The Forest Biosecurity Committee (FBC) met on 24 August in Wellington for its third quarterly meeting where it navigated a range of topics, some of which it wanted to highlight.

Government Industry Agreement (GIA)

Brendan Gould (FOA) provided a brief update on Government Industry Agreement (GIA) activities, including work to improve the identification of beneficiaries and therefore cost sharing discussions. This has emerged as a significant and contentious issue for other sectors in recent responses where it has impacted on rapid response decision making. A project to standardise the industry valuation methodology has been undertaken which aimed to develop an objective, consistent, and independent methodology to enable a move away from the existing self-valuation approach. Sector valuations impact on GIA cost shares as these are proportional to industry value. This project highlighted significant differences in how sectors valued themselves and as the outputs are implemented over the coming years it is anticipated that the forestry sector will see a significant reduction in its cost share.

The forestry sector's readiness Operational Agreement (OA) under the GIA Deed has been renewed for a further two years. In doing so, FOA signalled its intent to work with Biosecurity New Zealand (BNZ) to develop a long term readiness work programme (the current focus is on surveillance only) and also to revisit the current public : industry cost share to take account of the uniqueness of the forestry sector which provides a wide range of public benefits (i.e. ecosystem services, land access values such as mountain biking, hunting, and climate change mitigation through carbon sequestration, etc.). The latter raises the issue of carbon forestry currently being a non-signatory beneficiary (non-paying) to GIA as a direct result of government policy settings.

Readiness update

Biosecurity risk literature review projects - Scion has been engaged to undertake readiness literature reviews for three forestry pest and disease risks, including *Lecanosticta*, using *L. acicola* as a proxy/model risk organism, bark beetles, using *Ips grandicollis* (the Eastern five spined bark beetle) as the proxy/model risk organism, and Pine wilt nematode (and vectors). The objective of these reviews is to collate and analyse a broad range of information on these risk organisms. This will inform subsequent planning and development of generic readiness and response plans and operational specifications to enable effective and timely response decision making and planning. The outputs of these projects will inform our readiness work programme planning under the GIA.

Lepidoptera Readiness Operational Agreement – earlier this year, FOA signed the multisector Lepidoptera Readiness OA (under the GIA Deed). Working alongside several other GIA signatories, this OA aims to improve New Zealand's generic state of readiness to respond to a range of lepidoptera pest incursions. The working group has developed a work programme and has completed a stocktake on the current state of readiness. A project grouping Lepidoptera species into broad groups around which to develop readiness capability and plans has also been progressed as part of this work programme, and Scion have completed an extensive review of New Zealand's state of readiness to respond using Btk and understanding the current aerial application capability. These projects will help inform the ongoing work occurring in the Lepidoptera readiness work programme.

Science and research update

The FBC meeting included updates on current and recently completed science projects and programmes and considered biosecurity research proposals to FGR for 2024.

2024 Biosecurity Research Proposals - The FBC considered and prioritised four biosecurity focused research proposals that were to be submitted to Forest Growers Research. This consideration ensured that the FBC provided some insight to the FGR into what the FBC saw as the priority order of the biosecurity proposals.

Pre-emptive Biosecurity – Dr Jenny Aitken of The Tree Lab presented on her FGLT/FGR funded project that's looking to better understand and prepare for several significant biosecurity threats to radiata pine. Specifically, Jenny is evaluating the performance of New Zealand germplasm (from RPBC) planted two years ago and exposed to several biosecurity threats not yet present in New Zealand, that are of significant concern to our forest growing sector. These threats include *Lecanosticta acicola* (brown spot needle blight), *Fusarium circinatum* (pitch canker), *Thaumetopoea pitycampa* (pine processionary moth) and *Dothistroma pini* (NZ only has *D. septosporum).* The output of this research and measure of success is the identification and quantification of risk associated with New Zealand radiata pine germplasm exposed to foreign pathogens and insects - results that could influence radiata pine breeding.

