Also in this issue
Waikato biodiversity project
Biosecurity risk from international yachts
Animal biosecurity surveillance
Use of equivalences in animal trade
Australian quarantine review
Quarantine clearances for East Timor forces
Embryo transfer conference
Requirements for experimental seed imports
Plum pox ruled out

Fall webworm found in Auckland: p4
Contents

Features

3 Government targeting continuous improvement for biosecurity
4 Moths galore: A testing time for Forest Biosecurity
6 Waikato regional biodiversity project shows the way
7 Establishing biosecurity risk predictors for international yachts
8 Casting the animal biosecurity surveillance net wider
9 Equivalences when importing and exporting animals or animal products
9 No further discoveries after single Sydney huntsman spider found
10 South-east Asian countries coordinate efforts to beat FMD
11 Keeping pests and diseases out: Australia is in the same boat!
12 Seeds, snakes and scorpions netted in East Timor inspections
13 Biosecurity awareness good among Antarctic travellers
14 Animal biotechnology under microscope at conference
15 Humane vertebrate pest control discussed
15 First meeting of new Trans-Tasman Animal Welfare Working Group
16 New requirements for experimental seed imports
17 Plum pox ruled out
17 Plant Imports web site updated
17 Seed health workshop invaluable for knowledge sharing
18 Instant fines: lessons from the first 12 months
18 Border Bites

Update

19 New and amended import health standards
19 Draft import health standards for consultation
19 Animal exotic disease response standards revised
20 Honey bee genetic material
20 Belovo egg powders
20 Empty liquid nitrogen containers from all countries
21 Proposal to remove post-weaning multisystemic wasting syndrome (PMWS) requirement from pig semen IHS
21 Codes of ethical conduct - approvals, notifications and revocations since the last issue of Biosecurity
23 Eight new Import health standards for forest produce

Directory

22 New organism records: 8/02/03 – 21/03/03
23 Accredited reviewers for organisations with a code of ethical conduct
24 Codes of Animal Welfare - Animal Welfare Act Update

Cover: The distinctive communal “web” containing about 15 fall webworm caterpillars found in the Auckland suburb of Mt Wellington after a public call to MAF in late March.
Hon Jim Sutton  
Minister for Biosecurity

Our biosecurity measures are under the microscope again as we have had a flurry of incursions by moths, ants, and mosquitoes during the past month.

All of these incursions are serious. Particularly worrying is the latest incursion, that of a gypsy moth in Hamilton.

I can assure you that Agriculture and Forestry Ministry officials are doing everything possible to eradicate that moth, and I will be doing everything to ensure they have the resources to do so.

What do these latest incursions tell us about our biosecurity system?

Firstly, it indicates there are still areas for improvement.

That’s not a surprise.

**Sea containers significant risk**

We have already identified sea containers as a significant risk area. A $1 million research study has recently completed an intensive investigation into sea freight risks and its report has been published, along with a discussion document proposing options for tighter controls.

This work is important. There will be a rational and considered response to that coming not too far down the track.

I can give you a personal commitment that the Government is not complacent in this area, and that we intend to have tightened up biosecurity measures for sea containers by the end of this year.

We are in a process of continual improvement in biosecurity.

The Biosecurity Strategy is an extremely significant development in New Zealand.

All too often, governments lack planning and instead resort to series of ad hoc measures that may or may not be the right way to go in the long-term. Biosecurity is too important for New Zealand to be treated in that way.

With the combination of all my portfolios – biosecurity, agriculture, rural affairs, forestry, and trade – I realise how important it is for the primary production sector not to be constantly battling new pests and diseases.

There is no room for complacency. With ever-increasing traveller and freight flows, risks are increasing. Our response has been one of continuous improvement, which must continue relentlessly.

The Labour-Alliance Government, and now the Labour-Progressive Government, is more committed to biosecurity than any previous Government. According to the Auditor-General in a recent report on biosecurity, the Government is spending an extra $50 million a year on biosecurity baseline funding.

When foot and mouth disease was raging through Britain, we spent significant amounts of money to install soft-tissue x-ray machines at all international airports and to provide extra detector dog teams.

That lifted screening of air crew and passengers from about 80 percent to 100 percent. In addition, all mail is screened.

We are still the only country in the world to do that.

There is still a need to address sea container biosecurity. We are not complacent about this. We are working to fix it.

**Energetic response**

In the meantime, we are responding energetically to the latest finds. Asian gypsy moth is a very serious incursion indeed – this is a very serious pest with the potential to cause incredible damage throughout the country.

It is some consolation that we appear to have found it early, but it is a clear sign that we need to be constantly vigilant and to maintain our surveillance.

Again, it is a timely reminder that responsibility for biosecurity rests not just with Government or MAF officials, but with all citizens. We all need to watch out for unusual-looking or new diseases, insects or animals, and then report them to MAF.

Responsibility for biosecurity rests not just with Government or MAF officials, but with all citizens...
Moths galore: A testing time for Forest Biosecurity

In addition to their ongoing work programmes, MAF Forest Biosecurity staff are now fully engaged in major responses to what could be described as the ‘season of the moth’.

As noted in the last issue of Biosecurity this is a peak time of year for surveillance results, the paradox being that while no news (zero finds) is good news, it doesn’t make the headlines (Biosecurity 42:13).

However, new detections certainly do grab headlines – as with the single group of fall webworm (Hyphantria cunea) caterpillars found in the Auckland suburb of Mt Wellington, and the single gypsy moth (Lymantria dispar ssp.) trapped in Hamilton.

Both detections occurred in March, following closely on the heightened response MAF launched after surveillance confirmed the spread of the gum leaf skeletoniser moth over a wide area of southern Auckland in February.

“While this is obviously a testing time for our surveillance and response systems, they are, as one component of our overall biosecurity system, holding up extremely well,” says Peter Thomson, Director of Forest Biosecurity.

In this feature we update the situation with four responses currently underway: painted apple moth, gypsy moth (gypsy moth), fall webworm and gumleaf skeletoniser.

Painted apple moth (Teia anartoides)
The core painted apple moth (PAM) zone has been progressively reduced from an area of 8,500 hectares and is currently (at mid-April) about 6,600 hectares. There has been only one hotspot identified outside of the core zone, at Hobsonville.

Recent trapping results for the first time have indicated no moth trap catches at Waikumete Cemetery, an area of persistent infestation, where extensive vegetation removal has been required to complement the aerial spraying.

Between 19 February and 4 April more than 18,000 sterile male moths have been released.

These releases occurred at Waikumete Cemetery, Hobsonville and Ranui.

About 15 percent of the sterile moths were recaptured in the trapping programme. Some sterile male moths have been captured up to 9.5 kilometres from the site of their release. Current monitoring indicates that 90 sterile male moths are present in the wild for every one wild male moth.

Gypsy moth (Lymantria dispar)
A single male gypsy moth was caught in Hamilton in late March, demonstrating the value of MAF’s gypsy moth trapping programme.

The catch was the first made since the trapping grid was put in place 10 years ago as an early warning system, and immediately triggered a ‘full alert’.

As at the first week of April no further gypsy moths had been found, either through daily trap inspections or ground searches, and an intensified trapping programme was in full swing.

More than 400 traps had been placed out to a 7 km radius of the catch site. In addition, 75 traps had been placed at distances up to 30 km away on main arterial routes as a precautionary measure, and 1200 new traps and pheromone lures had arrived from Canada for contingency purposes.

A technical advisory group was scheduled to meet in Hamilton on 30 April and good support for MAF’s response was being received from the Hamilton City Council, the regional council, Environment Waikato and stakeholder groups.
Since launching a heightened response to gum leaf skeletoniser in southern Auckland three months ago, MAF has made significant progress towards establishing an “area of containment”. A decision on whether eradication is feasible is still some months away.

To be on the safe side, a delimiting survey to a range of 100km and no further infested sites were found outside of the affected area of approximately 11,000 hectares. The last new site within the affected area was reported on 7 March. A large-scale trapping programme using a synthetic pheromone got underway in April. The setting of between 1200 and 2000 traps has coincided with the peak emergence of adults and results will be published in Biosecurity 44 on 15 June.

AgriQuality is the main contractor and has established an interim operational headquarters at its Lynfield base. Requirements for host removal and vegetation movement controls will be coordinated from this base.

A consultative meeting of major affected landowners and science experts was held in Auckland on 7 March.

