjoys a nosebag with his rescuers following his airlift. Kirstie Dacre is pictured fifth from left. Also pictured are Amagh’s owners (at head), firefighters (at rear) and the veterinarians and students who took part in the rescue.
Red imported fire ant
Response update (Whirinaki 2006)

The red imported fire ant (RIFA) eradication programme is entering the busy season. Spring surveillance started in late October using protein and sugar attractant baits. Insecticidal ant baits will be applied in December 2006. Another round of surveillance and bait application is scheduled for March and April 2007.

Investigation and Diagnostic Centre (IDC) staff and contractors conducted a nest extraction as part of this response. An assessment of the size and age of the nest showed that the population was about 30,000 workers and was around two to two-and-a-half years old. Based on these features, IDC staff determined that there could have been reproductive flights during each of the previous two summers, and that queens could have established new nests up to 2 km from the nest site.

Ants not linked to 2004 Napier find

The nest was found in a junkyard area of the forest products plant. Where it came from is uncertain. To determine whether this find was related to the 2004 Port of Napier incursion, United States Department of Agriculture (USDA) experts conducted Gp-9 allele testing, GC mass spectroscopy and venom alkaloids analysis. These results showed the Whirinaki nest was the polygynous social form (multiple reproductive queens per nest) and that it was not related to the monogyne (single queen) form found in 2004.

Work to trace risk imports and goods into the nest area and analyse imported products from RIFA-infested countries to determine the introduction pathway is nearing completion. However, at least a partial answer lies in further genetic analysis to be conducted by the USDA in a large-scale research project aimed at identifying the global invasion pathway of this species. RIFA, a native of South America, has been introduced to a number of countries, including the United States, Australia, China and Taiwan.

Surveillance recommences for spring

Surveillance around the nest site at Whirinaki, using non-toxic attractant baits, was conducted in June. These activities were halted during winter, due to temperatures falling below reliable limits for detecting ant foraging behaviour, but re-commenced in spring. Intensive pitfall trapping out to 200 metres from the nest has been in operation since July. No further S. invicta have been detected since the treatment of the original nest.

A Controlled Area out to a 2 km radius from the nest site was declared on 23 June. Two important trace forward sites, the Omaruuni Land Fill and the Redcliff Waste Transfer Station were placed under Biosecurity Act section 122 Directions to contain and reduce the inadvertent spread of potential S. invicta colonies via contaminated material. More than 170 permits to safely move risk items have been issued to date. A project to trace movements of risk goods in to and out of the Controlled Area since 1 January 2003 was initiated to help identify where the nest may have arisen from and where it may have since dispersed to within New Zealand.

High-risk sites identified

IDC incursion investigators and entomologists developed the operational response strategy after considering expert advice from the RIFA Technical Advisory Group (TAG), overseas RIFA experts, and experience gained in eradicating two earlier RIFA incursions. NIWA wind plume modelling analysis was used to determine further high-risk sites in the Whirinaki area for surveillance or treatment.

Two ground-based surveys of high-risk areas are planned for the 2006–2007 summer, while single surveys will be conducted in late summer of the following two seasons (2008 and 2009). Insecticidal ant baits will be applied to inaccessible areas and sites where surveillance detection probabilities are low, using either ground-based or aerial application methods. A combination of slow-acting (insect growth regulators) and fast-acting (hydramethylnon-based) ant baits will be used to achieve maximum ant kill rates.

Due to predicted slow colony growth rates in New Zealand, it may take up to three years of surveillance to ensure any incipient colony is detected if present. Effective and robust initial response actions are vital to ensure this highly invasive species does not establish in New Zealand. Efforts to eradicate RIFA are continuing in Australia and Taiwan, while control measures are ongoing in heavily infested areas of the United States.

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A senior lecturer in veterinary neurophysiology at Massey University has received the 2006 National Animal Ethics Advisory Committee (NAEAC) Three Rs Award. Dr Craig Johnson was recognised for his work in developing a specialised anaesthesia technique and adapting it to a variety of applications in animal welfare research.

NAEAC selected Dr Johnson’s work from several high calibre nominations. The committee considered Dr Johnson’s anaesthesia technique to have a far-reaching effect across all species, with a focus on reduction and refinement of animal use.

The concept of the Three Rs, from which the award takes its name, is to replace live animal subjects, reduce the number of animals used and refine experimental techniques to minimise pain and distress. The award is coordinated by NAEAC and is now in its fourth year. It is made to an individual, group or institution within New Zealand that epitomises best practice with regard to the Three Rs.

“The Three Rs are the cornerstone of the ethical use of animals in research, testing and teaching,” says NAEAC Chair, John Martin. “This award celebrates achievements in the implementation of the Three Rs and promotes the concept within the scientific community and to the wider public.

“Dr Johnson’s research contributes significantly to the refinement of methodology in pain research. His technique can be applied to a wide range of species and allows conclusions about the efficacy of methods of pain relief to be drawn using fewer animals and without causing pain in any of them.”
Illegal Australian immigrants dealt with

A detection of Australian subterranean termites (Coptotermes acinaciformis) at Richmond, Nelson in late January 2006 has resulted in MAF calling on the advice of Australian and other international expertise to assist in response actions.

International advice was one of the key factors when termites were successfully eradicated from the North Island town of Otorohanga in May 2005. During the Otorohanga response, key linkages were established with a range of termite experts from Malaysia, the United States and Australia.

Subterranean termites are not established in New Zealand, but numerous incursions have been recorded from throughout New Zealand since the 1930s. Infestations have all arrived from Australia, via rail or tramway sleepers or in wooden utility poles. All finds have been able to be traced back to their original source.

Due to the high number of termite incursions in the past (circa 110), New Zealand border controls were enhanced in the 1970s. Controls, including compulsory fumigation, creosote of timber, and removal of all bark were put in place. Timber exports from Australia were prohibited unless these criteria had been met.

Termite management relationships with Australia have continued and when it comes to the latest management tools for response, there is no one better than the ‘termite source’ to destroy and kill the pest. In Australia termites have been estimated to cause up to A$910 million in damage, control and repair costs per annum. CSIRO data indicate that attack to individual wooden structures is as high as one-in-four throughout Australia, with Queensland having the highest recorded damage (Archicentre Limited Report, 2006).

The main assistance in New Zealand has been provided by the Sydney pest control company, Pestforce. Owner and general manager Shane Clarke is renowned throughout Australia for his knowledge and control of many termite species. Shane and his team are an integral part of the current Nelson response, providing both advice and on-the-ground assistance.

Additional advice has been provided by Dr Michael Lenz, CSIRO and Professor Nan-Yao Su, Florida University, United States, both world experts in the termite field. Professor Su’s advice is especially valued as he was one of the original creators of Sentricon, the bait system owned by Dow AgroScience that is being successfully used to eliminate the termites in Nelson.

Latest results in Nelson are encouraging with termites already being observed feeding on the active ingredient (Hexaflumron) in the bait stations. Based on the Otorohanga experience termite activity should now decline over the coming months.

MAF response leadership, assisted by local and international expertise, is proving a lethal combination to combat invading populations of termites. Leading scientists at Ensis (Forest Research), CSIRO and worldwide are all part of the current incursion response team. It is intended to maintain relationships with these groups to ensure New Zealand remains subterranean termite free now and in the future.

Mark Ross, Senior Adviser, Plant Response Team, Biosecurity New Zealand, phone 04 894 0535, mark.ross@maf.govt.nz
You’re looking at one of the most harmful pests in NZ oceans

Your boat is capable of trafficking some of the most harmful unwanted pests in our oceans. The spread of these pests is limited and will stay limited if you regularly clean and anti-foul your hull. Not only will you be protecting our oceans, your boat will perform better and last longer.

To find out more about what you can do to protect our oceans go to:

www.biosecurity.govt.nz
Push to manage more risk offshore

Thinking globally, acting locally was the theme for the fourth Biosecurity Summit, held in Wellington last month.

The summit opened with a karakia from George Ria of MAF followed by a welcome address from Jim Anderton, Minister of Agriculture and Minister for Biosecurity.

The Minister referred to the important role biosecurity plays in ensuring the success of our primary industries.

“The primary industries are vital to our economic well-being, and they are becoming more important. We need to keep them growing,” he said.

The Government is taking biosecurity seriously, with baseline spending increasing by more than 50 percent every year since 2000 (see sidebar). The focus of New Zealand’s biosecurity efforts is moving towards pre-emptive and preventative measures, rather than responding to risks when they are already here.

“I want to see us move more of our risk overseas, so that other countries and traders manage more biosecurity risks before they get to New Zealand.”

The Minister said while he welcomed progress, he also stressed realism, and could not promise a 100 percent incursion-free success rate.

“Even with unlimited resources we would not reduce the risk to zero,” he said. “With limited resources and unlimited threats, we need to direct our efforts to the most effective use of those resources.”

Murray Sherwin, MAF’s Director General, followed the Minister’s welcome with an opening address in which he talked about the impact of globalisation on New Zealand biosecurity.

“With today’s globalisation trends, risks are arriving faster and from more places,” he said. “Non-traditional sources of people and products are bringing non-traditional risks.”

Over the last decade, the pressure on our border has increased dramatically. The numbers of passengers, imported sea containers, used vehicles and machinery have doubled.

Murray Sherwin echoed the Minister’s comments on the impossibility of eliminating risk completely, and said risk reduction is the aim. He used the honey import health standard as an example.

“A huge amount of effort has gone into this. We’re not looking to eliminate the risk totally, but to get it down to the minimum, consistent with ongoing trade.”

He said there were a number of areas which need to change, going forward, including looking ahead at emerging risks, risk profiling and intelligence and a focus on behaviour change – using New Zealand’s “four million pairs of eyes and ears” to protect our natural advantage.

GOVERNMENT SPENDING ON BIOSECURITY

<table>
<thead>
<tr>
<th>Annual</th>
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<tr>
<td>$76 million on pre-border and border management</td>
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<tr>
<td>$30 million on bovine tuberculosis</td>
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<tr>
<td>$21 million on surveillance and incursion response</td>
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<tr>
<td>$4 million on biosecurity enforcement</td>
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<tr>
<td>Additional spending this financial year</td>
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<td>$11.132 million on southern saltmarsh mosquito programme</td>
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<tr>
<td>$4.45 million on varroa management</td>
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<tr>
<td>Additional spending over the next two years</td>
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<td>$11.81 million to manage didymo, Styela clava (sea squirt) and painted apple moth</td>
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In 2002, he retired from the Chair of Professor of Microbiology after 30 years at the University of Hong Kong. He began influenza virus studies in 1975 and confirmed that pandemic influenza is a zoonosis (an animal disease that can affect humans). In 1982, he developed the hypothesis that southern China is an epicentre for the emergence of pandemic influenza.

Professor Shortridge said, although pandemic influenza is now accepted as a non-eradicable zoonosis, it is possible to recognise incipient pandemics through virus surveillance, education and cooperation. He also stressed the importance of communicating science-based knowledge and maintaining transparency.

