Progress toward 2020

Phytosanitary treatments

Addressing the challenges

Ian R Gear – Don Hammond - Russell Dale

October 2018

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In the beginning – January 2011

EPA methyl bromide reassessment decision

Need for alternative phytosanitary treatments

Significant investment in research required

Sustainable Phytosanitary Treatments for exports and biosecurity

Prime interest: Logs and other forest products

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Outcomes sought

1. Market access
2. Growth of forestry exports
3. Alternative treatments
4. Wider range of treatments
5. Profitability
6. Environmental benefits
7. Accountability
8. Best practices,
9. Minimising environmental impacts

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Remembering

We need to:

- **Reduce risk**
  - **In trade; and,**
  - **That associated with treatments**
    - **Impacts – workers, communities, Iwi**
    - **Environmental impacts**
- **Be mindful of the acceptable level of risks**
- **Define residual risk**
- **Managing that risk**

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Enabling success

We are mindful of

- Reducing risks
  - In trade
  - Associated with treatments
- Defining and managing residual risk

We have

- Drawn upon the best advice available
- Developed strong networks
- Won industry support
- Commissioned sound research
- Subjected to peer review

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Funding success

- Voluntary levy
  - On methyl bromide and phosphine
  - Very high level of support
- Seek to leverage levy income
  - $1 Industry dollar : $1.75 dollars from other sources
- Total spend to date exceeds $20m

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Research programme

Research programme identified work streams

1. Alternative fumigants
2. Tools for managing, monitoring and modelling fumigations
3. Reducing methyl bromide emissions
4. Non-fumigant risk management - Ecological approaches
5. Non-fumigant risk management – Physical treatments

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Research programme

Research programme

Phase 1	Sorting the grain from the chaff	2011-2012
Phase 2	Consolidation – focused research	2014-2017
Phase 3	Approvals – statutory processes	2018-2019
Phase 4	Implementation	2020 onward

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Alternative fumigants

- Comprehensive literature review – 2014 – EDN only alternative
- Phosphine assurance protocols
- Efficacy data – EDN
  - Proven effective against insects associated with New Zealand forest products
  - Currently awaiting EPA and WorkSafe approval
- STIMBR working with MPI to deliver efficacy data to trading partners
  - Including supporting studies
  - Rationale for selecting the study insect species
  - *Sirex* study.

Fumigation monitoring and modelling

- Good practice guide for air monitoring of methyl bromide fumigations
- AERMOD modelling for methyl bromide - Tauranga
- Scion has also modelled methyl bromide emissions – on venting
- Draslovka has completed AERMOD modelling for EDN – Tauranga
- Genera
  - Addressing recapture challenges
  - Mobile monitoring capability
  - Reporting

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Reducing methyl bromide emissions

- **Methyl bromide emissions management**
  - Researched new and innovative capture/destruction technologies
  - Eliminated the majority
  - Challenges in disposing of methyl bromide scrubbing effluent
  - Genera on-going commitment to research and development

- **Methyl bromide treatment rates reduction**
  - Efficacy data
  - Needed to develop insect colony protocols
  - Supporting at least a 40% reduction in the current treatment rate
  - Confirmatory testing underway – to be completed Nov 2018.

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Risk management - Ecological approaches

- Seeking non-fumigant solutions
- Data from national trapping network
  - 100+ traps through-out the country over 3.5 years
  - Over 1 million specimens
  - Significant majority *Arhopalus ferus, Hylastes ater and Hylurgus ligniperda*
- Confirmed that seasonal no-risk periods for logs are very limited
- Post-fumigation exposure period extended to 21 days during winter
- After 4 years of study, confirmed there is little opportunity with this approach

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Risk management – Physical treatments

- **Joule heating of logs**
  - The use of heat is a phytosanitary treatment recognised by the IPPC
  - Proven the concept of using Joule heating to heat logs - technically possible
  - Development of a pilot plant for testing
  - Prerequisite for a commercial scale prototype

- **Debarking**
  - Is not a recognised phytosanitary treatment
  - More costly than current chemical phytosanitary treatments
  - In forest debarking
    - Challenges meeting phytosanitary standards
    - Further research required

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Thank-you for your support

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