A follow-up meeting was held with local authority staff from Manukau City Council, Auckland City Council, Auckland Regional Council, Waitakere City Council and Franklin District Council to agree on ways to ensure a constant flow of information about MAF’s biosecurity activity in Auckland. Biosecurity managers at all local authorities in the Auckland region have been sent a Participation Survey by MAF to build on the positive support MAF has received for its biosecurity incursion responses.

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

www.maf.govt.nz/biosecurity/pests-diseases/forests
Waikato regional biodiversity project shows the way

Regional and district councils throughout the country are increasingly taking leadership in managing biodiversity. For many councils this is a marked change in emphasis from traditional, species-led pest management, to the ecological restoration of whole sites.

The Waikato experience shows that, to be successful, these site-led projects require collaborative effort amongst landowners, agencies and industry, sound technical and practical knowledge, financial backing and committed motivated people.

Waikato’s key ecological sites

In the Waikato Region only 2 percent of our wetlands and 25 percent of our indigenous vegetation remain. A large proportion of this is on privately owned land.

Environment Waikato has a range of biodiversity initiatives across the agency. One initiative is the Key Ecological Sites (KES) project that delivers resources for protecting biodiversity on the ground. The project comes under the Waikato regional pest management strategy and is managed by the council’s biosecurity team. Environment Waikato placed greater emphasis on environmental pests when it last renewed its strategic mandate for regional pest management in 2002.

The KES project was focused on the North Waikato and Coromandel on the basis of two reports that identified and ranked sites of ecological significance in the context of planned pest control operations for 1999-2002. The reports were prepared by ecological and pest management consultants with considerable input from the Department of Conservation (DOC).

KES is a voluntary partnership of landowners, council and other agencies, so the shared understanding and involvement of these groups is crucial to success. While the consultants’ reports provided the ecological basis for the project, the assessment process also yielded important information on the range of perspectives held by Waikato landowners on ecological restoration work.

Communication and collaboration

Two of the larger KES-funded projects are in the Northern Coromandel and Whenuakite areas. In each area, coastal forest stretches from mountain to sea providing habitat for resident kiwi and numerous native plants and animals. The land tenure is a mix of DOC estate and private or communal ownership.

DOC operates pest control programmes on conservation land and provides support for mustelid trapping on private lands. The council fully funds initial possum control and contributes materials for maintenance work on private lands. Landowners contribute by patrolling trap and bait station lines, and by talking with neighbouring landowners about the work.

This collaboration enables consistent pest control to be sustained over a wider area of continuous habitat. Open communication among the partners is the basis for sharing information, setting realistic expectations, proactive planning of annual work and broaching new issues, such as emerging pest species.

Technical and practical inputs

As a rate-payer based organisation, it is important that Environment Waikato uses resources efficiently and effectively. For the KES project, this means we must set realistic targets and carry out pest control to a consistently high standard.

Currently, KES relies heavily on professional ecological and pest management operators. Professional contractors carry out ecological assessments and most of the initial pest control work.

Environment Waikato has also contracted professionals to provide feasibility studies, project design and training for ongoing projects. Other councils have used contractors to provide the communications link between the landowners and the agency.

In for the long haul

Without the opportunity of eradication, pest control will be an ongoing task. Thus projects aimed at ecological restoration through comprehensive pest control will also be ongoing.

A current review of the Waikato KES project suggests that, for the future, community groups and landowners will need:

• continued financial backing and incentives
• support from dedicated liaison and technical staff or contractors
• access to good information (e.g. pest control methods and options)
• access to ecological monitoring data; and
• a profile for their work.

Environment Waikato is committed to continuing this project and improving it in light of these needs, and new opportunities. We are looking to bring together staff of other agencies to talk through KES-style projects and the direct involvement of biosecurity workers in protecting biodiversity.

John Simmons, Group Manager Biosecurity, Environment Waikato, phone 0800 800 401, fax 07 856 0551, john.simmons@ew.govt.nz
Establishing biosecurity risk predictors for international yachts

Keep the anti-fouling paint fresh, keep on the move and scrub your hull before sailing here. A National Institute of Water and Atmospheric Research (NIWA) survey or hull fouling on international yachts indicates that owners who follow some or all of these practices will present the least biosecurity risk to our marine environment.

MAF Quarantine Service is helping NIWA collect data that will be used to predict the risk to marine biosecurity of international small craft. Most yacht hulls assessed in 2002-03 were clean. Sampling will resume for the 2003-04 boating season.

Exotic marine organisms hitch-hike here

Most of our 130-plus non-indigenous marine species reached New Zealand waters in the ballast water of large ships or in association with the organisms that colonise hulls of every size. In recent years, private yachts and cabin cruisers have been implicated in marine pest incursions such as the Japanese seaweed Undaria pinnatifida in New Zealand and North Atlantic Europe, and the blackstriped mussel (Mytilopsis sallei) in Australia.

Between 400 and 500 overseas yachts visit New Zealand each year – even more during America’s Cup years. Some of these boats may carry potential problem species.

Which boats?

NIWA scientist Oliver Floerl has started a project to determine the risk factors associated with fouling organisms on the hulls of overseas yachts, and the number of yachts that are high risk carriers. To develop a model, Dr Floerl needs a representative sample of overseas boats. MAF Quarantine Service is helping Dr Floerl by collecting data during their routine inspections of all incoming vessels.

Quarantine officers scored the fouling visible at the waterline on a rank scale of abundance (0 – 5), and obtained recent travel and hull maintenance histories from the owners by means of a questionnaire. Dr Floerl calibrated the fouling scores by sampling the abundance and diversity of fouling organisms over the entire hulls of 95 vessels soon after their arrival.

Most visitors have clean bottoms

From October 2002 to February 2003, quarantine officers in Opua, Whangarei, Auckland and Tauranga collected information on 65 percent (360) of all overseas yachts that entered New Zealand waters. Interestingly, 85 percent of these boats arrived with clean hulls (ranks 0 and 1); 13 percent carried low or moderate amounts of fouling (ranks 2 and 3) and 2 percent had hulls with extensive fouling (rank 4). No vessels qualified for rank 5 (very heavy fouling).

Statistical analyses so far indicate that the vessels’ country of registration or previous ports-of-call do not determine the abundance of fouling organisms. Instead, the boats’ maintenance history and sailing activity explained most of the variation in fouling cover. Of particular importance were the age of the antifouling paint on the yachts’ hulls, whether or not the owners had scrubbed or brushed the hulls since the last painting, and the longest period for which the boats had been continuously moored in one place.

Vessels that pose low or no risk to biosecurity:

- had antifouling paint less than 10.5 months old; and
- had spent 2.5 weeks or less at one anchorage; or
- their owners had manually scrubbed fouling organisms off their hulls before sailing to New Zealand.

Boats arriving with moderate or extensive fouling cover were predominantly those that had old antifouling paint (> 14.5 months), had spent long periods at anchor, and had not been scrubbed.

To be continued...

The results from one season are promising, but there is great variability in hull fouling and the vast majority of vessels sampled this year were devoid of fouling. The researchers need a larger sample of yachts to act as calibration sets and to reliably model fouling risk. NIWA plans to extend the data set during the 2003-04 boating season and then expects to produce robust tools to predict risk.

NIWA thanks all MAF staff involved in this research, in particular the Quarantine staff in Opua, Whangarei, Auckland and Tauranga.

Oliver Floerl,
National Institute of Water and Atmospheric Research,
phone 03 348 8987,
fax 03 348 5548,
ofloerl@niwa.co.nz
Casting the animal biosecurity surveillance net wider

Surveillance is the eyes and ears of biosecurity. The more sources of information, the more precisely MAF can define New Zealand's animal disease and pest status. The better New Zealand's status can be defined, the better the risks to our fauna can be managed. MAF is working to improve surveillance systems to maximise the return on our surveillance investment.

Internet based data capture for sheep disease surveillance

For the past 2 years, MAF has been researching an internet-based surveillance module for sheep farmers and veterinarians to record disease information. At the end of this project, MAF anticipates having a completed and field-tested sheep disease module that can be linked to, or integrated with, veterinary practice web sites to collect previously untapped surveillance information.

An analysis of the trial survey results will also be conducted, and recommendations will be made for the broader implementation and ongoing operation of this programme. This two-year pilot research programme will finish in April 2003 and the results will be summarised in Biosecurity.

Palmtop data capture by vets

Another research project is investigating the use of hand-held electronic devices by veterinarians to capture health information about our cattle, sheep and deer populations. The data would be downloaded from the palmtop to a database in each participating practice. The information in the database could then, in turn, be used for centralised analysis and reporting of disease events in a region over a period of time.