Not a nanny state

“It’s important to make information available to the public and make them aware of the difficulties but not be alarmist,” he said. “We must make the public responsible for themselves – this is not a nanny state.”

Professor Shortridge said the Hong Kong Government knew that a pandemic would eventually come from southern China well before the 1997 H5N1 (bird flu) outbreak occurred. Good interaction between the people of Hong Kong and their government played an important part in promoting awareness and education.

At the time of the 1997 outbreak, several decisions were made to improve communications, including recognising the importance of dealing with the media and ensuring that all official work went through the Government.

“Confidence was key. It was important that people could see the Government doing a good job.”

Be prepared

Professor Shortridge stressed the need to be prepared, to have landfills ready for bird carcasses, to test for leachates, and to know where all poultry farms are.

“Know your enemy. Surveillance, surveillance, surveillance all the time. Do not give up.”

Regular surveillance ensured a 2001 outbreak was detected early. The virus was picked up during surveillance in markets before any humans had become sick or any birds had died.

“Bird flu is a political problem. We need to get the message across and get governments to react for the common good – of humans, animals and the planet,” Professor Shortridge said.

So where does New Zealand fit in? Professor Shortridge provided a scenario which was easy to envisage.

“It’s possible that a young man who has back-packed his way around Asia and come into contact with, say, a swan, could then travel to Invercargill and bring the virus with him.”

He believes we stand a chance of beating a pandemic, or at least keeping it at low levels as long as we are vigilant with surveillance and continue to communicate with the world.

“H5N1 is out there and it’s going to be around for a long, long time,” he said. “We’ve done our job when we’re out of a job, but I don’t think that will ever happen.”

New Zealand standards among world’s best

Michael Brooks from the Poultry Industry Association of New Zealand (PIANZ) spoke at the Summit on the role of PIANZ and the Egg Producers’ Federation in preparing for avian influenza.

Poultry makes up 36 percent of all meat consumed in New Zealand, and on average we eat 220 eggs per person each year. New Zealand is free from the three major avian diseases: Newcastle disease, avian influenza and infectious bursal disease.

“We are the only country in the world to be free of all three diseases and the industry works hard to maintain that freedom,” Michael said.

He also credited New Zealand’s biosecurity regime for helping to maintain this status, in particular the control of poultry movement and the fact that no raw meat or table eggs are allowed to be imported. He says biosecurity standards on New Zealand farms are recognised as being among the highest in the world.

The industry is working on a number of key issues to keep out disease, including ensuring prompt reporting and rapid response to any suspected incursions, active and passive surveillance, and industry training.

Avian influenza surveillance in New Zealand

Biosecurity New Zealand has conducted comprehensive avian influenza surveillance designed to confirm freedom from highly pathogenic virus and that chickens and turkeys are free of all forms of the virus. Surveys so far have demonstrated freedom from notifiable avian influenza viruses in chickens and migratory birds. Plans are to continue surveillance in commercial chickens and wild birds and to initiate surveillance in turkeys. All at-risk bird categories will have been surveyed within two years, and New Zealand may then be in a position to draft a freedom case based on survey results and risk assessments with respect to risk pathways and the world situation.
Climate change and biosecurity

Professor Alistair Woodward is a lead author for the fourth Assessment Report of the Intergovernmental Panel on Climate Change, which was released last year. Since that report was released, Professor Woodward says attitudes towards climate change have definitely shifted.

Speaking at last month’s Biosecurity Summit, he said public interest has grown, politicians have accepted the science is now robust enough to justify action and the world’s business leaders have put climate change at the top of the list of the world’s serious environmental problems. Human-induced global warming has begun.

“We are now observing a rate of change that is unprecedented in this 5,000 year period,” Professor Woodward said. “Looking forward, temperatures will rise from between 1.4 to 5.8°C over the next 50 years.”

Although humans adapt well to environmental change, we only need to look at recent extreme weather events to see the effects climate change is already having. Thirty thousand people died in the European heat wave of 2003, and in 2005 Hurricane Katrina claimed the lives of 1300 people.

Climate change is altering our physical and biological world.

Stopping the global ant trade

Ants are adept hitch hikers and colonisers and have been spreading internationally for hundreds of years.

So says Biosecurity New Zealand’s Simon O’Connor, who is currently on secondment to the Secretariat of the Pacific Community. Simon is tasked with coordinating and implementing the Pacific Ant Prevention Programme (PAPP). Simon was a presenter at last month’s Biosecurity Summit in Wellington.

“Ants can contaminate anything, anytime. Not just the usual sea containers, but their contents as well, from shoes to iPods,” Simon said. “They utilise every pathway known.”

The PAPP was established to try to stop ants spreading through the Pacific Islands in order to protect islanders’ livelihoods, lifestyles and biodiversity. The programme has a number of challenges, including preventing commodity contamination, detecting and reporting at the border, and identifying requirements with Pacific Island nations.

As a PAPP partner, Biosecurity New Zealand has conducted trials in Papua New Guinea and the Solomon Islands in which simple hygiene measures proved effective in preventing contamination at ports of origin.

“Sea containers are a difficult pathway, but they can be kept under control,” Simon said.

Fighting incursions can be a costly exercise. Australia has recently had three red imported fire ant (RIFA) incursions, and has spent $200 million on eradication attempts.

“New Zealand has had three incursions at a cost of five to ten million dollars so far, but there is always potential for more. Likely sources are the United States and Southeast Asia.”

Two-thirds of the North Sea’s fish species have shifted in both latitude and depth. Disease-causing organisms are also migrating. It is this movement of diseases and their vectors which will affect biosecurity because climate change influences the distance which diseases and pathogens travel. This will result in an increased risk of outbreaks in susceptible populations.

“With a change in climate and trade over the next hundred years, New Zealand could become a high-risk area for dengue fever,” Professor Woodward warned.

He believes biosecurity plans must include climate change. Tackling increased rates of disease will depend on improvements in social conditions, environmental management and health care.

“The timeframe is a lot shorter than we thought,” he said. “Climate change requires us to think globally, act locally and act globally.”

The PAPP takes a regional approach to meet challenges head on, and has so far facilitated surveillance work in nine countries, specifically targeting RIFA. The effectiveness of the regional approach is reliant on support and commitment from New Zealand, Australia, the United States and all Pacific Island countries.

Future plans for the PAPP include obtaining full funding, increasing public awareness and institutionalising ant surveillance in the region. Vessel and port hygiene are two areas that also require additional focus.

“We need to lead by example and export our standards to the world,” Simon said.

He said some policy gaps regarding offshore treatment of sea containers need to be addressed, in particular the use of toxic bait in containers from China and the United States to prevent RIFA contamination.

One of the biggest challenges the PAPP faces is to optimise ant surveillance efforts to minimise the risks of founding populations going undetected. A good example of this is the little fire ant (LFA) which has become impossible to eradicate in Tahiti, New Caledonia, and Vanuatu. There are emerging populations now in Papua New Guinea and Cairns, and because of the lag in detection, eradication is an unlikely or very expensive response option in many cases.

Simon repeated the unofficial mantra of the summit: “Surveillance, surveillance, surveillance. Early detection is critical.”
What didymo means to a hydro electricity generator

With storage lakes comprising 77 percent of the country’s hydro storage capacity, Meridian Energy Ltd showed an early interest in the discovery of didymo.

Dave Herrick, Meridian’s Natural Resources Adviser, told the Biosecurity Summit the didymo invasion has thrown up some major challenges to New Zealand since it was discovered in Southland’s lower Waiau River.

Didymo was found during a routine Meridian Energy survey of alga growth by NIWA and Southland Fish and Game staff, and has since been identified in several South Island rivers.

“Didymo is the biggest thing to hit New Zealand water in a long time,” Dave said. “It’s touched everyone with an interest in fresh water.”

Although New Zealand is now regarded as a world leader in didymo research, Dave believes there is a lot we still don’t know.

“There is uncertainty about the impact on our ecology, and short- and long-term management,” he said.

As a commercial operator reliant on New Zealand waterways, Meridian has been involved in the didymo debate and response from the outset. As part of their response, Meridian staff took part in a fact-finding trip to the United States. Some of the waterways they visited have been concrete lined so they can be drained regularly to prevent didymo from taking over.

Among the risks Meridian could face should didymo become widely established, are asset failure of canal intakes and pumps (at present the Tekapo canal produces two tonnes of didymo per day), unreliable grid stability and security of supply, and the loss of access to water.

These risks are being addressed in a number of ways, including extensive scientific and civil evaluations, operational risk and response planning (civil, electrical and environmental), and working to increase awareness.

As part of raising awareness, signage has been erected at many waterways reminding users that it is an offence to knowingly communicate or spread an unwanted organism. The signs ask fishers and boaters to check, clean and dry all equipment before moving between rivers in the South Island.

Appointments to the National Animal Ethics Advisory Committee

The Minister of Agriculture recently announced the appointment of a new member and the reappointment of another member to the National Animal Ethics Advisory Committee.

Ms Allison Dodds was appointed for a three-year term to replace Mrs Barbara Benson, who had served two terms on the committee. Nominated by the Ministry of Education, Ms Dodds will provide knowledge and experience of the education sector, including the use of animals in schools. Ms Dodds is Head of the Sciences and Technology Faculty at Queen’s High School in Dunedin.

Dr Ian LeGrice has been appointed for a second three-year term. He provides knowledge and experience in medical science and the manipulation of animals for research, testing and teaching purposes. Dr LeGrice has degrees in engineering, physiology and medicine and is a senior lecturer at the Bioengineering Institute and Department of Physiology at the University of Auckland. The focus of his research work is the relationship between the structure and the electrical and mechanical function of the heart. Dr LeGrice was nominated by the Royal Society of New Zealand.
In recent years, several species of exotic crabs have arrived in New Zealand seas. In 2000, a Japanese paddle crab (Charybdis japonica) was found in Auckland Harbour, and in 2003/2004 two exotic rock crabs (Romaleon gibbosulus and Glebocarcinus amphioetus, formerly in the genus Cancer) were found in the Harbours of Lyttelton, Timaru, Wellington, Bluff and Gisborne. Increasing ship traffic in New Zealand waters has probably been the source of these new arrivals, and more can be expected in the future.

Some exotic crab species have been extremely successful in establishing invasive populations in many places across the world, and are known to have detrimental effects on local biodiversity and marine industries. For example, the European shore crab (Carcinus maenas) is now established in Australia, Japan, South Africa and North America. This crab is a highly competitive generalist predator which can dramatically alter species composition and dynamics in the invaded habitat (Grosholz et al 2000), and it has contributed to the collapse of shellfish fisheries on the American east coast (Smith et al 1955). In contrast, other crab species have become established outside of their native range but are not currently invasive, such as the New Zealand pie crust crab (Metacarcinus novaezelandiae) in South Australia and Tasmania.

