

Report to Forest Biosecurity Consultative Committee

Update on current MAF Biosecurity New Zealand forestry-related Post Border Surveillance, Pest Management and Incursion Response Activities For the meeting on Thursday July 31 2008

DUTCH ELM DISEASE, AUCKLAND (Disease Management programme) Fiona Bancroft

- MAF Biosecurity New Zealand is no longer coordinating or contributing funding to the national Dutch Elm Disease control programme following a decision that national management of the disease is not a priority when compared to other organisms that threaten the health and lifestyle of New Zealanders, our environment and our cultural and economic wellbeing.
- MAF Biosecurity New Zealand is now actively working to transfer the programme to Auckland City Council over an 18-month period, including agreed transition arrangements (e.g. MAF Biosecurity New Zealand maintenance of regulatory movement controls). Auckland City Council staff are currently developing a long term position, however this has yet to be formally tested with and approved by their council.
- MAF Biosecurity New Zealand has informed all Territorial Authorities of this decision and the new funding arrangements. MAF Biosecurity New Zealand is in the process of contacting each of the Territorial Authorities park managers to discuss what this means for them.
- MAFBNZ has issued a public statement about changes to the Dutch Elm Disease programme.

NATIONAL INTEREST PESTS RESPONSES John Randall

- The national interest pest primarily associated with forestry is *Erharta villosa* (pyp grass). The primary operational goal is eradication from New Zealand.
- There are now three known occurrences of pyp grass in the North Island. The following is a summary of response activity at the sites:
 - Blackhead
 - A delimiting survey of the immediate area around the known infestation resulted in a new site being located in a paddock close to the original areas. Four repeat treatments throughout the season have resulted in a good kill rate with no live plants found at the end of the season.
 - Santoft Forest/Koitiata
 - Delimiting surveys have defined the extent of the infestation. A number of new plants were located on the margins of the known infestations. Four repeat treatments throughout the season reduced the overall spread of pyp grass at this site. However, there are still considerable areas of live pyp grass. Revised treatment recommendations are to be implemented.

- Discussions on how to manage future harvesting of the pine trees to ensure that pyp grass will not be dispersed are occurring.
- Waitarere Forest
 - At the end of January 2008, DOC staff located a third North Island pyp grass site at Waitarere Forest. It is apparent that this site has been planted in conjunction with silver poplar for bank stabilization purposes. In partnership with Horizons Regional Council, this site was treated and the wider area was delimited throughout March.
- Further information on all the National Interest Pest responses can be found at <http://www.biosecurity.govt.nz/pests/surv-mgmt/mgmt/prog/nipr>

SUBTERRANEAN TERMITES – NELSON AND AUCKLAND

Sheree Chrsitian

- A colony of Australian subterranean termites, *Coptotermes acinaciformis*, was detected from Richmond, Nelson in January 2006 and at a property in South Rodney, Auckland in January 2007. The likely sources of both infestations are historically imported Australian railway sleepers used in landscaping. An eradication programme is underway at both locations.
- MAF Biosecurity New Zealand is eradicating the subterranean termites using the Sentricon Baiting system that uses the active ingredient hexaflumuron, which has been proven to prevent termites from moulting, resulting in death and eventual elimination of the colony.
- In Nelson, inspections throughout 2006 through to summer 2007 indicated that termites were ingesting considerable amounts of toxic bait. The last bait station inspections were completed in May and June 2007. There were no signs of termite activity, indicating that the colony is eliminated. A monitoring programme whereby the two infested properties and four neighbouring properties will be inspected every three months will be operation for up to five years before the infestation can be declared eradicated. A third delimiting survey out to 100 m from the two infested sites occurred in April 2008 with no live termite activity detected.
- In Auckland, a third survey out to 500 m of the infested site occurred in April 2008 with no signs of termite activity detected, indicating that the colony is eliminated. Like Nelson, a regular monitoring programme will commence in July 2008 and will continue for up to five years before the infestation can officially be declared eradicated. The monitoring programme will involve regular inspections of the property every three months.
- An application for full registration of the termiticide hexaflumuron was lodged with the Environmental Risk Management Authority (ERMA) in October 2007. To ensure hexaflumuron is available for the Auckland termite response, a special emergency was given by the Minister on 24 December 2007, and has formally been accepted by ERMA until full registration is obtained.

DAMPWOOD TERMITES – LYTTELTON, KAIPARA AND AUCKLAND

Bruce Philip

- Colonies of the Australian dampwood termite *Porotermes adamsoni* are known at three locations in New Zealand: Lyttelton (Canterbury), Kaipara (Northland) and Auckland. The source of the infestations is likely to be historically-imported timber such as railway sleepers and utility poles.
- *P. adamsoni* attacks dead wood and living trees (principally eucalypts, but also other species including *Pinus radiata*). It is considered a forest pest in southern New South Wales and Victoria. It is not a serious pest of houses in Australia, but may attack house timbers where decay allows access.
- Lyttelton infestation: This is a long-standing infestation at Lyttelton wharf, detected in 1963. The wharf was constructed of Australian hardwood timber imported in the 1950s. Because of inaccessibility of the wharf timbers, eradication has not been considered feasible. However, the termites are considered contained within the wharf area, and are managed by visual inspections when wharf maintenance is carried out and the removal and destruction of infested timber as it is found. MAFBNZ is assessing the need for a more proactive surveillance programme.
- Kaipara infestation: Detected February 2007 when an alate (winged reproductive) was found in a spider web at a private residence in Kaipara Flats. Surveillance at the time did not locate the colony.
- Auckland infestation: Detected February 2008 when several alates were caught in a private residence in Remuera.
- At both Kaipara and Auckland the alates were caught close to railway lines where sleepers and other structures made from imported Australian timber are present.
- Surveillance undertaken at the Kaipara and Auckland sites during February and March 2008 detected alates but failed to locate the colonies.
- MAF Biosecurity New Zealand is about to contract:
 - a risk analysis of the introduction pathway for Australian termites,
 - an impact assessment for *P. adamsoni* in New Zealand and
 - an assessment of surveillance and organism management options for *P. adamsoni* to provide information to assist the development of an overarching strategy to deal with the currently known and any future incursions of this termite.