If it is successful, this method of collecting disease information could be employed in the establishment of a national network of sentinel veterinary practices. This network could then help improve the level of surveillance information MAF currently obtains from some of the more remote locations in New Zealand.

This project began in December 2002 and will run for the next three years.

Wildlife

A 2-year research project about disease surveillance in New Zealand wildlife is about to begin. This project is expected to enable analysis and measurement of the risks posed to human and animal health from wildlife sources, as well as facilitating the ability to protect native fauna from disease risks.

The project will identify methods for prioritising wildlife diseases and their surveillance, and then prioritise the diseases, sites and species for surveillance.

The project will also develop a wildlife disease surveillance framework, including recommendations for prioritising new initiatives and enhancements to existing systems.

Improvements to active surveillance

There will be two components to Animal Biosecurity's active (or targeted) surveillance: animal exotic disease surveillance and exotic animal surveillance. Key objectives for both are early detection of incursions and post response surveillance should an incursion be detected. The aim is to have rolling surveillance activities that meet MAF's strategic and operational needs.

Exotic animals

Prioritisation is particularly important for exotic animal surveillance. This is because there are literally thousands of pests that could enter New Zealand and we have to be clear about which ones might be significant. Potential entry pathways can then be monitored using appropriate techniques and appropriate field activities can be designed.

Also important is the ability to evaluate patterns of border and post-border interceptions.

Technical experts will evaluate several criteria of pest invasiveness in a transparent and logical manner to assign an overall invasiveness score and recommend action should a specific pest be detected. The process is analogous to conducting a qualitative risk assessment.

Two other exotic animal active surveillance projects await funding. An ant pest risk assessment will contribute to the prioritisation process and field activities.

Another project will analyse exotic animal post border detection data, to evaluate and analyse information about risk pathways and to identify existing information gaps.

Animal exotic diseases

For animal exotic diseases, the first step is to prioritise a list of diseases for active surveillance. Prioritisation needs to be transparent and logical so that it can be peer reviewed.

Field activities are likely to be complex and potentially expensive. Traditional survey methods have already been proven unsatisfactory and MAF is working with Massey University's EpiCentre to develop new methods and software to make active surveillance efficient and statistically valid.

Roger Poland, Programme Coordinator, Surveillance, phone 04 498 9820, fax 04 474 4133, polandr@maf.govt.nz

Ron Thornton, Programme Coordinator, Active Surveillance, phone 04 474 4156, fax 04 474 4133, thorntonr@maf.govt.nz
Equivalences when importing and exporting animals or animal products

Equivalences are the means by which countries vary their import conditions for a specific shipment. The alternative must provide at least the same level of protection as required by the usual import condition.

Whether importing or exporting, there is a set of conditions that an animal or animal product must meet. These conditions are determined by the importing country on the basis of risk and describe how the risks will be reduced to an acceptable level. A case for equivalence is used to request means other than those in the conditions to minimise the level of risk, for example, a different laboratory test that is just as effective in finding infected animals, or a longer period in quarantine.

The concept of equivalence is part of the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement). The Agreement includes a requirement on the importing country to accept cases for equivalence if 'the exporting Member objectively demonstrates to the importing Member that its measures achieve the importing Member’s appropriate level of sanitary or phytosanitary protection'.

The exporting country must present the technical arguments for a case for equivalence, which the importing country must then accept if the prescribed level of protection is adequately achieved.

Cases for equivalence may be considered for both imports and exports of animals and animal products.

Kerry Mulqueen/Sally Aitken, Import Management, phone 04 498 9624, fax 04 474 4132, mulqueenk@maf.govt.nz, aitkens@maf.govt.nz

No further discoveries after single Sydney huntsman spider found

On 15 January 2003 an adult female Sydney huntsman spider (Holconia immanis) was found on a residential property in Auckland. There was no obvious link to recently imported goods or returned travellers and the property was not in the vicinity of a port or container unloading or storage site.

MAF National Plant Pest Reference Laboratory (NPPRL) staff visited the property to search for further sign of the spiders. None were found. A fact sheet was developed and mailed to all 71 households within a 100m radius of the find.

By the end of March, NPPRL had received about 40 calls from members of the public reporting suspect Sydney huntsman spiders, but none of these calls resulted in the discovery of further specimens.

The Department of Conservation and other spider experts advised that they expect the Sydney huntsman spider to behave similarly to a close relative (Delena cancrivora) which has been in Avondale for 40-50 years, lives mainly on wattle trees, predate the introduced peacock moths and hasn’t shown any sign of establishing elsewhere.

Taking into account what is known about the Sydney huntsman spider, the behaviour of the Avondale spider and the fact that was a single detection, MAF has decided to take no further action.

If further specimens are detected or new evidence comes to light, this decision will be reviewed.

Amelia Pascoe, Programme Coordinator, Exotic Animal Response, phone 04 470 2785, fax 04 474 4133, pascoea@maf.govt.nz www.maf.govt.nz/huntsman-spider
South-east Asian countries coordinate efforts to beat FMD

New Zealand stands to benefit from a campaign to eradicate foot and mouth disease (FMD) from the south-east Asia region.

The campaign to eradicate FMD from south-east Asia (SEAFMD) involves Cambodia, Indonesia, the Lao Peoples Democratic Republic, Malaysia, Myanmar, the Philippines, Thailand and Vietnam.

Collaboration needed to achieve FMD eradication

SEAFMD recognises that the whole region must collaborate to achieve FMD eradication. Each country has its own FMD campaign and has nominated a person to be responsible for it. A regional coordinating unit and regional FMD reference laboratory are based in Thailand. The annual meeting of the OIE Sub-Commission for FMD in south-east Asia provides a strategic overview and a forum for all the interested parties to meet.

The first phase of the campaign was to ensure that all the countries involved, and the region as a whole, had the components for a coordinated control campaign in place. Each country needed to reach a minimum standard and all the parties involved had to have a common understanding of the control strategies and tools.

Campaign to reduce prevalence

The second phase of the campaign, the control phase, is now approaching its mid-term review. The objective of this phase is to progressively reduce the prevalence of FMD in the region. One example of the work in Phase Two has been the Malaysia-Thailand-Myanmar Peninsula Campaign for FMD Freedom. These three countries have set up a joint commission to control FMD in their area because of the animal movement patterns. Another country grouping that appears to have strong linkages is Vietnam, Cambodia and the Lao Peoples Democratic Republic.

The third phase of the campaign, eradication and consolidation, is scheduled to begin late in 2004. The objective of this phase is a well-protected and internationally verified FMD-free zone in the region. Continued freedom from FMD will require participating countries to prevent re-introduction of the disease and develop regionally based contingency plans.

New Zealand benefits

New Zealand supports the objectives of the SEAFMD programme and stands to benefit from it in many ways. Programmes that reduce the incidence of, and ultimately eradicate, FMD from south-east Asia reduce the chances of the disease reaching New Zealand. The establishment of the regional reference laboratory in Thailand significantly increases our regional base of diagnostic skills for FMD.

The opportunities for New Zealanders to assist SEAFMD countries with this programme provide us with valuable insights and first-hand knowledge of FMD control issues that strengthen our disease response capability.

Finally, participation of candidates from SEAFMD countries in the advanced veterinary epidemiology training programmes available at the EpiCentre at Massey University has great potential to strengthen the veterinary infrastructure of our region.

Derek Belton,
Director Animal Biosecurity,
phone 04 474 4155,
fax 04 498 9888,
beltond@maf.govt.nz
The latest review of Australia’s quarantine function has recommended new standards for external and internal inspection of international cargo containers - at the same time as MAF Biosecurity’s Border Management group has put a process in place to change measures for container inspection in New Zealand.

Overall, the Australian review of quarantine function – a term used in place of the term biosecurity – found the same range of concerns as those being addressed in New Zealand. It was tabled to the Australian Parliament in March by its highest placed auditing body, the Joint Committee of Public Accounts and Audit (JCPAA).

A major focus of the JCPAA’s review was to assess how achievable high levels of quarantine border intervention are, following a funding windfall of almost A$600 million in May 2001 for increased intervention after the UK’s foot and mouth outbreak. Within a year, the Australian Quarantine and Inspection Service had recruited and started training more than 1200 additional staff.

Quality of inspections a concern

Despite the sharp increase in quarantine activity in Australia, the review expressed concern about the “quality and depth of quarantine inspections”.