Good news and bad for invasive species

One hypothesis of why invasive species are so successful is that they typically leave their natural enemies behind. In its native range, a species is kept in check by predators, parasites and diseases; when introduced to an environment without these natural enemies, a species can survive and reproduce more successfully (the 'enemy release hypothesis'; Keane and Crawley 2002). Counteracting this is the 'biotic resistance' a species will meet when introduced to a new location: exotic species may be poorly adapted for coping with native predators, parasites and diseases (Parker and Hay 2005). In theory, this means that the more diverse a new habitat is, the more likely one of the native species will either prey on or infect the exotic species. For example, predation by the North American native blue crab (Callinectes sapidus) appears to limit the southern distribution of the invasive European shore crab (DeRivera et al 2005).

Against the backdrop of ‘enemy release’ and ‘biotic resistance’ hypotheses, we are currently investigating whether native New Zealand marine predators or parasites could potentially limit the abundance and distribution of introduced crabs. The New Zealand marine fauna has few reported parasites that could attack exotic crabs and thereby defend our shores. Elsewhere in the world, a variety of parasites have a strong impact on crustacean populations (e.g. Rohde 2005).

Two recent discoveries in native crabs – a castrating parasite (a barnacle) and an egg predator (a ribbon worm) – suggest that New Zealand’s coastal waters may have some natural defences against exotic crabs.

In May 2006 we re-discovered a rhizocephalan (a parasitic barnacle) in the common New Zealand endemic pie crust crab (see photos) in Wellington Harbour. This barnacle is most likely a New Zealand endemic species new to science, which has been previously overlooked (except Bennett 1964).

Bizarre life cycle

Rhizocephalans are fascinating animals that have evolved an elaborate parasitic life cycle. By appearance, adult rhizocephalans aren’t much more than blobs of tissue – they have no limbs, no body segments, and few internal organs. We know these animals are crustaceans only because rhizocephalan larvae are very similar to those of rock barnacles. Rhizocephalan larvae are free-swimming, and females attach and insert themselves to a crab. The female grows a root-like system into the crab’s body, drawing nutrients from the host, and then produces an egg sac under the crab’s abdomen.

Male rhizocephalans are also parasitic, but there’s a twist:
their hosts are female rhizocephalans. After being part of the zooplankton for a few days, a male larva will settle on a female’s sac and moult into a mature adult; unlike females, mature males are dwarfs and remain larval-sized for years. The adult male enters the egg sac, attaches himself to the chamber, and starts fertilising the eggs within. The male will spend the rest of his life attached to the female, deriving nutrients from her and fertilising eggs.

Hosts castrated

It gets even more bizarre when we look at the impact of a rhizocephalan on a male crab. Female crabs have wide abdomens, an adaptation for carrying their fertilised eggs on their underside, whereas male crabs have much narrower abdomens. Regardless of the host’s sex, a rhizocephalan will produce an egg sac on the crab’s abdomen. In female crabs, the rhizocephalan egg sac is produced in exactly the same place where the host usually carries its eggs, and the crab will care for the parasite’s eggs as if they were its own. For rhizocephalans, parasitising male crabs pose two key challenges: their abdomens are too small for egg sacs, and males don’t tend egg masses. To get around this problem, rhizocephalans feminise male crabs by making their abdomens grow much wider, and inducing egg care behaviour. Practically all infected crabs become castrated during parasitisation, effectively eliminating them from the reproductive population; rhizocephalans therefore have the potential to influence host population dynamics.

In North America, the European rhizocephalan Sacculina carcini is being investigated for its potential as a biological control agent for the highly invasive European shore crab (Goddard et al 2005). In addition, European shore crabs may also encounter biotic resistance in new locations from local rhizocephalans. South Pacific rhizocephalans have received almost no scientific attention; of the approximately 250 species worldwide (Høeg et al 2005), less than a tenth are known from Australasia. There are only four records of rhizocephalans in New Zealand, and none of these have been identified to species (Bennett 1964; Mc Laughlin and Gunn 1992).

Ribbon worm discovery

A second new discovery is a ribbon worm (genus Carcinonemertes) found on red rock crabs (Plagusia chabrus; Grapsidae) (see photos) in the North and South Islands. There are currently 12 recognised species of Carcinonemertes worldwide, and these worms are egg predators of crabs. The worm’s intriguing life cycle typically includes a larval resting stage that hides under the abdomen of the crab. When a female crab lays eggs and attaches them under her abdomen, the worms come out to feed, mature, mate and reproduce on the eggs; as a result, a female crab may lose up to 100 percent of her brood.

Members of the genus Carcinonemertes have the potential for large scale ecological and economic impact. In North America, for example, widespread outbreaks of C. errans and C. regicides in the 1970s and 1980s led to extensive reproductive failure in Dungeness (Cancer magister) and red king crabs (Paralithodes camtschaticus), and caused significant damage to these fisheries (Jensen & Sadeghian 2005). With respect to biotic resistance, the North American ribbon worm Carcinonemertes epialti has been shown to cause significant brood mortality on the exotic European shore crab, demonstrating the potential for population-level impacts on non-native crabs (Torchin et al. 1996).

Parasite and predator may help foil exotic crabs

The discoveries of a new rhizocephalan parasite and a nemerteans egg predator are important for our understanding of the population dynamics of native and exotic New Zealand crabs. For example, the localised occurrence of these new species indicates that some crab populations are fairly isolated. Moreover, these newfound species might play an important role in the biotic resistance of New Zealand’s marine environment by lowering densities of exotic crabs.

References:
An international collaborative research project involving scientists from New Zealand, the United States and Canada aims to estimate the risk of Asian gypsy moth (AGM) establishing in New Zealand. The work, which is based around egg phenology and climate, has been initiated by Dr David Gray, Natural Resources, Canada.

Funding for the project is shared between the three countries, with actual research being carried out in North America.

At least two questions are fundamental to the issue of introduced exotic pests such as AGM:

- What is the probability that a given pest will become established in the event of an introduction?
- In the event of an introduction, and a measurable risk of establishment, can particular life cycle events (e.g. hatching) be reliably predicted in order to plan an intervention such as eradication?

Estimating the probability that an exotic species will establish in a given locality is of interest for a number of reasons. For example, where the probability is near zero, the risk posed by an accidental introduction of the species is negligible. The contrary is obviously true if the probability of establishment is high.

Following an introduction, planning response action is problematic as there are no records of the insect’s life cycle patterns in the local region.

CLIMEX (climate modelling) addresses uncertainties on climatic parameters by estimating similarities between regions, but does not provide answers on life cycle events. A biological model that directly assesses how well the locality satisfies the species’ development requirements can help predict how likely an exotic insect is to establish in a novel environment.

Among the requisites of each species is the availability of food during the insect’s feeding stage(s) and suitable temperatures to complete its life cycle: a ‘predictable necessity of seasonality’.

For example, to survive, AGM eggs need to hatch when new foliage is growing, so that emerging larvae have a ready feeding source. On the other hand, the cold-hardy and low-temperature-requiring egg diapause phase (when the metabolism slows, delaying development) needs to coincide with winter. Finally, these events need to coincide sufficiently each year for the continual survival of the insect population.

The collaborative research will involve collection of gypsy moth strains from China, Japan, Russian far East and Germany, thus making the project truly international. The egg masses will be reared in quarantine facilities in the United States, where adults will be mated. During rearing experiments, respiration measures will be used to determine the time-varying development responses in diapause and postdiapause in the four strains. The new parameters will be incorporated into the gypsy moth life-stage model. This creates a population in each location with an egg hatch pattern estimated for the temperature regime of the location.

The gypsy moth life-stage model has been used successfully to predict egg hatch and peak second instar population of gypsy moth in British Columbia and New Brunswick. However, it is currently only properly described for the North American strain. There are differences in the hatch patterns of Asian and North American strains, so the research outputs will be useful to all three contributing countries.

As a final output, the risk of establishment of AGM in New Zealand will then be estimated and a graphical interface for the gypsy moth life stage model will be created for use by Biosecurity New Zealand. This information will allow New Zealand to further refine its surveillance and response to incursions of Asian gypsy moth.

The project is helping increase international linkages and has been made possible by funding through the MAF operational research fund, the USDA and Natural Resources Canada. MAF acknowledges the efforts of Dr David Gray in leading and organising the overall research.

n Mark Ross, Senior Adviser, Plant Response Team, Biosecurity New Zealand, phone 04 894 0535, mark.ross@maf.govt.nz

Naomi Parker gave Biosecurity Summit attendees an overview of the draft New Zealand Biosecurity Science, Research and Technology Strategy, which has been released for public consultation.

Naomi is the Senior Science Adviser for marine biosecurity in Biosecurity New Zealand’s Strategic Science Team. She has been project managing the development of the strategy.

The science strategy addresses the expectations of the Biosecurity Strategy for New Zealand 2003 by providing guidance for science funders providers and users.

The strategy identifies three areas for development: prioritising science needs for the future; ensuring New Zealand has the capability and resources to deliver that science; and ensuring the science delivered is used appropriately to improve biosecurity systems.

The strategy also has three distinct goals:

1. Science direction: to provide clear research direction for biosecurity science, now and into the future.
2. Science delivery: to ensure we have the capability and the resources for the timely and efficient delivery of biosecurity science.
3. Science uptake: to ensure science is responsive to biosecurity needs and priorities and that uptake is timely and effective.

The strategy has been developed by government agencies and stakeholders and is designed to guide their decision-making.

Public consultation on the document runs to 28 February 2007. Feedback is sought from anyone with an interest in biosecurity science to ensure the strategy meets the needs of all stakeholders.

For a copy of the strategy and details on making submissions:

n www.biosecurity.govt.nz/science-strategy

PEOPLE

IN BIOSECURITY

Prashant Bakshi joined the Post-clearance Directorate’s Systems Design Group in November 2006 as a Business Support Officer, after a year in Post-clearance as Team Support Officer. In his new role, Prashant will assist Post-clearance staff with contracts management and financial analysis.

Before joining Biosecurity New Zealand (BNZ), Prashant was Regional Manager – India for Sumitomo Chemical’s Pesticide division, with regulatory and product management responsibilities. He also worked in Singapore for several years, mainly in research and development on urban pest control with focus on termites and biological control of mosquitoes.

Anna Banog joined the Post-clearance Directorate’s Systems Design Group in November 2006 as a Business Support Officer. Anna assists Post-clearance staff with contracts management and financial analysis.

Originally from the Philippines, Anna holds a Bachelor of Science in Commerce and majored in accounting. She previously worked in a bank, finance companies and an auditing firm. With experience in credit and loans, marketing, budgeting, financial and management accounting, reporting, and analysis, audit, systems, and documentation, Anna was exposed to evaluating and accommodating the needs of various businesses in different industries.

Rire Scotney has joined the Systems Design Group in the Post-clearance Directorate as Training Programme Manager. Rire is managing the design of a new learning and development programme to support the revised incursion response system.