RED IMPORTED FIRE ANT – WHIRINAKI

Megan Sarty

- On June 7th 2006 *Solenopsis invicta* (Red Imported Fire Ant) was identified from Pan Pac Forest Products Ltd, Whirinaki. The nest was thoroughly treated with an insecticide drench and insecticidal ant bait on June 9th.
- No further fire ants have been found to date.
- The nest is estimated to be two to three years old and dispersal may have occurred.
- Since the detection the area out to 2km from the nest site has been surveyed three times. Areas that can not be effectively surveyed have been treated with insecticidal ant baits.

- Movement controls have been in place during this time and will remain in place until eradication is declared.
- Surveillance and treatment will be repeated next summer (December 2008 – March 2009). If no further fire ants are found during this time, then eradication will be declared in approximately April/May 2009.

This is the third incursion of red imported fire ants in New Zealand, both previous finds were eradicated. Genetic analysis has confirmed that the Whirinaki colony is unrelated to the previous incursion at Port of Napier in 2004.

RANGE FRUIT BORER MOTH (OFB)

George Gill

- The orange fruit borer moth (*Isotenes miserana*) was detected in Auckland. A solitary male moth was collected by an amateur entomologist, and subsequent surveillance activity has located OFB around the original site of detection and at an additional site approximately 400m away. **Update:** The High Risk Site Surveillance programme has been actively looking for sign of OFB. This surveillance confirmed that the OFB was more widely spread throughout Auckland.

STABLE ISOTOPE ANALYSIS

George Gill

- MAF through Biosecurity New Zealand (BNZ) and the Food Safety Authority, and the Department of Conservation (DoC), have identified the need for a tool that will rapidly and reliably identify the geographic origin of flora and fauna. To this end the agencies have undertaken collaborative research to develop a stable isotope mapping tool.
- The basis for this tool is the development of a stable isotope map of NZ rainfall which will be used to establish and verify origin of specimens of interest. The main investment in this project is in the collection and analysis of rainwater samples and the subsequent development of mathematical tools to correlate this variation with geographic and climate drivers. The underlying hypothesis is that the isotopic composition of NZ rainfall will vary geographically and that the associated flora and fauna will also exhibit geographical variation in their isotopic composition.
- Further work is being conducted to verify the second assumption – “that the associated flora and fauna will also exhibit geographical variation in their isotopic composition”. This work (effectively ground-truthing) involves analysing the stable isotope composition of flora and fauna at selected sites.
- This work is essential to provide the key outcome of a tool that allows point of origin claims to be verified for a wide range of biological materials. The results of this work will provide the data necessary to place confidence limits on such claims.

BIOLOGICAL CONTROL OF GUMLEAF SKELETONISER

John Sanson

- Gumleaf skeletoniser is an Australian moth that continues to create problems in the greater Auckland region on eucalypts and a range of amenity tree species. GLS has now been found in Huntly, Hamilton and Cambridge, so appears to be becoming established in the Waikato region.
- Work on biological control of gumleaf skeletoniser has been underway for some time, funded largely by MAF. A Sustainable Farming Fund grant has been secured by the Gumleaf Skeletoniser Stakeholder Group to support Scion in continuing the project until 2010. This project is co-funded by FRST, FIDA (Forest Industry Development Agenda), FBRC and Farm Forestry Association, along with industry and Regional Council support.
- Scion entomologists have narrowed the potential agents down to two parasitic wasps: *Cotesia urabae* and *Dolichogenidea eucalypti* (Hymenoptera: Braconidae). Both wasps are believed to attack only gumleaf skeletoniser caterpillars. They lay their eggs inside the host caterpillar and the parasitic larva eventually emerges, killing the host.
- Host range testing is underway in quarantine in Rotorua on *Cotesia urabaeto* to determine the safety of this species against native and beneficial Lepidoptera in New Zealand. A range of choice and no-choice experiments are underway against five non-target species. Preliminary observations have shown that the parasitoid is willing to attack four of these species when confined together in a small dish. However it is too soon to determine if this attack will have any significant effect on the wellbeing of the caterpillars, or if they would pose any threat to the caterpillars in the wild. The answers to these questions will become clearer once the results of the experiments are obtained. Further experimentation will be done on the other parasitoid species, *Dolichogenidea eucalypti*, when it becomes available.
- Once the most suitable parasitoid has been identified, and host range testing and community consultation are complete, an application will be submitted to the Environmental Risk Management Authority (ERMA) to gain approval to release the insects in New Zealand. If the application is successful, releases of the biological control agent will then be made with the help of councils and forest owners in regions affected by gumleaf skeletoniser.
- There are no further updates on Gumleaf skeletoniser as at 24 July 2008.