The review examined relations with other agencies and regional government, pre-border offshore operations and Australia’s “quarantine gateways” – international air passengers, shipping and ship-borne passengers, international cargo and international mail.

A condition of additional funding to border operations was to gain an increase in the effectiveness of interventions (varying levels of inspection and seizures). After 12 months, effectiveness of quarantine for high risk items at airports had reached 70 percent, against an initial target of 87 percent, and effectiveness for clearance of ship vessels had reached 87 percent against a target of 96 percent.

Another condition was to increase base levels of intervention. Between 2001 and 2002 intervention rates for sea containers, air containers and high-volume low-value airfreight documents increased markedly – sea containers up 95 percent, air containers up 96 percent and airfreight documents up 80 percent.

Upgrading needed

The JCPAA found most gateway facilities were in need of upgrading and that intervention levels might not be sustainable when put under pressure during peak periods. However it was confident the targets that had been set by the Australian Government were achievable.

Science-based risk analysis was identified as an area where Australia has slipped behind New Zealand, and where it has the same problem with backlogs as experienced by MAF.

Part of the remedy the JCPAA review proposed is to set up a centre of excellence in Australia for undertaking import risk analysis research. In addition, MAF’s Australian equivalent, AFFA, had just completed a memorandum of understanding with Environment Australia to integrate advice on environmental issues into risk analyses and to ensure ongoing consultation on quarantine matters generally.

For the JCPAA review report:

Keeping pests and diseases out: Australia is in the same boat!

Australia’s highest placed auditing body has been told that data on the rate of biosecurity incursions in Australia is, at best, “lumpy”.

A review presented to the Australian Parliament in March by the Joint Committee of Public Accounts and Audit (JCPAA) reports there is no detectable change in the rate of incursions over the last 20-25 years. Some years had 10-15 incidents classified as incursions, whereas other years had only two or three. A contributing reason for this fluctuation is that a pest may take some years to detect.


The JCPAA agreed with AFFA that determining the mode of entry of a new pest or disease is extremely difficult. Its report commented that the rate of incursions is a misplaced performance measure and that “it is likely that few incursions could be directly attributable to lapses in biosecurity policy”.

Notwithstanding comments that Australia is “well prepared to meet existing and future quarantine threats”, the JCPAA received evidence of a long term decline in the level of scientific expertise available to assist in identifying disease incursions. It was also concerned at a lack of capacity for systematically dealing with marine incursions, especially of biofouling organisms.

Raw numbers don’t tell the whole story
Long working hours and harsh working conditions were part of the job for MAF Quarantine Officers working in East Timor, pre-shipment inspecting New Zealand Defence Force (NZDF) staff and equipment returning to New Zealand - the largest ever quarantine operation of its kind.

For two and a half years, every six months a team of four MAF Quarantine Officers from around New Zealand was sent to East Timor to conduct baggage inspections on soldiers returning to New Zealand after their 6-month tours of duty. In total, MAF Quarantine Service (MAFQS) staff spent about 2000 hours inspecting nearly 4000 personnel returning to New Zealand from East Timor.

Invasive weeds
Weed seeds were the most common interception, with MAFQS inspectors finding them in the clothes or gear of every third returning NZDF staff member.

“Many of the weeds in East Timor, such as the mile-a-minute vine and Siam weed are very invasive,” says Brian Whimp, MAFQS Programme Coordinator for East Timor. “Siam weed produces huge numbers of seeds, which stick to everything. We also intercepted scorpions, snakes and giant African snail, but these were not so common.”

Tough conditions
The MAFQS staff involved in the early stages of the East Timor programme had to put up with harsh conditions, says Brian. “They lived in army tents with river rock floors, army stretchers with mosquito nets, oppressive heat and humidity with no fans to move the air around and, during the monsoon season, afternoon rain storms that could create rivers through your tent in a matter of minutes.”

Later staff rotations were completed at a clearance facility at Hera, on the Northern Coast of East Timor, also used by the Australian Defence Force for AQIS clearances. “This made the inspection process for MAFQS staff a little easier as they were housed in air-conditioned 20-foot containers, and inspection facilities were excellent,” says Brian.

NZDF personnel had been part of a UN-backed multinational intervention force in East Timor since September 1999. This multinational force (INTERFET – International Force – East Timor) was made up primarily of Australian and New Zealand soldiers and helicopter crews. Their task was to ensure the Indonesian army-backed militia withdrew from occupied East Timor in an orderly and timely fashion.

Intervention phase completed
By March 2000, the intervention phase was completed and the NZDF asked MAFQS to send Quarantine Officers to East Timor to inspect the INTERFET staff coming home. Two Quarantine Officers formed the first MAFQS team to East Timor, and began the largest personnel pre-shipment inspection programme undertaken by MAFQS.

Following the withdrawal of the INTERFET force from East Timor, NZDF committed a full battalion to contribute to the new administration under UN guidance. This was known as UNTAET (United Nations Temporary Administration – East Timor).

The Royal New Zealand Airforce began the rotation of their staff home on a regular basis and MAFQS staff regularly visited East Timor to inspect these personnel, together with helicopters that were rotated back to New Zealand for servicing.

The first NZ Army personnel rotation was completed in May 2000, followed by regular six monthly rotations of about 600 NZDF personnel.

The NZDF responded to the introduction of MAFQS into the withdrawal process with enthusiasm and a desire to ensure that their staff could not be held responsible for introducing
flights that were delayed. Of the total 112 flights by the RNZAF, USAF and the South African Air Force, 28 were delayed in Antarctica by bad weather, and seven for maintenance reasons. Seven aircraft were turned back to Christchurch due to weather conditions, and one flight was forced to return because of mechanical difficulties.

Altogether 2,932 passengers were moved, and 1,225 tonnes of cargo was transported south. Major cargo loads included 10 tonnes of explosives for new road construction and 25 tonnes of liquid helium.

The season went well from the MAFQS point of view, says Rob, except for some flights that were delayed. Of the total 112 flights by the RNZAF, USAF and the South African Air Force, 28 were delayed in Antarctica by bad weather, and seven for maintenance reasons. Seven aircraft were turned back to Christchurch due to weather conditions, and one flight was forced to return because of mechanical difficulties.

Altogether 2,932 passengers were moved, and 1,225 tonnes of cargo was transported south. Major cargo loads included 10 tonnes of explosives for new road construction and 25 tonnes of liquid helium.
With a “toolbox” containing artificial insemination, embryo transfer, in vitro fertilisation, sex determination, nuclear transfer, genetic modification and genomics, animal biotechnology and its contribution to medical and life sciences was the focus of the 29th Annual Conference of the International Embryo Transfer Society.

Held in Auckland in January this year, the conference covered four main areas:

• the fundamental aspects of embryo transfer
• assisted reproductive technologies (ARTs) and their commercialisation
• transgenic technology; and
• the current status of embryo technologies in various species.

Cloning focus

A major focus for investigation remains cloning technology, where there continue to be difficulties in most species. The efficiency of cloning depends on a number of factors but one, known as aberrant epigenetic reprogramming, was suggested as a possible explanation for the high level of abnormalities in cloned pregnancies and offspring.

A number of papers covered the sourcing of oocytes (egg cells), the availability of which is often a limiting factor in ART. Developments in this area are showing potential for genetic material to be gathered from dams past the stage of infertility, or from high performance animals such as horses, in which a pregnancy may be undesirable.

Increasing rate of genetic progress

In the same vein, Juvenile In Vitro Embryo Transfer (JIVET), which involves the production of embryos from extremely young animals – 5 to 9 week-old lambs for example – is a procedure that aims to reduce the generation interval and increase the rate of genetic progress in breeding schemes. This procedure is also performed in calves.

Technology for sexing sperm

On the male side, the technology for sexing sperm is used in the United States, allowing preselection of offspring, although economic considerations will most likely preclude its use in New Zealand. Although in vitro spermatogenesis (creation of sperm cells) has so far been unsuccessful, investigation continues as it has the potential for direct genetic modification of the male germ line as well as the treatment of male factor infertility.

New technologies presented in the production of transgenic animals included the use of sperm as the vector of foreign genes instead of the traditional nuclear transfer method, while artificial chromosome vectors have been used to insert entire human sequences into cattle. The use of somatic cells rather than oocytes for nuclear transfer is also under investigation.