She comes to BNZ with an extensive public service background in learning and development, most recently in the leadership, learning and development group in the People Capability branch of the State Services Commission. In that role, Rire lead a project to design a learning and development framework for State Services agencies. She also worked in the former Department of Scientific and Industrial Research and at Victoria University. Rire is looking forward to working again in an organisation with a strong operational focus that adds measurable scientific and economic value to New Zealand.

Melonie Harrison joined the Post-clearance Directorate in November, as the Team Support Officer for the newly formed Systems Design Group. She provides support to the Group and PA administration to the Group’s Manager, Clifton King.

Melonie joined BNZ from the New Zealand Defence Force. She spent several years as the administrator for the Accredited Employers’ Programme, and more recently was the Personal Assistant to the Chief of Navy. In her spare time she is a keen Taekwondo student and hopes to achieve her black belt next year.
Many of the pests and diseases that could seriously damage New Zealand’s natural resources and threaten our economy could find their way here by hitchhiking on vehicles and machinery. A review is currently under way to improve the way we manage this important risk pathway.

More than 176,000 used vehicles and 112,000 new vehicles were imported into New Zealand in 2005. Although these came from at least 80 countries, at least 90 percent were imported from Japan. Despite a 30 percent decrease in used vehicle imports over the past year, this pathway still carries a high volume of traffic and presents a significant biosecurity risk.

In 2005, MAF began a review of the three import health standards (IHSs) that regulate the importation of used vehicles and forestry and agricultural equipment into New Zealand. These standards provide for all vehicles to have the interior and exterior inspected, and cleaned or treated if contamination is found – either offshore or on arrival at the border. About 55 percent of imported used vehicles are currently inspected and decontaminated offshore in Japan. There is currently no inspection required for new vehicles, unless surveillance reveals they are contaminated.

High cost of incursions
What prompted this review? There have been a number of recent incursions of high profile pests such as Asian gypsy moth (AGM) and painted apple moth (PAM). Since these are hitchhiker species (not dependent on the imported commodity for their survival), there are a number of possible entry pathways including imported vehicles. While these have been successfully eradicated at a cost of some $68 million, this is not an exercise MAF wants to repeat and spraying may not always be successful.

A further $17 million has already been spent successfully managing incursions of other hitchhikers, including the white spotted tussock moth, fall webworm and red imported fire ant (excluding the current incursion near Napier). New Zealanders are equally conscious of the further costs of responding to such incursions and of the consequences of failure to eradicate damaging pests like these. Expenditure on prevention, rather than cure, is the preferred option.

If these five pests alone were to establish in New Zealand, estimated costs...
are nearly all hitchhikers, and inspectors
these is the fact that the organisms found
signifi cant challenges. Not the least of
an inanimate pathway, it has met with
time a risk analysis has been applied to
vehicles, machinery and equipment
The risk analysis covers new and used
carried
contamination does occur.
scarce, and they have not been surveyed
both on-arrival and off shore inspected
current inspection regime was similar for
vehicles. Slippage was shown to occur
of vehicles and machinery passing visual
 underwent ‘slippage’ surveys, using a
video scope (probe) and visual inspection
(including inspection of air fi lters – not
usually part of the inspection) to assess
the effectiveness of visual inspection and
the current risk management regime.
The surveys revealed that more than half of
vehicles and machinery previously
cleared and re-inspected were found
to contain one or more contaminants,
ranging from dried plant material to a
live lizard. Many would not have been
detected without the video scope. It is
unlikely that every contaminant in used
vehicles and machinery can be seen, even
with the video scope, so the proportion
of vehicles and machines passing visual
inspection with undetected contamination
could be an under-estimate. In addition,
a large number of surveyed vehicles had
contaminants in air fi lters. The current
visual inspection process was itself
found to result in slippage of biosecurity
contaminants.
The surveys found that the effi cacy of the
current inspection regime was similar for
both on-arrival and off shore inspected
vehicles. Slippage was shown to occur
at both initial inspection and following
decommissioning of new vehicles

Wide range of organisms
carried
The risk analysis covers new and used
vehicles, machinery and equipment
from all countries. Since this is the fi rst
time a risk analysis has been applied to
an inanimate pathway, it has met with
signifi cant challenges. Not the least of
these is the fact that the organisms found
are nearly all hitchhikers, and inspectors
never know what they might fi nd. So far,
organisms from more than 280 genera
and 185 diff erent families have been
intercepted.
In order to carry out a meaningful
analysis on this wide range of organisms,
they have been sorted into 30 potential
hazard groups. Detailed risk analyses
have been undertaken for 12 of
these groups. These include the high-
consequence groups of moths, venomous
spiders, invasive ants, snails, mosquitoes
and micro-organisms associated with soil,
plant and animal debris. The analysis
for the moths draws on a comprehensive
analysis of a group of six moth species
across all entry pathways.
A wide range of risk management
options are reviewed and their effi cacy
against the identifi ed hazard groups
assessed. While contamination by some
hazards is common, the risk from high-
impact, low-frequency contaminants is
a concern, given the volume of vehicles
and machinery imported. The risk factors
for many of these hazards relates to
the use and storage conditions of the
vehicle/machine, factors that are diffi cult
to profi le.
Current regime does not fully
mitigate risk
The initial fi ndings from the monitoring
surveys, from post-border interception
records and from the draft risk analysis,
indicate that the current risk management
regime of 100 percent visual inspection
with follow-up decommissioning and
treatment when contaminants are found,
does not eff ectively mitigate the risk
of entry of biosecurity contamination
into New Zealand on the used vehicle
pathway. Visual inspection does not
appear to be the best tool for fi nding low
frequency, hidden creatures on a complex
structure such as a used machine.
Compared with imported containers,
which are a relatively simple structure
and don’t always move far from their
point of entry, vehicles are complex
and mobile. A vehicle or machine
carrying a viable pest could easily take
it well beyond existing pest surveillance
networks. The likelihood of any high-
consequence pests being detected while
it is still possible to eradicate them, is
consequently low.
Future shape of IHS/s not yet
decided
The risk analysis and surveys comprise
one of three integral parts of the IHS
review. The other two parts are the actual
IHS review and the implementation of
any new requirements. The IHS review
will incorporate the recommendations
of the risk analysis into an improved,
practical risk management regime. How
this will eventually look is still to be
decided, and will depend on an analysis
of the costs, benefi ts and impacts of
various measures, as well as further
feedback from stakeholders. It is still
undecided whether the three current IHSs
will be rationalised into one document
or how risk management of new vehicles
will be integrated into this. It is expected
that the implementation phase will
feature extensive stakeholder involvement
and suffi cient lead-in time is being
allocated for this.

Conscious of the impact of any changes
on industry and other stakeholders, MAF
began a series of stakeholder consultation
workshops in July 2006 in Auckland,
Wellington and Christchurch. These
workshops provided information on the
surveys, the risk analysis development,
issues around the current IHSs and
alternative risk management scenarios.
A key aim was to get feedback from
stakeholders, particularly on measures
and impacts. This feedback has been very
informative and will be used in scoping a
cost benefi t and impacts analysis and in
the revision of the IHS. No decisions on
any changes to the IHSs have been made
at this stage.
Timeline extended
Because the project is so complex and
time is needed for external peer review,
the timeline has been extended through
until the middle of 2007 for the issue
of any changes to the IHSs. The risk
analysis is likely to be available for public
consultation early in 2007. The BMG
survey reports will also be released at this
time, and the moth risk analysis is also
likely to be available.

MAF acknowledges that the extension
of the timeline is frustrating to people
working in the industry. Finding
an acceptable balance to managing
biosecurity risks and maintaining trade
is never easy. With signifi cant costs
and risks at stake, however, time must
be taken to work through the issues
carefully and engage with those they
affect. MAF encourages stakeholders to
participate in this review.

n Barry Wards, Senior Advisor and Used Vehicle
Review Programme Manager, Biosecurity
Standards Group, Biosecurity New Zealand,
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**Communicating emergencies**

**MAF and NZFSA communications staff accredited in Australian response system**

Dealing with incursions of unwanted pest and diseases, food safety incidents and rapidly emerging concerns that impact on our ability to trade, is all part of a normal day at the office for many MAF and New Zealand Food Safety Authority (NZFSA) employees.

The last few years have been characterised by widespread incursion responses, such as the successful painted apple moth eradication in western Auckland, to very localised events, such as termites in Nelson.

Effective communications with affected or potentially affected people, stakeholder organisations and business partners is part and parcel of a successful incursion response.

There are other occasions where dealing with an event, or suspected event, requires greater urgency. An example of this is the 2005 foot and mouth disease (FMD) hoax on Waiheke Island.

An event such as this requires MAF to acknowledge that it has significant national interest with potentially major impacts on our trade, and to manage this in close liaison with key ministers and relevant departments and government agencies.

Prior to Operation Waiheke in 2005, MAF organised a simulated FMD emergency called Exercise Taurus. The purpose of this was to test the organisation’s ability to effectively respond to all facets of such an event.

An outcome of Taurus and Waiheke was a focus on the emergency communications preparedness and processes used by MAF and the NZFSA. A project team was formed and tasked with developing a consistent, scalable emergency management communications (EMC) system that could be shared by both organisations.

**That project is nearing completion**

As well as reviewing the lessons from Waiheke and Taurus, the project team also looked at current international best practice in EMC. Part of this assessment included an examination of systems used by government agencies in other parts of the world, and particularly the EMC systems used by the Australian Department of Agriculture Fisheries and Forestry (DAFF).

Like the MAF/NZFSA EMC project team, DAFF officials had realised that running a round-the-clock emergency for an extended period required a lot of competent communications professionals – potentially at least 60 people in a national emergency centre and at the emergency site or sites.

As MAF/NZFSA does not have this many communications professionals on staff, then suitable people have to be sourced from elsewhere.

DAFF has addressed this issue by running courses to accredit communications professionals in the AUSVET response system in general and the public relations component of this in particular.

Course participants include staff from DAFF and the Australian Quarantine Inspection Service (AQIS), as well as from other potentially related Australian Federal departments and State governments. Recently, the net has been cast wider to include Australian industry organisations and MAF/NZFSA staff from New Zealand.

Gary Bowering and Diane Robinson from NZFSA, and Helen Keyes and Brett Sangster from MAF are now accredited practitioners in the DAFF system.

“Potentially this means we are able to assist our Australian neighbours in the event of a large-scale animal health emergency across the Tasman,” MAF’s corporate communications director Brett Sangster says.

“And this experience has also given us useful insights for potentially developing a similar training system in New Zealand for professional communicators who may be required to assist in large-scale emergencies here.

“New Zealand government agencies use similar systems for dealing with emergencies. Although an earthquake or terrorist emergency may appear to have little in common with a major foodborne illness or zoonotic disease, the systems and processes required to respond to these from a communications perspective have much in common.

“Actual events of the past few years, combined with regular whole-of-government emergency simulations, mean that there is now a team of government agency communicators who are used to working together. But a large-scale, long-term event would still require many more communications professionals to be drawn from elsewhere. This may include Australians,” Brett Sangster says.