Forest Biosecurity Pest Risk Evaluation – Dr Rebecca Turner (Scion) provided an update on the FGR/FGLT funded programme that's evaluating and adapting the Better Border Biosecurity (B3 - https://www.b3nz.org.nz) funded semi-automated biosecurity risk evaluation framework for forestry insect pests. Rebecca, in conjunction with Dr Craig Phillips (AgResearch), has been evaluating and ranking 649 known insect pests of radiata based on their likelihood of arriving and establishing in New Zealand. This resulted in the identification of 54 which had a high likelihood of arriving and establishing here. The next phase of this work (subject to consideration and funding by FGR) is to use a range of information sources to assess the 54 insect pests for their potential distribution in New Zealand and economic impacts. Ultimately, this work will contribute to developing a list of priority pests and associated risks for radiata pine forests in New Zealand.

Global Change and New Zealand Biosecurity – Dr John Kean (AgResearch) presented on the Global Change and New Zealand Biosecurity report prepared as part of a B3 research collaboration between Scion, AgResearch and Plant and Food Research Limited scientists. The project reviewed a range of global megatrends and the potential implications on New Zealand's environment, primary industries, and the biosecurity system. The project report proposed that new, invasive plant-destroying insects, weeds, and diseases will increasingly challenge our borders as a warming climate and other global 'megatrends' make our plants and ecosystems more vulnerable. Read the report and summary here: https://www.b3nz.org.nz/global-change-and-new-zealand-biosecurity-report/.

N***Z's Biological Heritage National Science Challenge*** – Bill Dyck (FOA) provided an overview and update on the biosecurity aspects of the Science Challenge relevant to the Committee. Of particular relevance was the opportunity to push the use of new technologies (i.e., remote sensing, genetic technologies, Artificial Intelligence) for biosecurity surveillance, biodiversity monitoring and to develop more connected systems. To ensure that eDNA technology can be effectively applied, work is underway to develop a national DNA library that meets the needs of, yet is acceptable and sensitive to, stakeholder needs. RNA interference (RNAi) technology is not considered by the Environmental Protection Authority (EPA) as Genetic Modification, therefore field research is underway investigating the application of this technology to control pests.

Chief Biosecurity Officer and the Biosecurity System Strategy update

Peter Thomson (Biosecurity New Zealand) was recently appointed as BNZ's Chief Biosecurity Officer. This is a critical role for the biosecurity system, providing system and science leadership, driving consistency in risk management across the system, and supporting the Chief Technical Officers in fulfilling their roles consistently under the Biosecurity Act. The role aims to strengthen capability and leadership across the many values that the biosecurity system aims to protect and is expected to undertake targeted reviews within the system to facilitate integration and efficiency in delivery.

Pete provided an update on some of BNZ's system improvement initiatives, including the development of the Biosecurity System strategy which is anticipated to be consulted on early in 2024, but has sought preliminary input from across the biosecurity system to inform this. Pete also updated the Committee on the New Plant Health and Environment Laboratory (PHEL) project which aims to build a modern and future focused replacement for the current outdated lab as well as a new and expanded Post-entry Quarantine facility to better serve the primary sector, the national wilding Conifer programme and the new electronic traveller declaration option.

Scion Update

Dr Tara Strand (Scion) provided a general update on some biosecurity activities at Scion. Of particular interest was the increase in stress-related fungal infections (red needle cast and Dothi) and in opportunistic fungi in cyclone damaged trees, as noted recently by the Forest Health Reference Laboratory. A new isolate of the totara dieback pathogen has also been identified with some concerns that this one may be more likely to cause disease. Dr Darryl Herron (Scion) will be running Scion training for *Fusarium* and *Ceratocystis* for BNZ's PHEL staff.

Protecting Aotearoa from aerial invaders in a changing climate – this Scion-led research proposal to the Endeavour Fund 2023 was successful and will receive close to $11m over five years to address gaps in our knowledge about the wind-assisted pathway for the introduction of and subsequent spread of new biosecurity threats to New Zealand. https://www.mbie.govt.nz/science-and-technology/science-and-innovation/funding-information-and-opportunities/investment-funds/endeavour-fund/success-stories/2023-research-programmes/.

Forest Biosecurity Conference

The FBC planned to hold the next forest biosecurity conference in Rotorua in November 2023, however, due to challenges in securing a date and location near the end of the year, the Conference Subcommittee decided to postpone and are now looking to confirm a new venue in the last week of February 2024. The Subcommittee are hoping to incorporate a small desktop biosecurity response exercise to increase the sectors exposure to how a biosecurity response to a forest pest or pathogen might unfold.