Semen and embryo technologies for cattle

A symposium, “Implementation Challenges of Smart Semen and Embryo Technologies in Cattle”, following the conference. Points of interest included:

• many of the ART technologies are not presently applicable to the New Zealand environment because of economics, although they could be used in niche markets such as with high value stud animals
• future developments in liquid semen technology, in which New Zealand leads the world, include the encapsulating of sperm to increase their survivability within the cow from the present 12-40 hours up to 96 hours, thus reducing the demand for accuracy in terms of timing and heat detection
• because of BSE, there is increasing hostility in Europe to the use of hormones, particularly pituitary extracts such as FSH.

Concerns about cloned companion animals

Concerns about the cloning of companion animals included animal welfare problems, questions about how recipient animals would be managed and societal worries related to the emotional rather than the economic value attached to these animals.

A New Zealand paper looked at species-specific methodology in embryo transfer in deer, including a media system for culture of Red deer embryos to the blastocyst stage, and a limited annual period of activity based around the 4-month breeding season, which has greatly improved the success rate.

Concerns about cloned companion animals included animal welfare problems, questions about how recipient animals would be managed and societal worries related to the emotional rather than the economic value attached to these animals.
Humane vertebrate pest control discussed

The RSPCA Australia Scientific Symposium, “Solutions for achieving humane vertebrate pest control”, held in Canberra in February, brought together people from diverse backgrounds with an interest in this subject.

Four sessions covered community needs and expectations in pest-animal control, ethics of controlling vertebrate pests, a re-examination of current strategies, and developing innovative and practical solutions to pest-animal control. The following perspectives emerged:

- RSPCAA – killing animals is acceptable provided that it is done humanely and for a reasonable purpose.
- Landholder – ongoing pest control is essential because without it there would be huge production losses and land management problems.
- Environmenta – without ongoing pest control, environmental degradation would occur and biodiversity would be threatened.
- National Regulatory Authority – agrochemical and veterinary drug regulation is primarily concerned with efficacy and human safety with no requirement to consider animal welfare, although opportunities are being sought to include it.
- Australian legal framework – whatever the other perspectives, there are legal obligations to control vertebrate pests.
- Diversity of views – a range of views, interests, fears and concerns attend discussions of the welfare aspects of pest-animal control, and this is heightened in some quarters by a shift in thinking towards considering the welfare of pest animals.
- Ethics – the welfare of pest animals deserves the same consideration as that of farm, companion, experimental and other animals. The suffering caused by most control methods therefore demands comprehensive, rigorous and ongoing action to reduce it.
- Humaneness of control methods – ranking current methods, improving current methods and developing new more humane methods, which are also practical, effective, safe and affordable, must be undertaken to reduce suffering; promising results are already evident.
- Guidelines for control programmes – a list of guidelines to maximise the humaneness and success of control programmes should be formulated; examples were provided.

This symposium successfully established common ground between stakeholder groups and stimulated thought and discussion on practical and innovative ways of achieving humane vertebrate pest control. The paper summaries and the proceedings will be made available on the RSPCA Australia website at: www.rspca.org.au

Professor David Mellor, Director, Animal Welfare Science and Bioethics Centre, Massey University, phone 06 350 4807, fax 06 350 5657, D.J.Mellor@massey.ac.nz

First meeting of new Trans-Tasman Animal Welfare Working Group

New Zealand participated in this new Trans-Tasman group, which met in Adelaide during March. Discussions covered a broad range of farm animal welfare issues, vertebrate pest control and ethical and welfare issues arising from the use of animals in gene technology research.

As a result of the replacement of the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) by the Primary Industries Ministerial Council (PIMC), there has been a review of the supporting committee structure.

The previous Trans-Tasman Animal Welfare Committee has now become an Animal Welfare Working Group (AWWG), providing operational support and strategic advice for the Animal Health Committee (AHC).

AWWG composition remains the same, with members representing all states and territories, the Federal Government, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and New Zealand. The committee continues to be chaired by Dr Mike Rickard of the CSIRO.

Discussions at the Adelaide meeting included the following topics:

- Australian Model Codes of Practice
- Options to reduce animal use in the regulatory testing of veterinary biologicals
- The future modus operandi of the AWWG
- Animal welfare and international trade

- Regulatory issues arising from the use of animals in biotechnology
- Vertebrate pest control and relationships with the Trans-Tasman Vertebrate Pest Control Committee
- The OIE animal welfare initiative.

In addition to its lead role in developing Model Codes of Practice, it has been agreed that the group should also address animal welfare issues of strategic importance.

A major agenda item for the next meeting to be held in August 2003 will, thus, be identifying and discussing strategic issues of strategic significance to both Australia and New Zealand.

David Bayvel, Director Animal Welfare, phone 04 474 4251, fax 04 498 9888, Bayveld@maf.govt.nz
New requirements for experimental seed imports

MAF Biosecurity has concluded that Level 1 (open ground) post-entry quarantine is generally insufficient to prevent the entry of pests associated with seed. Regulated pests have been identified in Level 1 quarantine, e.g. aphid-transmitted viruses. MAF inspectors have also frequently observed non-regulated pests, e.g. fungi, on such crops. This demonstrates the potential for pests to move in from surrounding crops and by implication to move out from the quarantine area.

Current import requirements

Seed imported for sowing must fulfil the requirements of standard 155.02.05 Importation of seed for sowing. All seed must meet the basic conditions (section 2) while some species (for which specific pests have been identified) have further requirements designed to prevent the entry of pests into New Zealand (section 3 of the standard).

Seed for experimental/breeding purposes may be imported into post-entry quarantine by registered operators without meeting the requirements of section 3. This includes seed imported for breeding and multiplication (using New Zealand as a contra season to the northern hemisphere), and new varieties imported for trialing purposes. Currently eight companies import seed of up to nine species and 18 genera, from up to 27 countries.

Such seed is currently grown in Level 1 quarantine, mainly around Christchurch. Level 1 quarantine facilities are registered and inspected by MAF according to standard PBC-NZ-TRA-PQCON Specification for the Registration of a Plant Quarantine or Containment Facility, and Operator. These facilities are open fields in which the seed is grown isolated from plants of the same genus by 50 metres (less isolation is required from other genera). Level 1 facilities are meant to be used only “for plant propagating material which may be infected/infested with risk group 1 pests which cannot be detected by visual inspections at the point of entry and are highly unlikely to be spread by wind, water, insects or other vectors”.

Proposed revisions of post-entry quarantine requirements

MAF Biosecurity has reviewed the import requirements for experimental/breeding seed and, in particular, whether Level 1 quarantine is appropriate. Seed of the species imported under these provisions may be infected with regulated pests that can be spread by wind or water (e.g. downy mildew and Karnal bunt), or insects (e.g. Pea enation mosaic virus). Level 1 quarantine is not sufficient to contain these pests if imported in association with seed.

Simultaneously, MAF Biosecurity has reviewed the pests associated with the most important species imported for experimental/breeding purposes (e.g. barley, beans, oats, peas and wheat). From this review, it is clear that there are many more regulated pests associated with seeds of these species than previously realised.

MAF Biosecurity is proposing the following changes to the import requirements for seed which requires post-entry quarantine:

- seed of any species with special conditions (section 3, 155.02.05 Importation of seed for sowing) may be imported into post-entry quarantine;
- seed of these species may be imported from any country; and
- importers will no longer be required to be “registered operators”, provided that quarantine facilities are registered and operated according to standard PBC-NZ-TRA-PQCON.

Consultation

Many of these changes will facilitate seed importation but some revisions may affect the activities of the eight companies which currently import seed for experimental/breeding purposes. MAF Biosecurity is aware that some seed has been imported into post-entry quarantine because it has proved difficult to obtain phytosanitary certificates overseas, in particular the United Kingdom. Discussions with the UK Department of Environment, Food and Rural Affairs have now resolved this problem and such seed will no longer require post-entry quarantine.”

Formal submissions on these proposed changes closed on 25 April 2003. However, MAF Biosecurity will consider submissions made after this date if possible.

MAF Biosecurity will consider alternative ways to prevent the entry of seed-associated pests, e.g. testing for regulated pests or increased field isolation. Depending on the results of consultation (submissions closed on 25 April), it is anticipated that a final decision on the future arrangements for post-entry quarantine for seeds will be made in June-July 2003.

Plant Imports - Consultation on experimental seeds, MAF Plants Biosecurity, PO Box 2526, Wellington, New Zealand, phone 04 498 9843, fax 04 474 4257, PlantImports@maf.govt.nz

Biosecurity Issue 43 • 1 May 2003
Plum pox ruled out

A suspected case of Plum pox investigated by MAF is most likely to be Apple chlorotic leafspot virus (ACLSV) and Prunus necrotic ringspot virus (PNRSV) - both common viruses present in New Zealand.