Production of a reference manual is the key outcome of the MAF/NZFSA emergency management communications project. This contains a range of reference items, such as checklists, process flowcharts, job cards, work streams, accountabilities and “how to” guides. This manual will be tested in future MAF/NZFSA simulation exercises and in any real events that may occur. Adjustments will be made based on the outcomes of those experiences. MAF and NZFSA are also looking at software that will keep stakeholders closely involved and informed as emergencies unfold.

To see the AUSVET system:

n www.outbreak.gov.au

n Brett Sangster, Corporate Communications Director, Ministry of Agriculture and Forestry, phone 04 894 0165, brett.sangster@maf.govt.nz
A workshop was held between the quadrilateral agreement countries (Australia, Canada, New Zealand and the United States) in Canberra in March 2005 to clarify the role of disease models in understanding disease epidemiology and the development of effective disease response policies. A Quadrilateral EpiTeam (as a sub-group of the QUADS Emergency Management Working Group) was formed as a direct outcome of this workshop. A three year work programme was developed, which included a model comparison project under the leadership of Dr Caroline Dube of the Canadian Food Inspection Agency.

The project purpose was to compare the results of the three different models used by the four quadrilateral countries: AusSpread (Australia), Interspread Plus (New Zealand) and the North American Animal Disease Spread Model (Canada and the United States). This would allow for a better understanding of the models used by each country, and would also partially fulfil model validation requirements. The New Zealand group consisted of representatives from Biosecurity New Zealand, as well as modellers from AgriQuality and the EpiCentre at Massey University.

Standardised scenarios

Standardised scenarios using a simulated foot-and-mouth disease outbreak in a fictional location were supplied and were run by each of the three models. The first six scenarios compared the effects of simple disease spread mechanisms such as direct and indirect contact and airborne spread; the next five compared the effects of various control measures including movement controls, vaccination and slaughter policies.

Model outputs included the number of newly infected units (farms) per day, as well as spatial distribution maps of the modelled disease spread for each of the scenarios. The three different model outputs were then statistically compared to determine where significant differences occurred.

The three models produced remarkably similar results with respect to the number of newly infected premises per day, despite marked differences in their configuration. Although the differences were statistically significant, they were generally of little practical consequence.

Other benefits of this comparison project were the improvements made to models where bugs were identified, improved knowledge of core mechanism functions, and improved knowledge of the impact of assumptions on model output, all of which have resulted in further refinements to the models used.

Further work to be completed includes the creation of banks of outbreak scenarios for FMD policy development, collaboration on farm network analysis in the various QUADS countries, extending disease models to other diseases such as avian influenza, and developing other decision support tools to be used in outbreak management.

Fact File: Bovine spongiform encephalopathy (‘mad cow disease’)

• BSE is a fatal disease of cattle. The colloquial ‘mad cow disease’ tag arises from the appearance of cattle in the final stages of the disease.
• BSE has been linked with variant Creutzfeldt-Jakob disease, a fatal neurological disease in humans.
• BSE was first reported in the United Kingdom in 1986 and resulted in severe restrictions on its exports of cattle, beef and many bovine products.
• New Zealand has been recognised as BSE-free by the World Animal Health Organisation.

n Andre Van Halderen, Acting Team Manager, Animal Response, Biosecurity New Zealand, phone 04 894 0543, andreas.vanhalderen@maf.govt.nz

n Erin Daldry, Senior Assessor, Compliance and Enforcement Group, Biosecurity New Zealand, erin.daldry@maf.govt.nz
Three-way animal welfare MOU

A memorandum of understanding (MOU) for animal welfare activities has been under development for the past 18 months. The three parties involved are Biosecurity New Zealand’s Animal Welfare Group (AWG) and Compliance and Enforcement Group (CEG), and the New Zealand Food Safety Authority Verification Agency (VA).

The MOU documents agreed accountabilities and commitments between the VA and BNZ for the ongoing provision of animal welfare activities in New Zealand. The specific topics covered by the MOU are:

- accountabilities
- training and appointments
- standards and outcomes
- verification
- non-compliances and offences
- CEG referrals and support
- reporting
- responsibilities
- costs.

The MOU has many benefits to MAF, including:

- It establishes a clear framework for reporting channels to ensure that all animal welfare investigations performed by the VA will be reported in MAF’s annual statistics.
- It facilitates a two-way referral system between the VA and the CEG for animal welfare investigations and responses. This is significant for the CEG, as it means they can have access, under agreed criteria and procedures, to the VA’s resource of about 240 veterinarians.
- It provides VA veterinarians with a new opportunity to utilise their expertise: this in turn can lead to greater job enrichment.

The MOU was signed 7 November 2006, and will provide the platform for better coordination and consistency of animal welfare activities between the three parties. Regular liaison meetings are planned to agree procedures to deliver each party’s respective commitments and responsibilities.

n Roger Poland, Senior Adviser, Animal Welfare, phone 04 894 0372, roger.poland@maf.govt.nz

Reporting new organisms to MAF

The Biosecurity Amendment Act 2003 includes a “General Duty to Inform” (section 44). It states that: “Every person is under a duty to inform the Ministry, as soon as practicable in the circumstances, of the presence of what appears to be an organism not normally seen or otherwise detected in New Zealand.”

The requirement to report “as soon as practicable in the circumstances” means MAF should be contacted as soon as the person suspects that the organism is not normally seen in New Zealand. This may be before a definitive identification has been completed.

Reporting by the public

Growers, farmers and members of the public reporting a suspected new organism should use MAF’s exotic pest and disease reporting hot line: 0800 809 966

Reporting by science providers: identification already known or suspected

Science providers are welcome to use the public hotline number 0800 809 966 or, if preferred, can email MAF directly with the relevant information on: neworganisms@maf.govt.nz

When reporting a new organism, science providers are requested to include the following information:

- species name
- location of find
- host (where applicable)
- when collected
- when identified
- who collected and identified the specimen
- availability of specimen for further work
- contact details of person reporting
- contact person for further information if different from above.

Note that this “General Duty to Inform” refers to any organism not normally seen or otherwise detected in New Zealand. It is not restricted to the notifiable organisms contained in the Biosecurity (Notifiable Organisms) Order 2006 listed in our Directory section on page 32.
Quadrilateral zoning and compartmentalisation workshop
Vancouver, Canada February 2007

The presence or introduction of certain animal diseases (such as foot-and-mouth disease or avian influenza) may impact on that country’s ability to export animal products until the disease is eradicated. As an alternative to country freedom, countries may apply the concept of zoning to establish geographically separate subpopulations of animals with a different animal health status within national boundaries. This would enable trade to continue from specified disease-free zones.

The OIE (World Organisation for Animal Health) Terrestrial Animal Health Code has recently introduced the concept of compartmentalisation as an alternative way to manage disease in animal populations to reduce trade disruption. Unlike zoning, which involves geographical separation of animal populations of different health status, compartmentalisation is based on grouping populations under a common biosecurity management system containing animal subpopulations with a distinct health status with respect to a specific disease. An example of a ‘compartment’ would be elite poultry breeding stock.

Specific surveillance, control and biosecurity measures will be required from such a compartment for the purpose of continued international trade in the event of a disease outbreak in that country. These specifications require agreement between trading countries and certification by the official veterinary services. A practical approach is needed for the application of this concept between countries.

A Quadrilateral Zoning and Compartmentalisation workshop is to be held in Vancouver, Canada from 19 to 22 February 2007. The purpose of this workshop is to define recommendations for the quadrilateral agreement countries (Australia, Canada, New Zealand and the United States) on how approaches to zoning and compartmentalisation can be effectively implemented, using avian influenza as a case study. This will include seeking agreement on pre-planned zones or compartments based on marketing practices that are put in place in the face of an outbreak, and to review mechanisms to validate and obtain international acceptance for pre-outbreak compartments or zones.

It is envisaged that this will lead to increased collaboration between the QUADS countries, and that it will contribute to the further development of OIE zoning and compartmentalisation guidelines.

Andre Van Halderen, Acting Team Manager, Animal Response, Biosecurity New Zealand, phone 04 894 0543, andreas.vanhalderen@maf.govt.nz

Import health standards seminars

A round 200 people attended a successful seminar series on import health standards hosted by Biosecurity New Zealand’s Pre-clearance group last month in Wellington, Auckland and Christchurch.

The seminars were attended by past and intending import health standard applicants, members of the Biosecurity Ministerial Advisory Committee (BMAC), consular, trade and other government officials, members of the Forest Biosecurity and Animal Biosecurity Consultative Committees, and other interested parties.

The seminars covered:

• why Biosecurity New Zealand (BNZ) has adopted this process for development of import health standards
• how it works and who is involved
• how stakeholders can get the most from engaging in the process
• deadlines and milestones
• questions/feedback from prior rounds.

The seminars were intended to:

• provide the equivalent of a pre-tender briefing for prospective applicants in order to improve the quality of applications
• clarify the import health standard application process
• address stakeholder issues
• reinforce government priorities and policy for biosecurity
• inform, educate and engage stakeholders in regard to the process in order to more actively manage stakeholder relations
• introduce the newsgroup concept in order to deliver regular communications/updates to stakeholders and interested parties in regard to the life cycle of an import health standard and the annual work plan.

The take home messages from these seminars were:

- Prioritisation is necessary.
- The process aims to be fair, robust and transparent.
- BNZ is committed to ongoing improvements in the system.
- The quality of your application makes a difference.
- Any problems – talk to us … the sooner the better. We will use the newsgroup to keep you all informed.

Feedback from attendees was very positive, and they placed a high value on the face-to-face communication between BNZ and stakeholders. There was also strong support for the regular newsgroup concept.

Attendees suggested that a more strategic approach between the different types of applicants with similar interests – for example hobby and interest groups getting together with zoos to submit the application – would be beneficial and likely to be adopted.

At the seminars, Biosecurity Standards Group Manager Clive Gower-Collins announced that BNZ will run regional workshops in February/March 2007 to address specific concerns and engage with stakeholders who share the same interests.

“We plan to adopt a round table approach set up around ‘a table of interests’ staffed by members of the Risk Analysis Group and Biosecurity Standards Group who will engage workshop style with stakeholders according to their interest,” says Clive.

This concept was warmly received by stakeholders.

Emma Tyshing, Executive Assistant, Pre-clearance Group, Biosecurity New Zealand, phone 04 894 0263, fax 04 894 0662, emma.tyshing@maf.govt.nz

n Andre Van Halderen, Acting Team Manager, Animal Response, Biosecurity New Zealand, phone 04 894 0543, andreas.vanhalderen@maf.govt.nz

n Emma Tyshing, Executive Assistant, Pre-clearance Group, Biosecurity New Zealand, phone 04 894 0263, fax 04 894 0662, emma.tyshing@maf.govt.nz

n Andre Van Halderen, Acting Team Manager, Animal Response, Biosecurity New Zealand, phone 04 894 0543, andreas.vanhalderen@maf.govt.nz
Animal welfare in the ‘Fast Food Nation’}

David Bayvel, Director of the Animal Welfare Group in Biosecurity New Zealand, recently visited the United States as an invited speaker at the 110th meeting of the US Animal Health Association and to co-chair a meeting between the World Organisation for Animal Health and the International Council for Laboratory Animal Science.

He reports that the US meat industry prepared itself in advance for the release of Fast Food Nation, a movie about some aspects of food production. The movie is based on the book of the same name that deals with the social, health, financial and animal welfare implications of the fast food industry.

If Upton Sinclair Were Alive Today, He’d Be Amazed by the US Meat Industry is a brochure published by the American Meat Institute for the centennial of the 1906 Federal Meat Inspection Act in June this year (see www.meatami.com/Education/UpstonSinclair.pdf). It describes improvements in food production and safety since the publication of Sinclair’s book on the terrible conditions in Chicago factories early last century. Along with a new website www.bestfoodnation.com, it presents an industry response to the issues raised in Fast Food Nation.

David noted increased US interest in animal welfare by both industry groups and the veterinary profession. This is reflected in the increasing attention given to animal welfare in US conferences and meetings and the American Veterinary Medical Association’s recent establishment of a five-person Animal Welfare Group. The pursuit of higher animal welfare standards by legal means continues to be of particular interest in the United States, he says. For instance, lobbying by non-governmental organisations has led to regulatory changes in horse slaughter and transport by truck, the World Society for the Protection of Animals has recently appointed a UN Affairs Director to help progress the proposed International Animal Welfare Declaration, and several US producers and retailers have emerged to fill a niche for ‘animal welfare friendly’ food, with quality assurance schemes and associated labelling.

Harmonised standards for laboratory animal welfare

As indicated, the primary purpose of David’s visit to the United States was not, in fact, farm animal welfare but laboratory animal welfare. The World Organisation for Animal Health (OIE) is to take a leading international role in this area. To clarify what unique role could be played by the OIE, a joint meeting with the International Council for Laboratory Animal Science (ICLAS) was held in Salt Lake City. The meeting was held back-to-back with the annual meeting of the American Association of Laboratory Animal Science and was attended by key international laboratory animal science organisations. As Chairman of the OIE Permanent Animal Welfare Working Group, David co-chaired the meeting along with Dr Gilles Demer, President of ICLAS. The following were identified as topics for possible OIE involvement:

- A review of the 1986 document published by the Committee of International Organisations of Medical Science.
Queenslanders pegging back fire ant incursion

Sonya Bissmire, Manager for Biosecurity New Zealand’s (BNZ) red imported fire ant response in Whirinaki, visited Brisbane’s Fire Ant Control Centre in early October. Sonya met the team that manages the eradication programme that has run since 2001 and even found a new fire ant nest herself.

Queensland’s Department of Primary Industries has had great success in reducing Brisbane’s fire ant infestation area from 72,000 hectares to 25,000 hectares in five years. Red imported fire ants are thought to have arrived in Brisbane five to eight years before they were detected, allowing populations to grow very large. At the height of the programme, nearly 650 staff worked for the Fire Ant Control Centre. This number has fallen to 140 as the size of the response has reduced. To date the response has cost A$175 million.

A successful component of the Brisbane response strategy is community engagement. Early in the response, a dedicated communications team of 25 staff managed public relations. They focused on teaching the public how to identify fire ant, their biology and how they can help prevent further spread. Community fire ant volunteers conducted local fire ant days where residents searched parks, reserves and schools for fire ant nests. This strategy has seen strong community engagement, with most new nests being reported by members of the public.

The science team maintains a number of fire ant colonies in secure facilities for research and education purposes. Science projects resulting from the response strategy include assessment of non-target impacts of bait application, genetic analysis of colonies to determine origin and training a sniffer dog to detect small colonies. A large glass terrarium full of fire ants is also maintained as a tool for public awareness.

Field teams undertaking surveillance and treatment of fire ant nests continue to be busy in Brisbane. In one day a team visited a range of locations including a paddock in a dairy farm, the middle of a soccer field in a residential area and a family’s backyard. New nests are excavated to determine likely age and then treated with insecticide to destroy them. Infested areas outside urban centres have insecticidal baits applied aerially over a two-year period to ensure all nests are eradicated.

Information gathered on Sonya’s visit will be used in the Whirinaki fire ant response and BNZ will stay in touch with the Brisbane Fire Ant Control Centre to continue to share knowledge and experience.

n Sonya Bissmire, Team Manager, Environmental and Marine Response, Biosecurity New Zealand, phone 04 894 0538, sonya.bissmire@maf.govt.nz

This unremarkable patch of earth is the only outward sign of a red imported fire ant nest. Tracking and destroying nests like this one has cost Australian taxpayers A$175 million to date.
Marine biosecurity collaboration

New Zealand and Australia share many marine biosecurity challenges, and the two countries are developing a common approach to marine pest surveillance.

To date, collaboration between New Zealand and Australia on marine biosecurity issues has been relatively ad hoc; even so, the joint work undertaken by both countries has resulted in complementary benefits. Given our relatively close proximity, similarity in marine environments and in the species that threaten those environments, closer collaboration has the potential to yield significant environmental, economic (including research and development expenditure savings) and government policy benefits. Accordingly, Biosecurity New Zealand is exploring formal collaboration with the Australian Government Department of Agriculture, Fisheries and Forestry to realise these benefits and to develop more effective and efficient marine biosecurity systems.

First step toward more formal collaboration

Having recognised the importance of ongoing surveillance in managing the risks posed by non-indigenous marine species, the New Zealand and Australian governments have collaborated on the development of a targeted marine pest surveillance manual that will form an integral part of our respective marine biosecurity programmes. This manual will be a ‘how to’ guide for designing and implementing targeted surveillance that meets agreed minimum principles. It will ensure that data is collected using rigorous, consistent methods and meets agreed quality standards. This will help to ensure that management decisions are based on up-to-date and accurate data. It will also enable nationwide and potentially international comparisons over time. Implementation of the manual is currently being trialled in Australia, and it is anticipated that it will be updated and trialled again in New Zealand during 2007/2008.

n Brendan Gould, Senior Adviser Surveillance, Post-clearance, Biosecurity New Zealand, brendan.gould@maf.govt.nz
n Naomi Parker, Senior Science Adviser (Marine), Post-clearance, Biosecurity New Zealand, naomi.parker@maf.govt.nz
n Allan Bauckham, Marine Biosecurity Programme Coordinator, Post-clearance, Biosecurity New Zealand, allan.bauckham@maf.govt.nz
n Consultation on Draft MAF Operational Standard - General Facilities for holding, inspection, processing or treatment of uncleared goods

MAF must consult with interested parties before issuing or amending (other than of a minor nature) MAF standards in accordance with Section 22 of the Biosecurity Act 1993 and MAF Biosecurity New Zealand’s consultation policy. MAF standards specify regulatory requirements that must be carried out, either in the country of origin or of export, during transit, or in a transitional facility (quarantine), before biosecurity clearance can be given for any particular commodity to enter New Zealand. MAF must ensure that these requirements are technically justified, do not impose unjustified technical barriers to trade and provide an appropriate level of biosecurity protection (i.e. prevent the entry of unwanted organisms into New Zealand). A copy of the draft standard can be viewed at:


Forward your comments in writing by 22 December 2006. MAF encourages respondents to forward comments electronically to:

standards@maf.govt.nz

However, should you wish to forward submissions in writing, please post or fax them to:

Consultation on Draft MAF Operational Standard - General Facilities for Holding, Inspection, Processing or Treatment of Uncleared Goods Attention: Dr Dave Nendick MAF Biosecurity New Zealand Pre-clearance Directorate, Operational Standards Ministry of Agriculture and Forestry 25 The Terrace, PO Box 2526, Wellington Fax: 04 894 0733

Please note that your submission is public information. Submissions may be the subject of requests for information under the Official Information Act 1992 (OIA). The OIA specifies that information is to be made available to requesters unless there are sufficient grounds for withholding it, as set out in the OIA. Submitters may wish to indicate grounds for withholding specific information contained in their submission, such as the information is commercially sensitive or they wish personal information to be withheld. Any decision to withhold information requested under the OIA is reviewable by the Ombudsman.

Agrisafety ID scheme approved

Agrisafety application for approval of animal identification system under section 50 Biosecurity Act

Effective 7 December 2006, the Director Post-clearance, Peter Thomson, has approved the Agrisafety AgriTag animal identification scheme as an official scheme for cattle, deer and also camels, sheep and goats.

Tags will meet requirements under the Biosecurity (Animal Identification System) Regulations 1999 for the purposes of the National Bovine Tuberculosis Pest Management Strategy. Other schemes approved for this purpose are the Animal Health Board scheme and MINDA (run by Livestock Improvement Corporation).

Funding review of live animal and germplasm exports

Biosecurity New Zealand (BNZ) is seeking the views of industry and the public on cost recovery proposals for export-related services under the Animal Products Act 1999.

The primary purpose of the proposals is to redistribute fees so that they are more transparent, equitable and justifiable, and allocated more closely to those exporters benefiting from the work. The key point of difference is in the funding of new market access work and three options are presented for this.

BNZ is also seeking comments on effective ways for exporters to work with BNZ in prioritising the services that are funded through the proposed unit fees.
We welcome submissions from all interested parties on any aspect of the proposed cost recovery charges and mechanisms presented in this document. Submissions are invited by Friday 9 February 2007. Information about making a submission, including key issues BNZ seeks comment on, is on page 17 of the paper.

The discussion paper outlines the issues and invites feedback from interested parties. It is available at:


Please address your submissions and any queries to:

Janet Greenwood, Policy Analyst, Biosecurity New Zealand, PO Box 2526, Wellington, phone 04 894 0425, fax 04 894 0730, janet.greenwood@maf.govt.nz

Import health standard applications for 2007

Closing date is 2 February 2007, for applications for new or revised import health standards to be considered for the Biosecurity New Zealand work programme for the year starting 1 July 2007.

New Zealand applicants whose application was not successful last year will be contacted individually to see if they wish to confirm or revise their application for 2007.

Application forms can be found on the Biosecurity New Zealand website (see below), then by following the type of import being requested:

- Animal Imports/Find or apply …
- Plant Imports/Plant Import Health Standards
- Other imports/Non-biological imports such as vehicles

Completed forms should be sent Biosecurity New Zealand, preferably by email. Options are:

- Email (care of):
  - plantimports@maf.govt.nz
  - Fax: 04 894 0662
  - Post: PO Box 2526, Wellington

For application forms:

www.biosecurity.govt.nz/commercial-imports/

Animal and Plant Imports Permit Office: closing dates over holiday period

The Animal and Plant Imports Permit Office will be closed from Monday 18 December 2006 until Sunday 7 January 2007, reopening on Monday 8 January 2007. Importers need to have ensured that applications for permits have been received at the Permit Office by close of business on Wednesday 13 December 2006. Importers who wish to renew a permit that expires during the closure period need to have submitted the application for renewal by the 13 December 2006 deadline.