MAF was alerted to the incident in March this year when a single non-commercial plum tree in the Waikato exhibited symptoms remarkably similar to plum pox. Samples from the tree were sent to the United States Department of Agriculture for further verification after initial results in New Zealand were negative.

Barney Stephenson of MAF’s Plant Biosecurity group, who led the response, is relieved by the findings

“I am very appreciative of way industry worked alongside MAF in managing the scare,” he says. “Summerfruit New Zealand was a crucial part of our response and it has been an extremely useful test of our response system,” he says.

There are four strains of the plum pox potyvirus, which is a notifiable disease under the Biosecurity Act 1993. In infected countries it is commonly spread by grafting and by aphids. It can devastate fruit-bearing varieties from the Prunus family including peaches, apricots, plums, nectarines, almonds and cherries, causing fruit to be unmarketable and decreasing the yield.

Background information on plum pox is available at:
- www.maf.govt.nz/plum-pox
- www.summerfruitnz.co.nz

Philippa White,
MAF Communications Adviser,
04 498 9948 or 027 223 1875

Plant Imports web site updated

After receiving feedback that some information on its website was difficult to understand or out-of-date, MAF Biosecurity Authority Plant Imports has updated several areas of the site. All of the changes are accessed from the Plant Imports homepage through the URL (unchanged) mentioned below.

Changes to the website are:

- Modification of the overview that describes import health standards (IHSs), the Biosecurity Act 1993, relevance to international agreements and the role of the Plant Imports Team. This is located under ‘Importation of plants and plant products into New Zealand’.
- Addition of an explanation and link to the Unwanted Organisms Register. This is located under ‘Lists of Quarantine Organisms’.
- Reformat of the nursery stock page to improve clarity. This is located under ‘Nursery Stock’.
- Addition of a new table describing the current IHSs under development and review in response to requests for this information. This is located under: ‘Plant Imports Health Standards Under Development/Review: 1 July 2002 – 30 June 2003’.
- Addition of new information regarding the Convention on International Trade in Endangered Species (CITES) and provision of links to the appropriate commodity groups viz. Fresh Cut Flowers/Foliage, Nursery Stock and Seed for Sowing. This is located under: ‘Cites Agreement’.

Laraine Jackett,
Technical Adviser - Plant Imports, Plants Biosecurity,
phone 04 474 4126, fax 04 474 4257,
Laraine.Jackett@maf.govt.nz

www.maf.govt.nz/plant-imports

Seed health workshop invaluable for knowledge sharing

In the week following International Congress of Plant Pathology (2-7 February 2003, Christchurch), a seed health-testing workshop was organised by the Plant Disease Committee (PDC) of the International Seed Testing Association (ISTA).

The workshop concentrated on seed-health testing of vegetable and cereal crops of interest to the Asia/Pacific region. MAF Biosecurity (Plant Imports) was represented by Afreen Rahman, (Technical Adviser – Pest Risk Assessment). Scientists coming from different parts of the world gave oral and laboratory presentations for seed pathogens, in particular Xanthomonas campestris pv. campestris, Phoma lingum, Fusarium spp., Pea seed-borne mosaic virus, Lettuce mosaic virus, and Ascochyta spp.

The positive and negative aspects of seed-health testing techniques, including the quarantine aspects of seed testing, were discussed and demonstrated. The sharing of knowledge and experience by the wide spectrum of scientists was invaluable and MAF Plants Biosecurity (Imports) will be seeking to incorporate the information and techniques into import seed requirements as appropriate.

Afreen Rahman,
Technical Adviser – Pest Risk Assessment, Plants Biosecurity,
phone 04 470 2766, fax 04 474 4257,
rahmana@maf.govt.nz
In June 2001, the Government introduced a system of instant $200 fines for travellers to New Zealand who make erroneous biosecurity declarations (Biosecurity 29:4). MAF has reviewed the first year’s operation of this programme.

The review examined the policy objectives underlying the instant fine programme, the appropriateness of the relevant enforcement standards, and various operational issues.

Although the seizure rate for undeclared biosecurity risk goods has declined slightly since the programme began, the enforcement rate is less than anticipated. The main reason is the number of passengers apprehended who do not understand English and cannot complete a valid declaration. The language barrier is the most pressing issue to be addressed.

The review’s most prominent recommendations are that:

- declaration forms and signs at airports should be revised to communicate the infringement notice programme more effectively
- infringement should remain a strict liability offence (one that may be excused only if the defendant can show that the breach occurred despite reasonable steps having been taken to prevent it) but some discretion should continue to be used in issuing infringement notices
- training should ensure that staff are fully competent to perform enforcement functions; and
- staff deployment should be reviewed to determine whether biosecurity would be enhanced by some redirection of current capability.

In response, MAF is forming project teams to tackle specific recommendations. MAF will also report to the Government on the performance of the instant fine programme in achieving biosecurity outcomes.

Neil Shaw,
Legal Coordinator,
Biosecurity Coordination,
phone 04 470 2771,
fax 04 470 2730,
shawn@maf.govt.nz

Border Bites

Infringement facts and figures

For the second half of 2002:

- 31 travellers in every thousand (3.1 percent) had biosecurity risk goods seized
- about a quarter of seizures were of undeclared items
- 2.5 infringement notices were issued per thousand travellers for a total of 4,965 fines
- half of all fines were for failing to correctly declare fresh produce considered to be fruit fly host material; contaminated equipment was the next biggest category, followed by bee products and meat products

Telling porcies

These are dried porcupine stomachs, seized by MAF Quarantine Officers at Auckland International Airport. They were found during a full search of the luggage of a family from Cambodia. The family was asked what kind of animal they came from but had very limited English. Eventually, however, a drawing of a porcupine was produced. The porcupine stomachs were destroyed.

Dangerous harvest

A prototype forage harvester, being sent around the world for trials in different countries, was heavily contaminated when it arrived at the Port of Auckland. MAF Quarantine Service Officers required the harvester to be stripped by an engineer for inspection, as contaminants commonly lie hidden inside rollers or behind cover plates on this type of machinery. When this had been done, large amounts of debris, including soil and plant material, were evident.

They were removed by steam cleaning. The photo above right shows contamination discovered when the cutter cover plates were removed; the photo at right shows contaminants behind the light fittings.
New and amended import health standards

Cervine semen and cervine embryos from Great Britain

Bovine tuberculosis

New Zealand has accepted a Department of Environment, Food & Rural Affairs (DEFRA) request for increased flexibility in the bovine tuberculosis safeguards to allow export of embryos from donor deer that do not belong to DEFRA’s deer health scheme.

Bovine spongiform encephalopathy (BSE) and chronic wasting disease (CWD)

Little is known about the possible transmission of CWD via germplasm and there is minimal surveillance of transmissible spongiform encephalopathies (TSEs) in deer in Great Britain. Therefore MAF has included a requirement that there has not been any introduction of genetic material from North America, in the form of live deer or cervine germplasm, onto the farm of origin since 1998, the year when New Zealand suspended importation of cervids from Canada.

Because deer in Great Britain were fed similar rations to cattle prior to BSE being identified and there has been no work done in deer to determine the distribution of the BSE agent, it is now required that donor animals have been born after the date from which the ban on the feeding of ruminants with meat and bone meal and greaves derived from ruminants has been effectively enforced, 1 August 1996.

Brucella abortus

A testing requirement has been added because Great Britain can no longer certify freedom from Brucella abortus after an outbreak in Scotland in February 2003. Brucella abortus can be transmitted in the semen of cattle and possibly also in deer.

The standards are now dated 20 February 2003 and replace the previous ones dated 10 February 2002.

Horses from the European Union, Australia, Canada and the United States of America

These standards have been updated for equine herpesvirus 1, in accordance with the MAF Biosecurity risk analysis and OIE Code. The new standards are dated 13 March 2003 and replace those dated 13 November 2001 (EU), 12 August 2002 (Australia) and 15 December 2001 (Canada and United States).

Laboratory animals from all countries

This import health standard has been amended for identification purposes. An original certificate that identifies the species of laboratory animal and any associated biota must accompany each consignment. The certificate must be signed by the Director/Manager of the institution from which the animals originate. This IHS is dated 13 March 2003 and replaces the one dated 18 July 2002.

Camel meat and meat products for human consumption from Australia

This is a new import health standard dated 13 March 2003. It only applies to muscle tissue (not offal). The camel meat must come from animals slaughtered and processed in government-licensed premises under official supervision and be subject to ante-mortem and post-mortem inspection. The standard also requires the camel meat and camel meat products to be commercially packaged and sealed with an official government or company seal.

Draft import health standards for consultation

Equine viral arteritis

- Horses from Australia, the European Union, Canada and the United States
- Horse Semen from Australia, the European Union and the United States

Comments are invited on an addendum to the horse risk analysis and subsequent change to the horse import health standards for the importation of ‘cleared’ shedder stallions, or semen from ‘cleared’ shedder stallions.

Aquaculture food containing poultry by-products

Comments are invited on a change to the Import health standard for fish food, fish bait, Artemia salina and Artemia franciscana from all countries.

The proposed change allows the importation of specific aquaculture products containing poultry meal (0-15%), poultry oil (0-25%) and poultry blood meal (0-10%). The products are Pacific, Orient, Vitalis, Nutra and Nova aquaculture feed for the salmon and trout industry manufactured by Gibsons Ltd T/A Skretting Australia.

The product must be accompanied by an AQIS Certificate that certifies that poultry meal and poultry oil in the product has been rendered at 110 degrees Celsius for at least 1 hour, and the poultry blood meal in the product has been subjected to a temperature of 90 degrees Celsius for 30 minutes during processing.

The closing date receipt of submissions is 9 June 2003.

All submissions should be sent in writing, attention: Paul Berentson, Technical Adviser, International Animal Trade, fax 04 474 4227, berentsonp@maf.govt.nz

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

Animal exotic disease response standards revised

The revised draft animal exotic disease response standards are available for public comment.

MAF Biosecurity specifies standards for the delivery of New
Zealand’s response capability for animal exotic disease outbreaks in documents known as the 153 series of standards: Exotic Disease Programmes of Animals (including honey bees and fish). The standards define the organisational structure for investigations and responses, the requirements for suppliers and the biosecurity responsibilities of processing and production industries.

Many of the approaches described in the first issue of the standards were, and remain, appropriate for the investigation and response to suspected foot and mouth disease. The revised draft standards attempt to balance this scenario with the full range of other possible scenarios, describing systems generically and avoiding prescriptions that may not be appropriate in all circumstances.

The first issue of the standards was developed at a time when the annual number of investigations per year was in the order of tens, and most of the investigations were for suspected vesicular disease (for example foot and mouth disease). In recent years there have been upwards of 100 investigations a year. This increase has been largely due to increased awareness of the threat of exotic animal diseases, and greater use of the 0800 reporting system, rather than to higher incidence of disease. In addition, much has been learned during the responses to Varroa destructor, Mycoplasma mycoides mycoides (large colony) and Brucella suis, diseases that behave quite differently from the vesicular diseases and require a different response approach.

Honey bee genetic material

The honey bee (Apis mellifera) genetic material import risk analysis and a draft import health standard for Carniolan honey bee semen (Apis mellifera carnica) from Germany are now available for public comment.

The risk analysis considers four forms of honey bee genetic material – queens, queen cells, eggs laid by queen bees and semen – and discusses 38 potential hazards. For the importation of semen, the major risks are Africanised honey bees (Apis mellifera scutellato), which would affect people’s enjoyment of the environment, and the Cape honey bee (Apis mellifera capensis), a production issue. Semen is not considered a risk good for the importation of European foulbrood (Melissococcus pluton).

Safe importation of honey bee semen will enable the genetic base of New Zealand’s bee population to be broadened. This may assist in developing New Zealand honey bee populations with a range of characteristics not presently found, such as bees with increased varroa tolerance. This would benefit beekeepers struggling to live with varroa.

The risk analysis was done by an external consultant and has been subjected to MAF’s internal scientific review process and to international expert review. The Director Animal Biosecurity is satisfied that it is technically sound and sufficiently robust to base an import health standard on.

The closing date for comments is the 30 May 2003.

Belovo egg powders

The draft import risk analysis for three types of Belovo (brand name) egg powders from Belgium is now available for public consultation. The risk analysis considers the heat stability of a number of bacteria and viruses that have the potential to be present on or in eggs. It is concluded that due to the processing involved in the preparation of these egg powders (prolonged times at high temperatures), they do not pose a biosecurity risk and therefore no safeguards are required. At present there are import health standards for dried egg albumen, egg yolk powder and whole egg powder from a number of countries. Should there be no changes required to the draft risk management measures, Belovo egg products will be added to the Import health standard for the importation into New Zealand of specified products for human consumption containing dairy products, eggs or meat.

The closing date for receipt of submissions is 12 June 2003.

Empty liquid nitrogen containers from all countries

Comments are invited on the draft import health standard for the importation into New Zealand of empty used liquid nitrogen containers. This includes any container that is designed to contain liquid nitrogen such as those frequently used for the transport of animal semen or embryos.

It is proposed that an official inspector authorised by the competent authority of the exporting country must certify that the containers have been cleaned inside and outside using a detergent and then sterilised or disinfected using one of the following methods:

- autoclaving at a pressure at 120ºC for 15 minutes; or
- dry heat at 140ºC for 30 minutes; or
Proposal to remove post-weaning multisystemic wasting syndrome (PMWS) requirement from pig semen IHS

Comment is invited on MAF’s proposal to remove from pig semen import health standards the current requirement for the herd of origin to be certified free of evidence of the clinical condition of PMWS for the three months prior to entry of the donor animals onto the collection centre.

When PMWS first appeared as an emerging issue for pigs in 1997, the epidemiology of the disease was unclear. As a precautionary measure for imported semen, early in 1999 MAF introduced the requirement that the herd of origin had to be certified free of evidence of the clinical condition during the 3 months before donor animals entered the collection centre.

As a result of concerns expressed by the pork industry about the possible transmission of PMWS in the international trade of pig material, advice was commissioned from the Massey University EpiCentre on the aetiology of this disease.

Specific aetiological agents that have been linked to PMWS include porcine parvovirus (PPV), porcine circovirus type 2 (PCV2) and porcine reproductive and respiratory syndrome (PRRS) virus. PPV and PCV2 are endemic to this country and measures are already in place to manage the risk of introduction of the PRRS virus in semen and pig meat.

MAF therefore proposed that no additional restrictions be imposed. However, MAF recommends that New Zealand pig farmers receiving semen from countries where PMWS occurs adopt generic biosecurity and quarantine measures to contain any hitherto unrecognised agent that may be in the semen.

Moreover, the value of the existing certification for imported semen has recently been questioned. While it is presumably possible for the competent veterinary authority to certify that the owner of any particular herd has reported that there has been no evidence of clinical PMWS during the 3 months prior to entry of the donor animals onto the collection centre, the level of assurance that this delivers for subclinical infections by unspecified micro-organisms is considered to be negligible.

Since MAF is opposed to imposing certification requirements that cannot be objectively verified, MAF is proposing to remove the current PMWS requirement for herd of origin freedom from clinical PMWS from the import health standards for porcine semen.

Submissions should be sent in writing before 9 June 2003.

Paul Berentson, Technical Adviser International Animal Trade, phone 04 498 9897, fax 04 474 4227, berentsonp@maf.govt.nz

www.maf.govt.nz/biosecurity/consultation.htm

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

Amendments to codes of ethical conduct approved: Nil

Notifications to MAF of minor amendments to codes of ethical conduct: Nil

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

• Ancrum Consultancies (to use Lincoln University’s code) (renewal – code expired)
• Feral R & D Ltd (to use the University of Auckland’s code)
• ImmunoEthical Associates (NZ) Ltd (to use Lincoln University’s code) (renewal – code expired)
• Pest Control Research Ltd (to use Lincoln University’s code) (renewal – code expired)
• Pest-Tech Ltd (to use Lincoln University’s code) (renewal – code expired)
• Pyne Gould Guinness Ltd (to use Lincoln University’s code) (renewal – code expired)
• Wool Research Organisation of New Zealand (Inc) (to use Lincoln University’s code) (renewal – code expired)
• Wrightson Research (to use Lincoln University’s code) (renewal – code expired)

Codes of ethical conduct revoked or expired or arrangements terminated

• Bayer NZ Ltd (to use AgVet Consultants Ltd’s code)
• Caledonian Holdings Ltd (to use AgVet Consultants Ltd’s code)

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

• Melanie Vivian (to conduct environmental enrichment research on zoo-hold chimpanzees)

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

Linda Carson, Senior Policy Adviser, Animal Welfare, phone 04 470 2746, fax 04 498 9888, carsonsl@maf.govt.nz

Updates continued on page 23
New organism records: 8/02/03 - 21/03/03

Biosecurity is about managing risks - protecting the New Zealand environment and economy from exotic pests and diseases. MAF Biosecurity Authority devotes much of its time to ensuring that new organism records come to its attention, to follow up as appropriate. The tables below list new organisms that have become established, new hosts for existing pests and extension to distribution for existing pests. The information was collated by MAF Forest Biosecurity and MAF Plants Biosecurity during 08/02/03 - 21/03/03, and held in the Plant Pest Information Network (PPIN) database. Wherever possible, common names have been included.