Permit applications received by 13 December will be processed before 22 December 2006 (assuming there are no difficulties with the application).

All import permit application information should be returned to either Plant or Animal Imports (see contact details below) for processing before the import permit is issued. The processing time for import permits is 10 working days (20 working days for biological permits).

- Plant Import Office, MAF Biosecurity New Zealand, PO Box 2526, Wellington, phone 04 894 0462, fax 04 894 0662, plantimports@maf.govt.nz
- Animal Imports, PO Box 2526, Wellington, phone 04 894 0459, fax 04 894 0662, imports@maf.govt.nz

New email list for plant export stakeholders

The Plant Exports Group has created a new electronic (email) mailing list for stakeholders involved in the export of horticultural and arable commodities from New Zealand.

This new process of notifying stakeholders of changes to Biosecurity New Zealand documents and requirements will replace the current ICPR email notification list.

To receive email notifications on changes to the following Biosecurity New Zealand plants exports documents:

- importing country requirements (ICPRs)
- operational standards/requirements
- commodity pest lists and country freedom

please go to www.biosecurity.govt.nz/mailing-lists/index.htm tick the Plant Exports box, insert your email address in the space provided, and hit the submit button.

You will receive confirmation of your subscription to this mailing list by email. You will also receive instructions which will allow you to unsubscribe from the list in future if this is required.

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

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

Codes of ethical conduct approved: 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:

- Landcare Research New Zealand Ltd

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

- BioLogic Scientific Consulting Ltd (to use PharmVet Solutions’ code)

Codes of ethical conduct revoked or expired or arrangements terminated or lapse:

- RisqA Veterinary Consulting

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

Amendments to codes of ethical conduct approved: nil

Consultation on codes of welfare:

- Dairy cattle code: draft code was released for public consultation from 4 November to 19 December 2006.
- Deer code: final code presented to Minister of Agriculture in July 2006.
- Companion cats code: final code presented to Minister of Agriculture in July 2006.
- Commercial slaughter code: submissions being reviewed by NAWAC.

Codes of welfare under development:

- Dogs
- Transport in New Zealand
- Sheep and beef cattle

Cheryl O’Connor, Programme Manager Animal Welfare, phone 04 894 0371, fax 04 894 0747, cheryl.oconnor@maf.govt.nz

Animal manipulation statistics due

All organisations/individuals with a code of ethical conduct or who have an arrangement to use another organisation’s animal ethics committee are reminded that their annual return of animals manipulated during 2006 is due to be submitted to MAF by 31 January 2007. Returns must be in writing and should be made on the forms provided by MAF for this purpose.

A copy of the form is posted to organisations in December each year and is also available on the Biosecurity New Zealand website (see below). Please do not use old versions of the form.

To download a copy of the form:


Kirsty Grant, Executive Coordinator Animal Welfare, phone 04 894 0366, fax 04 894 0747, kirsty.grant@maf.govt.nz
The Biosecurity (Notifiable Organisms) Order 2006 came into effect on 16 November 2006. This Order lists all the notifiable organisms declared by Order in Council. A notifiable organism is an unwanted organism that could cause serious harm to natural or physical resources or human health.

The Biosecurity Act 1993 requires any person who suspects a notifiable organism is present in a place it is not established, and the chief technical officer is not aware of its presence, to report the organism’s presence to the chief technical officer. Penalties for failure to do so for an individual are a fine of up to $100,000 and/or up to five years in prison, and for a corporate a fine of up to $200,000.

### Notifiable organisms list

**The Biosecurity (Notifiable Organisms) Order 2006**

The Biosecurity Act 1993 requires any person who suspects a notifiable organism is present in a place it is not established, and the chief technical officer is not aware of its presence, to report the organism’s presence to the chief technical officer. Penalties for failure to do so for an individual are a fine of up to $100,000 and/or up to five years in prison, and for a corporate a fine of up to $200,000.

**Scientific name** | **Common name**
---|---
**Invasive plants**
Bryonia| White bryony
Caesalpinia| Mysore thorn
Cardiospermum| Small balloon vine; balloon vine
Ehrharta| Pyp grass
Eichhornia| Water hyacinth
Homeria| Cape tulip
Houttuynia| Chameleon plant
Hydrilla| Hydrilla
Ludwigia| Water primrose
Menyanthes| Bogbean
Myrica| Fire tree; candle-berry myrtle
Myriophyllum| Eurasian watermilfoil
Najas| Southern nilad
Nuphar| Yellow waterlily
Najas| Sawtooth
Pistia| Water lettuce
Potamogeton| Clasped pondweed
Sagittaria| Arrowhead
Sagittaria| Great reedmace
Vaillnessia| Eelgrass
**Organisms affecting crustacea**
Aphanomyces| Crayfish plague
**Organisms affecting honey bees**
Acarapis| Tracheal mite
Aethina| Small hive beetle
Apis mellifera| Cape bee
Apis mellifera scutellata| Africanised honey bee
Euvaroa| Varroa
Melissococcus| European foulbrood
Tropilaelaps| Tropilaelaps
Tropilaelaps| Tropilaelaps
Varroa destructor| Varroa
**Organisms affecting marine or freshwater environment**
Asterias| Northern Pacific seastar
Carcinus| European shore crab; green crab
Caulerpa| A green seaweed
Eriochir| Chinese mitten crab
Potamogeton| Asian clam
Sabella| Mediterranean fanworm
**Organisms affecting molluscs**
Bonamia| Bonamiosis
Martelia| Marteilliosis
Martelia| Marteilliosis
**Marteilliosis**
Mikrocystos| Mikrocystosis
Mikrocystos| Mikrocystosis
Mikrocystos| Roughleyi
Perkinsus| Perkinsiosis
Perkinsus| Perkinsosis
**Organisms affecting multiple species**
Amblyomma| An animal tick
Anaplastna| Anaplasmosis
Aujeszky's disease| Aujeszky's disease
Babesia| Babesiosis
Bacillus| Anthrax
Bluetongue| Bluetongue
Boophilus| An animal tick
Chrysomyia| A screw-worm
Cochliomyia| A screw-worm
Cowdria| Heartwater
Coxiella| Q fever
Dermacentor| An animal tick
Echinococcus| Hydatids
Foot-and-mouth disease| Foot-and-mouth disease
Ixodes| An animal tick
Leishmania| Leishmaniosis
Rabies virus| Rabies
Rhipicephalus| An animal tick
Rift Valley fever virus| Rift Valley fever
Salmonella| Salmonellosis
Theliera| Tick-borne lymphadenitis
**Transmissible spongiform encephalopathy agents**
Scrapie; bovine spongiform encephalopathy; chronic wasting disease; feline spongiform encephalopathy
Trypanosoma| Trypanosomiasis
**Vesicular stomatitis virus**
**West Nile virus**
**Organisms primarily affecting birds**
Anatid herpesvirus 1| Duck virus enteritis; duck plague
Avian paramyxovirus 1 (exotic strains)| Newcastle disease
**Duck hepatitis virus**
**Duck hepatitis virus**
**Infectious bursal disease virus**
**Influenza A virus of H5 or H7 subtype**
**Influenza A virus of H5 or H7**
**Trypanosoma spp.**
**Trypanosomiasis**
**Vesicular stomatitis virus**
**West Nile virus**
**Organisms primarily affecting cattle**
Bovine herpes virus type 1 (abortifacient strain) (1)| Infectious bovine rhinitis and abortion
Brucella abortus| Bovine brucellosis
Cysticercus| Bovine cysticercosis
**Lumpy skin disease virus**
**Lumpy skin disease**
**Mycoplasma bovis**
**Mycoplasma mycoides**
**Mycoplasma mycoides SC**
**Pasteurella multocida**
**Pasteurella multocida B2 and E2**
**Haemorrhagic septicaemia**
**Rinderpest virus**
**Rinderpest**
**Organisms primarily affecting dogs**
Brucella canis| Canine brucellosis
**Dirofilaria immitis**
**Heartworm**
**Dirofilaria immitis**
<table>
<thead>
<tr>
<th>Organisms primarily affecting fish</th>
<th>Organisms primarily affecting forestry</th>
<th>Organisms primarily affecting horses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeromonas salmonicida</td>
<td>Furunculosis</td>
<td>Hendra virus</td>
</tr>
<tr>
<td>Epizootic haemato poetic necrosis virus</td>
<td>Epizootic haemato poetic necrosis</td>
<td>Histoplasma capsulatum var.</td>
</tr>
<tr>
<td>Infectious haemato poetic necrosis virus</td>
<td>Infectious haemato poetic necrosis</td>
<td>Epizootic lymphangitis</td>
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<tr>
<td>Infectious pancreatic necrosis virus (exotic strains)</td>
<td>Infectious pancreatic necrosis virus</td>
<td>faciminus</td>
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<tr>
<td>Myxobolus cerebralis</td>
<td>Whirling disease</td>
<td>Taylorella equigenitalis</td>
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<tr>
<td>Oncorhynchus masou virus</td>
<td>Oncorhynchus masou virus disease</td>
<td>Contagious equine metritis</td>
</tr>
<tr>
<td>Renibacterium salmoninarum</td>
<td>Bacterial kidney disease</td>
<td>Organisms primarily affecting fish</td>
</tr>
<tr>
<td>Spring viraemia of carp virus</td>
<td>Spring viraemia of carp</td>
<td>Anstrepha fraterculus</td>
</tr>
<tr>
<td>Viral haemorrhagic septicaemia virus</td>
<td>Viral haemorrhagic septicaemia virus</td>
<td>South American fruit fly</td>
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<tr>
<td>Yersinia ruckeri (exotic strains)</td>
<td>Yersinia ruckeri (exotic strains)</td>
<td>Anstrepha ludens</td>
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<td></td>
<td></td>
<td>Mexican fruit fly</td>
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<td>Anstrepha obliqua</td>
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<td></td>
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<td>West Indian fruit fly</td>
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<td>Anstrepha serpentina</td>
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<td>Sapote fruit fly</td>
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<td>Anstrepha striata</td>
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<td>Guava fruit fly</td>
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<td>Anstrepha suspensa</td>
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<td>Caribbean fruit fly</td>
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<td>Bactrocera aquilonis</td>
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<td></td>
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<td>A fruit fly</td>
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<td></td>
<td></td>
<td>Bactrocera carambolae (formerly B. sp. near B. dorsalis (Taxon A))</td>
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<td></td>
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<td>Carambola fruit fly</td>
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<td>Bactrocera cucumis</td>
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<td>Cucumber fly</td>
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<td>Bactrocera cucurbitae</td>
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<td>Melon fly</td>
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<td>Bactrocera curvipes</td>
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<td>Banana fruit fly</td>
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<td>Bactrocera dorsalis</td>
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<td>Oriental fruit fly</td>
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<td>Bactrocera facialis</td>
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<td>A fruit fly</td>
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<td>Bactrocera frauenfeldi</td>
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<td>Mango fruit fly</td>
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<td>Bactrocera jarvisi</td>
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<td>Jarvis fruit fly</td>
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<td>Bactrocera kirki</td>
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<td>A fruit fly</td>
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<td>Bactrocera latifrons</td>
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<td>Solanum fruit fly</td>
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<td>Bactrocera melano tus</td>
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<td>A fruit fly</td>
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<td>Bactrocera neohumeralis</td>
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<td>Lesser Queensland fruit fly</td>
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<td>Bactrocera papayae (formerly B. sp. near B. dorsalis (Taxon B))</td>
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<td>Papaya fruit fly</td>
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<td>Bactrocera passiflorae</td>
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<td>Fijian fruit fly</td>
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<td>Bactrocera philippinensis (formerly B. sp. near B. dorsalis (Taxon C))</td>
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<td>A fruit fly</td>
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<td>Bactrocera psidii</td>
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<td></td>
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<td>South sea guava fruit fly</td>
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<td>Bactrocera trilineola</td>
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<td>A fruit fly</td>
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<td></td>
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<td>Bactrocera trivialis</td>
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<td>A fruit fly</td>
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<td>Bactrocera tryoni</td>
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<td>Queensland fruit fly</td>
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<td>Bactrocera xanthodes</td>
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<td>Pacific fruit fly</td>
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<td>Bactrocera zonata</td>
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<td>Peach fruit fly</td>
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<td>Ceratitis capitata</td>
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<td>Mediterranean fruit fly</td>
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<td>Ceratitis rosa</td>
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<td>Natal fruit fly</td>
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<td></td>
<td></td>
<td>Clavibacter michiganensis subsp.</td>
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<td></td>
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<td>Bacterial ring rot of potato sepedonics</td>
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<td></td>
<td></td>
<td>Conotrachelus nenuharum</td>
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<td>Plum curculio</td>
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<td>Grapevine bios noir phytoplasma</td>
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<td>Grapevine flavescence doree phytoplasma</td>
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<td>Gymnosporangium asiaticum</td>
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<td>Japanese pear rust</td>
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<td>Gymnosporangium juniperi-virginiana e</td>
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<td></td>
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<td>Cedar pear rust</td>
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<td></td>
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<td>Helicobasidium mompa</td>
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<td></td>
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<td>Violet root rot</td>
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<td></td>
<td></td>
<td>Homalodisca coagulata</td>
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<td></td>
<td></td>
<td>Glassy-winged sharpshooter</td>
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<tr>
<td></td>
<td></td>
<td>Hyalodendrya obsoletus</td>
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<td></td>
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<td>A leaf hopper</td>
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<td></td>
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<td>Leptinotarsa decemlineata</td>
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<td></td>
<td></td>
<td>Colorado potato beetle</td>
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<td>Monilinia fructigena</td>
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<td>Apple brown rot</td>
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<td></td>
<td></td>
<td>Pepino mosaic virus</td>
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<td>PepMV</td>
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<td>Plum pox potyvirus</td>
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<td></td>
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<td>Plum pox</td>
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<td>Potato mop-top virus</td>
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<td>PMTV</td>
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<td>Rhagoletis pomonella</td>
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<td>Apple maggot</td>
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<td>Scaphoideus titanus</td>
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<td>A leaf hopper</td>
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<td></td>
<td></td>
<td>Synchytrium endobioticum</td>
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<td></td>
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<td>Potato wart</td>
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<td>Tilletia controversa</td>
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<td>Dwarf bunt</td>
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<td>Tilletia indica</td>
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<td></td>
<td></td>
<td>Karnal bunt</td>
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<td></td>
<td></td>
<td>Trogoderma granarium</td>
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<td></td>
<td></td>
<td>Khapra beetle</td>
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<tr>
<td></td>
<td></td>
<td>Xanthomomas axonopodis pv. citri</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(synonym X. campestris pv. citri)</td>
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<tr>
<td></td>
<td></td>
<td>Citrus canker</td>
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<tr>
<td></td>
<td></td>
<td>Xanthomomas fragariae</td>
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<tr>
<td></td>
<td></td>
<td>Angular leaf spot of strawberry</td>
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<tr>
<td></td>
<td></td>
<td>Xylella fastidiosa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pierce's disease</td>
</tr>
</tbody>
</table>