### PLANTS BIOSECURITY RECORDS 08/02/03 - 21/03/03

#### Validated new to New Zealand reports

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<tbody>
<tr>
<td>Septoria sisyrtchii (septoria leaf spot)</td>
<td>Sisyrinchium sp. California Sky</td>
<td>Auckland</td>
<td>National Plant Pest Reference Laboratory (NPPRL)</td>
<td>This obscure fungus produces a small leaf spot on an obscure plant. DoC has been informed of this detection.</td>
</tr>
<tr>
<td>Peronospora lamii (sage downy mildew)</td>
<td>Salvia officinalis (sage)</td>
<td>Auckland</td>
<td>NPPRL</td>
<td>The infected plants have been destroyed and MAF is investigating the circumstances of this incursion.</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>Fusarium oxysorum (fusarium rot)</td>
<td>Crocus sativus (saffron)</td>
<td>North Canterbury</td>
<td>NPPRL</td>
<td>This species has a very wide host range.</td>
</tr>
<tr>
<td></td>
<td>Ammi visnaga (Fenn leaf Bishop's flower)</td>
<td>North Canterbury</td>
<td>NPPRL</td>
<td></td>
</tr>
<tr>
<td>Pythium sp. (cavity spot, damping-off)</td>
<td>Ammi visnaga (Fenn leaf Bishop's flower)</td>
<td>North Canterbury</td>
<td>NPPRL</td>
<td>This species has a very wide host range.</td>
</tr>
<tr>
<td></td>
<td>Ammi majus (bullwort)</td>
<td>North Canterbury</td>
<td>NPPRL</td>
<td></td>
</tr>
<tr>
<td>Pseudomonas syringae (bacterial blast)</td>
<td>Secale cereale (rye)</td>
<td>Mid Canterbury</td>
<td>NPPRL</td>
<td>This species has a very wide host range.</td>
</tr>
<tr>
<td></td>
<td>Ammi majus (bullwort)</td>
<td>North Canterbury</td>
<td>NPPRL</td>
<td></td>
</tr>
<tr>
<td>Sclerotinia sclerotiorum (sclerotinia rot)</td>
<td>Ammi majus (bullwort)</td>
<td>North Canterbury</td>
<td>NPPRL</td>
<td>This species has a very wide host range.</td>
</tr>
<tr>
<td>Gibberelgia avenacea (foot rot, root rot)</td>
<td>Crocus sativus (saffron)</td>
<td>North Canterbury</td>
<td>NPPRL</td>
<td>This species has a very wide host range.</td>
</tr>
<tr>
<td>Nepovirus arabis mosaic virus (ArMV)</td>
<td>Resmarinus officinalis (rosemary)</td>
<td>Auckland</td>
<td>NPPRL</td>
<td>Other PPIN hosts include tamarillo and rose.</td>
</tr>
<tr>
<td>Pseudomonas cichorii (bacterial rot)</td>
<td>Hydrangea sp. (hydrangea)</td>
<td>Mid Canterbury</td>
<td>NPPRL</td>
<td>Other PPIN hosts include tomato, capsicum, tamarillo, and chrysanthemum.</td>
</tr>
<tr>
<td>Pleospora allii (stemphylium leaf spot)</td>
<td>Alchemilla mollis (lady's mantle)</td>
<td>Mid Canterbury</td>
<td>NPPRL</td>
<td>This species has a very wide host range.</td>
</tr>
<tr>
<td>Botryosphaeria parva (botryosphaeria rot)</td>
<td>Alchemilla mollis (lady's mantle)</td>
<td>Mid Canterbury</td>
<td>NPPRL</td>
<td>Other PPIN hosts include apple, grape, feijoa, pear, kiwifruit, blueberry, puka, broadleaf, peach and Japanese plum.</td>
</tr>
</tbody>
</table>

#### Extension to distribution reports:

No extension to distribution reports during this period.

### FOREST BIOSECURITY RECORDS 08/02/03 - 21/03/03

#### 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>Sarcostoma hakeae (no common name)</td>
<td>Grevillea glabrata (grevillea)</td>
<td>Auckland</td>
<td>National Plant Pest Reference Laboratory</td>
<td>The related fungus Sarcostoma grevilleae is common and causes similar symptoms on Grevillea spp. in New Zealand. S. hakeae could have been confused with S. grevilleae in the past. No evidence suggests the fungus is a recent introduction.</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>Uraba lugens (gum leaf skeletoniser)</td>
<td>Eucalyptus cladocalyx (sugar gum)</td>
<td>Auckland</td>
<td>Forest Research</td>
<td>This Australian insect was first recorded in Mt Maunganui area in June 1997, and within the Onehunga area in August 2001. It is a defoliator of many eucalypt species, including: E. cinerea, E. crenulata, E. leucoxylon, E. macarthurii, E. maideni, E. salmon, E. viminalis, E. fastigata, E. leucoxylon ssp. Melagocarpa, E. robusta, E. coccifera, Lophostemon confertus</td>
</tr>
<tr>
<td></td>
<td>Eucalyptus brookeriana (eucalyptus)</td>
<td>Auckland</td>
<td>Forest Research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eucalyptus bosistoana (Bosisto's box)</td>
<td>Auckland</td>
<td>Forest Research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eucalyptus botryoides (Southern mahogany)</td>
<td>Auckland</td>
<td>Forest Research</td>
<td></td>
</tr>
</tbody>
</table>

Continued next page
Eight new import health standards for forest produce

Forest Biosecurity has recently issued the following eight import health standards for forest produce:
1. Wood packaging material from all countries
2. Sawn wood from all countries
3. Poles, piles, rounds, and sleepers from all countries
4. Wooden panels from all countries
5. Woodware from all countries
6. Bamboo, cane, willow and rattan from all countries
7. Sawdust, wood chips, wood shavings, and wood wool from all countries
8. Bark from all countries.

The first three import health standards (Nos. 1-3: wood packaging material; sawn wood; and poles, piles, rounds, and sleepers) have a number of new import requirements recently introduced to combat newly identified biosecurity risks and to comply with international standards.

The other five import health standards (Nos. 4-8: wooden panels; woodware; bamboo, cane, willow and rattan; sawdust, wood chips, wood shavings, and wood wool; and bark) clarify the current import requirements for these commodities.

Update

Dr Michael Ormsby, National Adviser Import Health Standards, Forest Biosecurity, phone 04 474 4100, fax 04 470 2741, forestihs@maf.govt.nz

www.maf.govt.nz/forest-imports
### CODES OF WELFARE – Animal Welfare Act Update

This part of the Directory section of Biosecurity is a new, regular feature. The table below is a quick guide as to the status of the various codes of welfare as they are developed under the Animal Welfare Act 1999.

<table>
<thead>
<tr>
<th>Code</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broiler Code</td>
<td>Final Code presented to Minister of Agriculture on 15 November 2002</td>
</tr>
<tr>
<td>Pig Code</td>
<td>Final Code to be presented to Minister of Agriculture mid May 2003</td>
</tr>
<tr>
<td>Rodeo Code</td>
<td>Public consultation completed. Final Code to be presented to Minister of Agriculture mid May 2003</td>
</tr>
<tr>
<td>Layer Hen Code</td>
<td>Public consultation completed. Final Code to be presented to Minister of Agriculture mid May 2003</td>
</tr>
<tr>
<td>Zoo Code</td>
<td>Under development. Final Code to be presented to Minister of Agriculture mid September 2003</td>
</tr>
<tr>
<td>Circus Code</td>
<td>Under development. Final Code to be presented to Minister of Agriculture mid August 2003</td>
</tr>
<tr>
<td>Commercial Slaughter Code</td>
<td>Public consultation completed. Final code to be presented to Minister of Agriculture mid June 2003</td>
</tr>
</tbody>
</table>