Biosecurity is about managing risks – protecting the New Zealand environment and economy from exotic pests and diseases. 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 below list new organisms that have become established, new hosts for existing pests and extension to distribution for existing pests. The information was collated during 18/09/2006 – 10/11/2006 and held in the Plant Pest Information Network (PPIN) database. Wherever possible, common names have been included.


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>Nerine latent carlavirus (Nerine latent virus, NeLV)</td>
<td>Nerine sp. (Guernsey lily, nerine)</td>
<td>Wanganui</td>
<td>IDC (general surveillance)</td>
<td></td>
</tr>
<tr>
<td>Phoma enterolouca var. influenzescens (fungus: no common name)</td>
<td>Olea europaea (African olive, olive)</td>
<td>Wairarapa</td>
<td>IDC (general surveillance)</td>
<td></td>
</tr>
<tr>
<td>Grapevine leafroll associated virus type 4 (GLRaV-4)</td>
<td>Vitis sp. (grape)</td>
<td>Gisborne</td>
<td>IDC (general surveillance)</td>
<td></td>
</tr>
<tr>
<td>Xanthomonas translucens (bacterial leaf streak)</td>
<td>Hordeum vulgare (barley)</td>
<td>Wanganui</td>
<td>Crop &amp; Food Research (barley cultivar trial)</td>
<td></td>
</tr>
<tr>
<td>Septocyta ruborum (purple blotch)</td>
<td>Rubus ursinus (boysenberry)</td>
<td>Nelson</td>
<td>IDC (general surveillance)</td>
<td></td>
</tr>
<tr>
<td>Diachus auratus (leaf beetle)</td>
<td>unidentified plant</td>
<td>Auckland</td>
<td>IDC (general surveillance)</td>
<td></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>Pheidole proxima (big headed ant)</td>
<td>Dust sample</td>
<td>Waikato</td>
<td>IDC (general surveillance)</td>
<td>First found in Napier during 2004/05 national invasive ant surveillance</td>
</tr>
</tbody>
</table>


Validated new to New Zealand reports

<table>
<thead>
<tr>
<th>Organism</th>
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<td>unidentified plant</td>
<td>Auckland</td>
<td>IDC (general surveillance)</td>
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</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>
</tr>
</thead>
<tbody>
<tr>
<td>Calonectria acicola</td>
<td>Phoenix canariensis</td>
<td>Auckland</td>
<td>IDC (directed general surveillance)</td>
</tr>
<tr>
<td>Botryosphaeria lutea</td>
<td>Psidium sp. (guava)</td>
<td>Auckland</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Botryosphaeria parva</td>
<td>Halimium lasianthum (plant: no common name)</td>
<td>Mid Canterbury</td>
<td>Ensis (high risk site surveillance)</td>
</tr>
<tr>
<td>Saissetia oleae</td>
<td>Laurus nobilis (bay; laurel, bay leaf tree)</td>
<td>Bay of Plenty</td>
<td>Ensis (high risk site surveillance)</td>
</tr>
<tr>
<td>Hemiberlesia rapax</td>
<td>Hippeastrum sp. (hippeastrum)</td>
<td>Auckland</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Hemiberlesia rapax</td>
<td>Euonymus lucidus (plant: no common name)</td>
<td>Mid Canterbury</td>
<td>Ensis (high risk site surveillance)</td>
</tr>
<tr>
<td>Xylotoles sp. (longhorn beetle)</td>
<td>Sambucus nigra (elder)</td>
<td>Mid Canterbury</td>
<td>Ensis (high risk site surveillance)</td>
</tr>
<tr>
<td>Mycosphaerella africana</td>
<td>Metrosideros excelsa (pohutukawa)</td>
<td>Northland</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Rhizoctonia solani</td>
<td>Iris sibirica (Siberian iris)</td>
<td>South Canterbury</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Botryotinia draytonii</td>
<td>Cichorium intybus (chicory)</td>
<td>Auckland</td>
<td>Crop &amp; Food Research</td>
</tr>
<tr>
<td>Gibberella baccata</td>
<td>Pistacio vera (pistachio)</td>
<td>Nelson</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Ceroplastes destructor</td>
<td>Pittosporum tenuifolium (pittosporum)</td>
<td>Gisborne</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Tospovirus tomato spotted wilt virus</td>
<td>Chisorium intybus (chicory)</td>
<td>Auckland</td>
<td>Crop &amp; Food Research</td>
</tr>
<tr>
<td>Prionoplus reticularis</td>
<td>Liquidambar formosana (Chinese sweetgum)</td>
<td>Bay of Plenty</td>
<td>Ensis (public enquiry)</td>
</tr>
<tr>
<td>Ramularia deusta</td>
<td>Lathyrus odoratus (sweet pea)</td>
<td>Auckland</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Oidium sp. (powdery mildeuw)</td>
<td>Spiraea japonica (plant: no common name)</td>
<td>Auckland</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Phytophthora citricola</td>
<td>Olea europaea (African olive, olive)</td>
<td>Northland</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Ceroplastes sinensis</td>
<td>Ficus benjamina (weeping fig; Benjamin's fig)</td>
<td>Bay of Plenty</td>
<td>Ensis (high risk site surveillance)</td>
</tr>
</tbody>
</table>

### Extension to distribution reports

<table>
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<tr>
<td>Stromatinia gladioli</td>
<td>Crocus sativus (saffron)</td>
<td>Mid Canterbury</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Stigmina thujina</td>
<td>Chamaecyparis lawsoniana (Lawson’s cypress)</td>
<td>Marlborough</td>
<td>Ensis (exotic forest survey)</td>
</tr>
<tr>
<td>Nambouria xanthops</td>
<td>Eucalyptus nicholii (eucalyptus, narrow-leaved black peppermint, Nichol’s willow-leaved)</td>
<td>Northland</td>
<td>Ensis (high risk site surveillance)</td>
</tr>
<tr>
<td>Elsinoe takoropuku</td>
<td>Pittosporum tenuifolium (pittosporum)</td>
<td>Taupo</td>
<td>Ensis (ad hoc collection)</td>
</tr>
<tr>
<td>Gliocladium vermoesenii</td>
<td>Phoenix canariensis</td>
<td>Hawkes Bay</td>
<td>IDC (general surveillance)</td>
</tr>
<tr>
<td>Rosenschediella stryacis</td>
<td>Olearia traversii (akeake)</td>
<td>Auckland</td>
<td>Ensis (high risk site surveillance)</td>
</tr>
</tbody>
</table>

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n. Eleanor Morrison, Technical Support Officer, Biosecurity New Zealand, phone 04 894 0551, eleanor.morrison@maf.govt.nz
Exotic disease and pest emergency hotline: 0800 809 966
Animal welfare complaint hotline: 0800 327 027
www.biosecurity.govt.nz